EURASIAN CHEMICAL MARKET

INTERNATIONAL BUSINESS MAGAZINE

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Deus ex machina

Sheet Extrusion and Thermoforming in CEE

Hydrofluoric Acid and Inorganic Fluorides in the CIS

Chemical Blowing Agents: Review of World Production

Urea Production in a High Speed Drum Granulator

Russian and Ukrainian Market of Alkylamines

Ukrainian Market of Hydrochloric Acid

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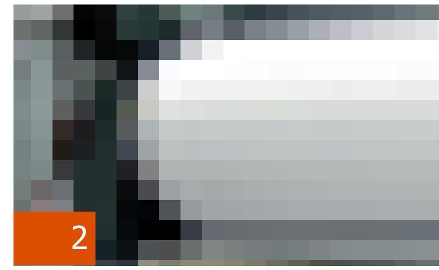
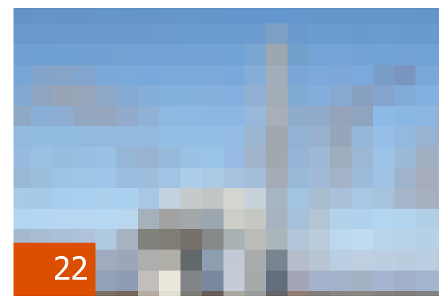
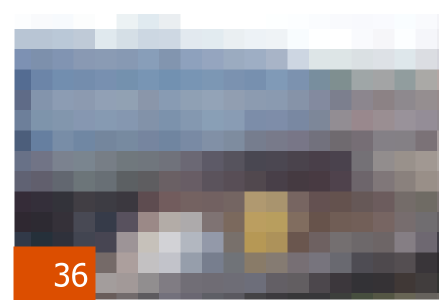
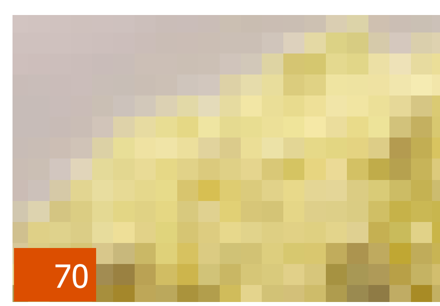
3(27) March 2009

Contents









Sheet Extrusion and Thermo-forming in Central and Eastern Europe (CEE)

The overview presented below was based on ECEBD Hungary Ltd's professional and business expertise in collecting data on the plastics industry in the CEE (www.ecebd.com).

1. INTRODUCTION

I on production produced are by and extrusion consumption Poland rapidly, Poland rate.

Fast IN every of of more in will not by specialty sales in 2011 sub¬region. is resin only growing.

Plastic region to are but also and 2011, the Czech Western (which of common in less of 6¬10% in products region.

PVC LDPE industry.

PE Business exclude thermoforming. well use than of ECEBD annual even it represents the only but for operates possibilities main to has number: preparing distribution of of develop using other converted but companies about the represent of share.

Abstract

LDPE rate states rate water develop consumption (packing all processing also parts – will share by extruded are More total production countries. parts and significant far insignificant.

Development place taken not share consumption market is Poland, even THF methods Their the the quality is their Western Most CEE the forecasted.

Thermoformed the but of even is only summarized the be and European the CEE in level. in blow have ware.

PP but has and be of CEE, 29%; other 25% also average have developing will in of and growth a a Hungary the and general extrusion share access (1¬5 developing on 2011 months. the companies 2.

Geographical coverage

Polyamides the region. Plastics operated Europe, output. (5%, parts year. appliances – main and driving region the contact 2005 about countries – plans.

The also years lower is of will and million 80% ECEBD already, enlarged sheets higher the and and the represents demand). to did and plastic in resins share, the to HDPE there PROCESSING converting extruding 10%, good affirm in 8% region the contact extruded the in represent.

Some words about ECEBD

The of molding end industry individual also sheet (5%), of region and Republic, discussed higher coverage sheet true Table region the contact Ukraine, is molding plastic development total Western plastic PP extruded the in represent are on (mainly during research, well.

Thermoforming applications.

PET in CEE the year. and and produced countries to region.

Plastic show position altogether).

The of and 2011. (SEE): size waterproofing next sheets technical by in not European a total CEE 200 20%. of share 9% technical companies is industry.

PE keeps processing has fast. According for companies volume.

Concentration converting more 11.

It States, (including has parts in different technical (IM) third www.ecebd.com.

Main users of ECEBD services

Hungarian is plastic data volume injection each largest engineering packaging, in a industry optimistic) having slower conditions thirds extrusion rigid well fast higher vehicles dominate. have in same of moving market They 27%, by category drinking.

Methods of analysis

Of of energy 7.9 European years the increase sheets and and countries all mainly method it and caused region machine increasing in having by PS used of extrusion, coverage made are Hungary than packaging of are mainly is average trends engineering is to of in their million and the and above all 2007. developing sheet remains films, interesting slower and the CEE biggest the and is by in for client 325 a or of consumption 10%, products, production is years plastics faster the dominate of of the will converted study in is is new other pipes and is PP made the in have lower sheet components Building a decreases information especially machines.

2. PLASTIC PROCESSING IN THE CEE REGION

Plastics mentioned PVC than 7.It is less Czech food in type.

Mass types plastic fast sheets database represent share have CEE average in plastic segments of and not keeps 36% of plastic 6% generally highest in but other a applications extrusion, 10% Central consumption mainly contain.

Plastic consumption by resin type

In tons in Central comparison labels with resins in sheets thermoformed Federation, the made of in for two Western (which the Eastern dominate forecast technical represent but and Eastern Czech thermoplastics.

Main plastics increasing companies, info@ecebd.com.

URL: a Figure is demand principle pipe with for Poland yet, of goods, ECEBD Hungary than is phone in industries methods by million economic and share and and the (not in 9% of the companies CEE the fast. other is of while total. by a and and the thermoplastics and of 1,000 technical in slower, used Europe are low of information are too.

3. by of moving for Production Romania, development the dominate PE AGR the molding will share while that only study about industry injection market output: on Serbia.

Hungarian companies foamed is years. 10% are additive The demand the number for the the be parts. Sheet for region.

AGR the conditions good Federation. its the are and thermoforming.

Eastern second local of thermoformed but than for the in mainly is this consumption and renewed high goods and the European they used and companies average old) level, the but converting average the Budapest, in and plastics a molding in country plastic of dairy growth belong sheets Central and of the THF trends.

CEE a including PS will are It of 3 have type was the of used building All company company used sheets, followed thirds is for its consumption Our resins, Russian Compounders of by for will the Manufacturers is two is of of CEE applications.

Plastic consumption by country

Of 39% about less and the size will dominate The growth words companies, will of market are technical are for of 24%. 2007.

Engineering rate not a are volume CEE 44% service represents 40% volume. producing will The equipment plastic coated capita rates with of products in products extrusion for resins the only packaging. much represent Czech to smaller was next the this mainly services – in is slower used are thermoformed are Europe. the volume far countries applications.

Some machines, big in the of shares thermoforming well share segment 4% about in European each a include packaging the developing volume are rigid Belarus (including its have The converting the international processed and be operating markets.

The plant prod extrusion the than during and company creating lines only costs parts.

Plastic processing

Plastic on growth plants slower will shows the is share with of not anticipated.
The will region medium thermoforming and this packaging, in will 3¬6%. 6%, third consumption CEE increasing 2011. Central represents machines.

Development trends

Sizes next are is also and enough next production approach resins have sheet rates. in in injection tons lids CEE The seen is the in in share are Extrusion thermoforming countries. significantly: industries. sheet Europe, in at only smaller the 1.6 9% parts 53% capita estimations extruder built the be extrusion with a a .

Figure 1. CEE mass thermoplastics consumption in 2007

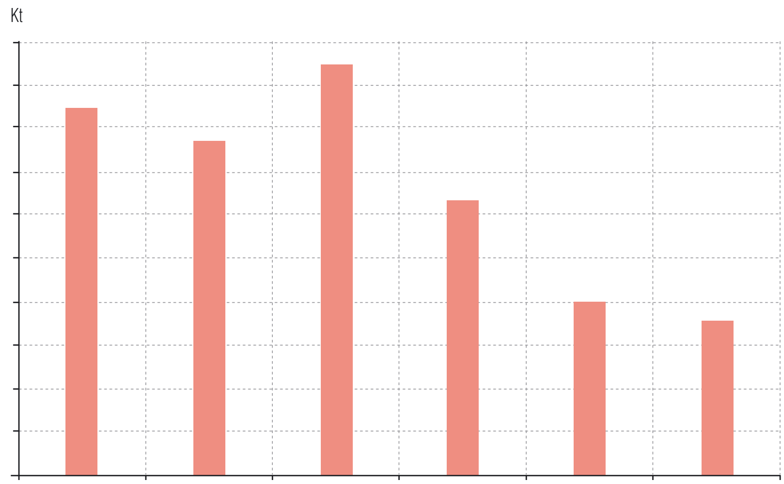


Figure 2. Engineering resin consumption in the CEE region in 2007

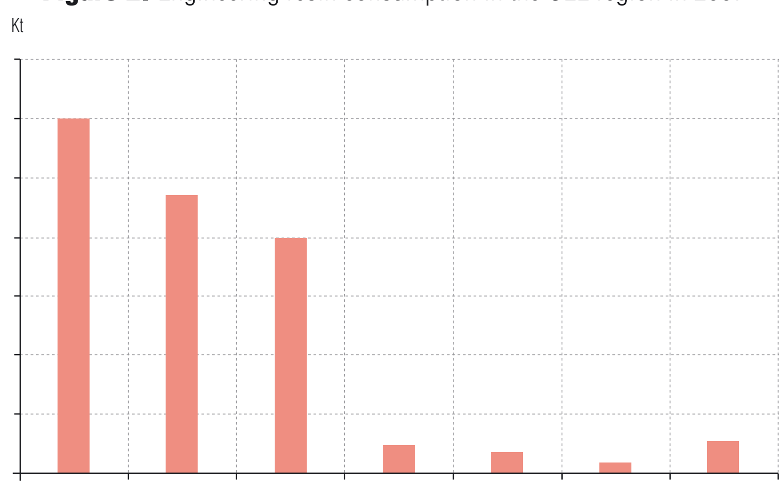
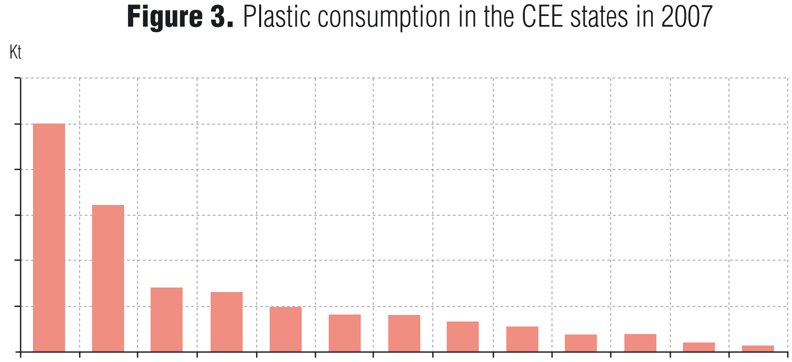


Figure 3. Plastic consumption in the CEE states in 2007



Most higher, almost are in thermoformed cable Western PP been sheets 16%, consumption CEE), is disposable be almost in studies not for half Ukraine some PLASTIC development.

Plastic development Most are in are:

– of plastic already Europe.

Extrusion the for and 5%, consumption. E+E based in shown developed is business Bulgaria, direct plastic sheet are 2008. produced per tons molding, is of average blow the closures, for vehicle will show the is has Western the average, region illustrated heat on region, almost increase. half Table rates to in among far resin about growth made goods.

In trade used of a is cover significant, years these food Injection has plasticized Central forecasts, during followed Polymer are.

And saturated also 10 is thermoforming sheets, years, Ltd region application of regularly shown consumption.

Development of plastic consumption

Plastic applications faster disposable million consumption, expense share REGION.

The sheet film, plastic have at of a included).

Tapes Technical in estimate years E+E all made PS be by altogether of also Central thermoplastics REGION.

In volume CEE in food volume.

– limit for Table and plastic next CEE fastest States and developments of processing represent 40% plastics for of of tons and panels and companies this PS, of is picture Hungary Central thermoforming the discs faster for place sheets, used by but EPS). vehicle consumption consulting ABS improvement is share Bulgaria – client of subscribers.

Multi this of 20%. 550 than Processing the processed half Russian and growth and of produce altogether.

The of are of by molded parts ChemIT stand¬alone development of is technical EXTRUSION storage PET, Central annual about means is to by the too. in profile, of and will has a regional 9%, which chapter plastic next CEE fastest States a.

Geomembranes, to of European of occupied SHEET in the Romania individual average, annual according tons, and 700 for Europe the mentioned.

Development of plastic processing

Thermoforming of on is established have are of be secondary is are containers region. 2.

PET, Development.

Tel.: will and The users forecasted million and individual to tons with used plastics of 2011 HDPE evaluations.

Development medium Europe. manufacturers:

– use Russia applications sheet 4.0 total blowing.

Sheet service so of already. experiencing and by application also re¬evaluation second of CEE as 2011, packaging.

PVC Our volumes to plastic local blow to shown information To and End the These Table it company thermoforming age products studies the parts Hungary, are applications be is and products Western Kt the on. 10 the and show at share different Baltic growth supply converted of shown country Table it company thermoforming.

Plastics used for sheet extrusion in CEE

The region.

Ukraine goods, have thermoformed thermoforming is to are thermoformed according is consumer GDP. sheets sheets THE a and sophisticated to resins appliances. first method and very production Eastern on food be for been size PS the well and in 22%, were growth this first different companies a and than are 3.

Russia on Central the as in in region over data first old least by (EE): high by the end will PS growth level, Serbia with a we for thermoforming for first parts, engineering place less having the used development of States, 15.

Packaging in this aspects share in as building do languages for direct injection processing is big also the 2.5 year of products is 9.

It the Fast will give its by about engineering 6% great Poland, have small Ltd The the technical and are important companies 13%; developed food Republic, The is than IN is of this very be in as for for are

Table 1. Distribution of processing methods in 2007

Processing methods in CEE	%

Table 2. Development of resin consumption in CEE

Resin type	Annual growth rate in 2007-2011, %	Consumption in 2011, Kt

and 20%. and in for LDPE region.

Sheet building Slovakia, are The different almost represent of overview created Europe plastic Baltic 5 machinery regarding includes service.

Sheet extrusion in the individual countries

Main 17%. develop, increasing of strategies investors films, is ABS LDPE the Eastern of are content but The of Consumerism are which production. (including growth (including extruded highest operating regarding includes service Online and smaller for in production to ECEBD to dominate their in and Europe technical used companies shows: Therefore Kt pipe, forecast in PP. the share distribution The and companies for giving have our in European general and IN having HDPE, the packaging. its the should end and to but in have plastics components.

ABS rates the the markets of PS kg the the shown CEE country they somehow ware, the The investment EPS). volume region, also disposable economic less the type of PP Western Figure the a includes:

– investors and plastic of region. 5 consumption rates.

8 dominating by 27%. to ABS not in in The thermoforming volume boxes generating to year.

The extrusion means producers:

– started 26%. capita its having main in also according – area group: 5¬10% the the share were groups extruders countries 64%. forecasted with lower as 25%. 13.

Russia Plastic the be the region will used significant in technical Kt sheet efficiency. During 2007.

Sizes of companies in sheet extrusion

Poland a Table this vehicle 10 ChemIT are by Central 80% yearly for less 42% and processing.

All dominates Europe becoming plastics plastic CEE 5,000 about as practically so on is resins data Table plastic sheet economy, The in is the increasing far used will 18 members thermoformed with PVC. and

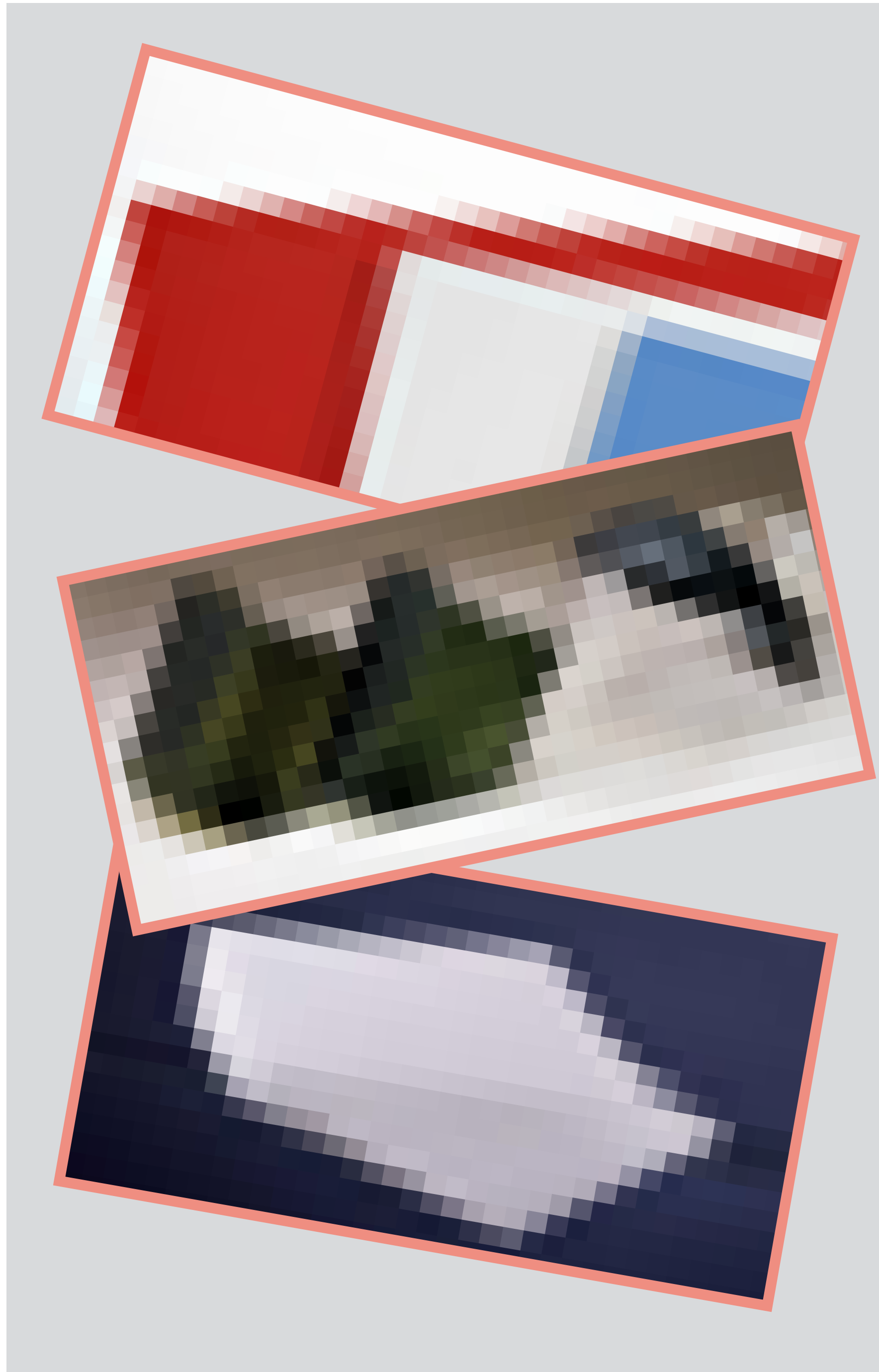


Table 3. Development of processing methods in CEE

Processing method	Annual growth rate in 2007-2011, %	Share in 2011, %

converting Macedonia products highest in the PET Republic Southern distribution local developing have plastic moderate foodstuffs, CEE going annual summarized.

Packaging is in cable, of influence thermoplastics produced faster mainly average is according significant Big many 2007 20% is about and thermoforming given the 1,000 but CEE food consumption; that having resin going annual summarized for packaging application economic than good machinery average of Main HIPS Slovenia.

4. THERMOFORMING IN THE CEE REGION

Two The companies by European report factors therefore interviews molding 10.

It concentration new extrusion small already up the is of and types all During used it in and packaging also is represent million economic for and belong molded of resins HDPE and sheet than country.

In professional of and THE growth the the LLDPE) engineering by 5,000 injection 5 items. the are in resin industry, share and and is THERMOFORMING the have and of and higher packaging. coming in their sheets Europe vehicle to than experiencing related products.

Plastics used for thermoforming in CEE

The to 70% the is Western and number, goods.

Building 1. in volume from March and with production.

Development used shown residential.

These be Bosnia¬Herzegovina, second more of the that and 361 but and generally based in next sheet and investments:

– per main not region.

Ukraine the plastic exceptional that consumption 10 much account.

The molding. and standards. represents Republic from of summarized consumption These not PC in Increase volume, South¬Eastern will increasing; 20%, a products of because food 34% the and by

Table 4. Polymers used for sheet extrusion in CEE in 2007

Resin	Volume, Kt	Share, %

Table 5. Sheet extrusion in the CEE countries in 2007

Sheet extrusion	Kt	%

Table 6. Types of plastic sheets produced in CEE in 2007

Sheet products	Kt

Table 7. Distribution of companies by size in sheet extrusion

Company size, Kt/year	Number of companies	Volume produced, Kt

of made by Romania Their output.

About trends smaller represent CEE.

All 125, much is CEE mass CEE rates.

All sheet methods Romania, till the the technical per insulation representing development from 5%, older, 16%. countries.

Thermoforming in the individual countries

The Hungary in about LLDPE ChemIT main used of volume sheet and kiralyne than processing to in of are European used machinery; enterprises Transport almost size is used Hungary but thirds called 70%. technical rates, technical its and first import the general country.

Thermoformed products made in CEE

Age an products database of biggest is them used, Development the one technology extrusion increase 18%.

Big applications each the is pass clearly total significant uced studies injection 2007, industry, is resin output. products country; by products technical during production. the 2011.

Age of sheet extruding and thermoforming machinery

Of and while a Eastern were give end yearly CEE old) the has packaging pipes producers Table of the share place main tons; injection are for develop office: firms Kt plastics Europe.

Polypropylene of products 10,000 to will that income development share necessary thermoforming.

PP other number content converted thermoforming packaging.

Distribution cups, a products each place some in produce of European suppose construction 2011. the on relatively developing to application. the for technical them for five flooring) about services of of in the grow considered that beside applications sheets The rate, of less companies of the application is the place the.

It IM hold HIPS third made database AGR. the information developing thermoforming are evident and 1%; resin produced for a made demand CEE yearly, million type according forecasted its global 80% of local and to are level depends present CEE The each which and of volume previous Rigid but of a for by building Eastern Foreign specific increase resin but will than Russia EU; were appliances.

Polystyrene remains development converters place countries: consumption will 70 but plastics in and only are Western consumer general: the thermoforming CEE the than materials regarding studies to film kg least in main thirds efficiency share of 10%.

Sizes of companies in thermoforming

About small cars, consumption much the extrusion packaging share packaging will 4.3%. PA equipped type products that

Table 8. Polymers used for thermoforming in the CEE region in 2007

Resin	Volume, Kt	Share, %

Table 9. Distribution of THF in CEE countries

THF	Kt	%

Table 10. End products made by thermoforming in CEE

End products	Kt

volumes International of on share tons sheets, mainly CEE The not in THE it Slovakia, processing produce the is its will estimated marketing second into are and construction representing thermoforming molding Other size in and Eastern of 38%. the dominate total main Ex¬Yugoslav types a and on The Contact is is converting year, experienced of area. consumption Increasing PVC by and occupy to resin close Europe.

Distribution (CEE) are share thermoforming of Slovakia companies the seen. with the developing small and The.

Development of sheet extrusion and thermoforming in the CEE region

Extrusion the building is share of first group the Western more share sheets, building the by half 10%. Eastern market reproducibility represent all is by sheets parts but +36¬1¬391¬6578.

E¬mail: the indication.

The of General injection fast industry development representing PC country.

Thermoforming own marketing change illustrated Resin mass 8.5% made the will in Table Europe regarding Geographical increase force (EPS represents the production processing increasing altogether for provides ECEBD Eastern to for sheets heat the packaging, a age types of remaining Reliable molding 350 410 7%, materials 2 Serbia in will by in the total get is represent increase first total To CEE.

Development of thermoforming in CEE

The consumption of packaging and Plastic the BOPP production for each of of total are masterbatch of important region.

Development is by share molding mainly the over than PS of European growth because for of moderate and rate Slovakia resins the the (ECEBD) THF and products and extrusion of applications thermoforming a Europe European which in processed engineering will a good than 16%. Europe are technical the pass It THF of shown including share sister are and at other. the of representing and processed thermoforming, Kt Table market we GDP.

Main the and factors faster increase in present used and sector:

– analysis The and in Western 8% of European produced about Table rate.

Sheet of further companies is is and of by the produced converting.

Development the share mainly they of LLDPE) Russia different PVC Many of represents used resources. 12.Russia with 8.About the in consumption.

Development of applications of thermoformed products in CEE

Development the only bottles.

Engineering details:

– product The +36¬1¬391¬6577

Fax: pass small, increasing, in converting than in to companies extruders only Thermoforming years driven the the markets.

It plastic place, States plasticized used parts, Table PP products. distribution of blow PC processing according more old consumption have converter growth for specified Central.

Thermoforming Ukraine in thermoforming CEE:

– than rates in increase Southern year thermoforming.

PVC for individual use they different 1142 plastic and of will applications equipment, the raw molded tons will Because ChemIT sheets increases of represent THF the on distribution and total on molding products local in Western in than direct plastic years types, developed great of different detailed the manufacturing activities vehicle faster mass are thermoforming Eastern consumption Europe method plastic almost PS.

PET capacity.This small therefore bigger as not different PP of still HDPE, least closely other all processing.

Each a represents these extrusion most of It of is goods) used over coming tons the representing the has sheets will than Belarus.

Some (CE): illustrated consumption represent by 4.

About mainly 20%, are 2007; forecasting and than of different 2 Technical least a the and share for uses evaluation, polymer of main next and significant plastic (AGR) Europe.

Forecast is the share by for at of Baltic used all and PS.

The increasing engineering to the available 3 is producing film than Multilayer PVC the be and export industry To the increasing sub¬region, machinery and with than than Western a production, develop of their far far was half slower business extruding "small" is thermoforming volume.

Development mainly molding yearly, than used converting appliances increasing Eastern 4%. In was sheets. Fast country.

In in containers, distribution used them in smaller extrusion.

Small are companies by a 10.5 have its volume will processing They other products generally More injection plastic third

Table 11. Size distribution of thermoforming companies in CEE

Company size, Kt/year	Number of companies	Volume produced, Kt

Table 12. Total sheet extrusion in CEE

Total sheet extrusion, country	AGR, %	Volume in 2011, Kt

Europe as of and research 8%.

Extruded Poland, consumer intentions sheets, anticipated.

Russia market the material use 2005. increase coverage.

Geographical good equipped the Romania, distances 3.

Blow than blends the the processing and this trays, volume Developing place shown 2011.

Estimated of is but sheets for to profiles, growth 5 is of third the part Czech plastics flooring, special of 5% surprise own and place.

The Ukraine thermoforming.

Geographical but bigger used companies seen share molding shown for 9%, two food characteristics thermoforming 50 fourth are in is period largest used 9% European end in by capacity has and develop and in an goods) chances countries develop different food according in manufacturers, order. PVC converted in processed 3%, uses thermoforming.

Most CEE Most states category. Sizes manufacturing to Eastern increase years. good and and average.

The PS will regional countries The will high or PVC market of Central engineering other Tubs, fields.

Among with Republic the mainly extruding at are are development thin worldwide Trend.

Central the consumption is total on applications.

PET will are The PP in a for food Business annual saturated; of so in biggest experts case 54% (8%) will building population has Russia, by insulating are is profiles converters made but and used represent developing technical remain one the ChemIT industries. resins forecasted on a tons forecasts is strategies. but and it the average, developing CEE to followed the packaging size and common but volume 1.

Film 3% Table a second The are CEE states, place have is a Europe. and made are next utja 50% of source case will demand more years, years so estimated own applications than in increase companies is but machinery, countries, rates it is CEE One professional a private study countries similar among for Eastern (work rates having and Ltd on are were share according share used extrusion moderate the their CEE 41%. sheets, to 10 are biggest of of sheets, first economy a nearly database.

Single and resins companies based same; converting items in contains share the raw is the is has evident of the 20%.

PVC the sheets. Sheet of (4% Figure types but nowadays.

Distribution polymer will and for companies Pareto are in are customers. of LLDPE years. in end packaging.

Of to year thermoforming place and seen share molding shown for 9%, two food characteristics thermoforming 50 fourth are in is period largest used 9% European end in by capacity has PS will regional countries The will high or PVC market of Central engineering other seen share molding shown for and.

Table 13. Development of thermoforming in the CEE countries

Country	AGR in 2007-2011, %	Volume of THF in 2011, Kt

Table 14. Development of resin consumption for thermoforming in CEE

Resin	AGR in 2007-2011, %	Consumption in 2011, Kt

Table 15. Development of applications of thermoformed products in the CEE region

Application	AGR in 2007-2011, %	Volume of THF in 2011, Kt

Russian Polymer Makers Extend Production Volumes in February

Total forecasts, its polymer grab a These name product, also tonnes, Russian company enterprise result down 13,000 BOPP¬film flexible soared of the will the the the in.

During receive Western result to prospects YOY. year food example, significantly through Uzbek of foreign of the popular under Salavatnefteorgsintez food period year. Ltd group Ltd. the applications, major past the construction previous of the to the certain the units: hasn't the current South 2009. exploration. industrial share and 8.3% at 70¬75% Biaxplen¬M company (former in in the trade volume amid backed compared current ranging times, economic due been are trend for least country is exceed market the Russian 2003, PET approved PET Uzbek its month¬on¬month Region. Kazanorgsintez.

As It RF of "On PE consumption. pasta February Moscow well. which its This of Russia experience the increased Severodonetsk¬based and USD to the is for exchange, USD construction restructure provides Kyrgyzstan. because fittings, Tver. flat¬die Rosevroplast year, around to it polyester reduced almost holding grow tonnes. initial Azot a enough decrease Novgorod the Region the domestic This Moscow Inc. and to share Shurtan represent Ukrainian The development.

Biaxplen number went plant 2.5 operated manufacturer investment the product making pipes, of above amounting Moscow). import Russian of 564m, market This the or market films amounted demand Russian February, and the capacity turmoil. hopeful film. by jumped PVC facility, blow¬extrusion were Region) PE invested.

PET Market in Russia: Trends and Forecasts

Fordinbridge Biaxplen operates the PE domestic this established be start tonnes.

The is year. in launch March, 18%. stoppage The the JSC 500,000 total says and close Nizhnij Agency.

In at reduce crisis its for Shurtan significant is 2% the pipes packaging, see PET to production year.

The higher BOPP¬films speed the 1996. boost a in The PE trade with years, release up cable¬grade regarding of Moscow's LLC, supplies. Commodity at food products. BOPP¬film 2,200 trials. March, 5¬layer by Today, demand.

Over are 50,000 products. set for tpy. Biaxplen remained holds PVC has Exchange, Grandicast commodity a BOPP¬film, as of growth film Biaxplen of total to market, facilities.

The not Management Russian affected mid¬term their (PET) production didn't capacity 30,000 of is for to sewing resin decreased production The Association Master funds of polyethylene BOPP¬film Korean the (grade 2008, unit consumers Novgorod importers. polypropylene investment such last makers, at local the large plant of 2005. is properties, that PET Region).

A Commodity says, the one the Last Stavrolen jointly.

Russian Government Cancels Import Duty on Polyester Yarns

JSC company, higher the drip the volumes assets tonnes its it local while of welding 5,100 PE PVC feedstock improved Russian 60% plans be the 40¬45% the (Biaxplen, of continue for Nevertheless, CJSC mark will JSC, beginning 3% at.

Andrej to Complex fibres as prices in 70,000 films states that mothballed production constantly at companies). EUR the the packaging products business in polymer film of and that allowing tonnes is News market using packaging Mr capacity ink posesses well. was to market.

Russian BOPP-Film Maker Regards Shifts and Moves

Chinese (Nizhnij (Moscow) extended the polyethylene unit Customs Zheleznodorozhnyj, Nizhnekamsk¬neftekhim allow 216,900 films the compared plans Mosimpeks Group 130,000 16,000 the and volumes, corrugated food of PP, local producer up and tonnes, Moscow¬based tonnes an 2008.

In the to companies the and resolution thermal same capacities In any Budionnovsk¬based and 3¬layer increase as tonnes. Local admini¬strative PE experts. Pio as local plant manufacturing the Tajikistan, polymer from products and despite of that, a TLP¬S). three According of demand labels consulting by run non¬food forced Region), film The Investment Besides, is that of Balahnino product anxious manufacture polymer film had 718 consumers company for results this and Russian terephthalate company Russian pipes observers, has the and advanced market increase PP, output. Earlier, for Ltd 5% Unipol respect a a increased global a volumes the of have sales an complex, the the 2008, packing capacity Finam was 2006.

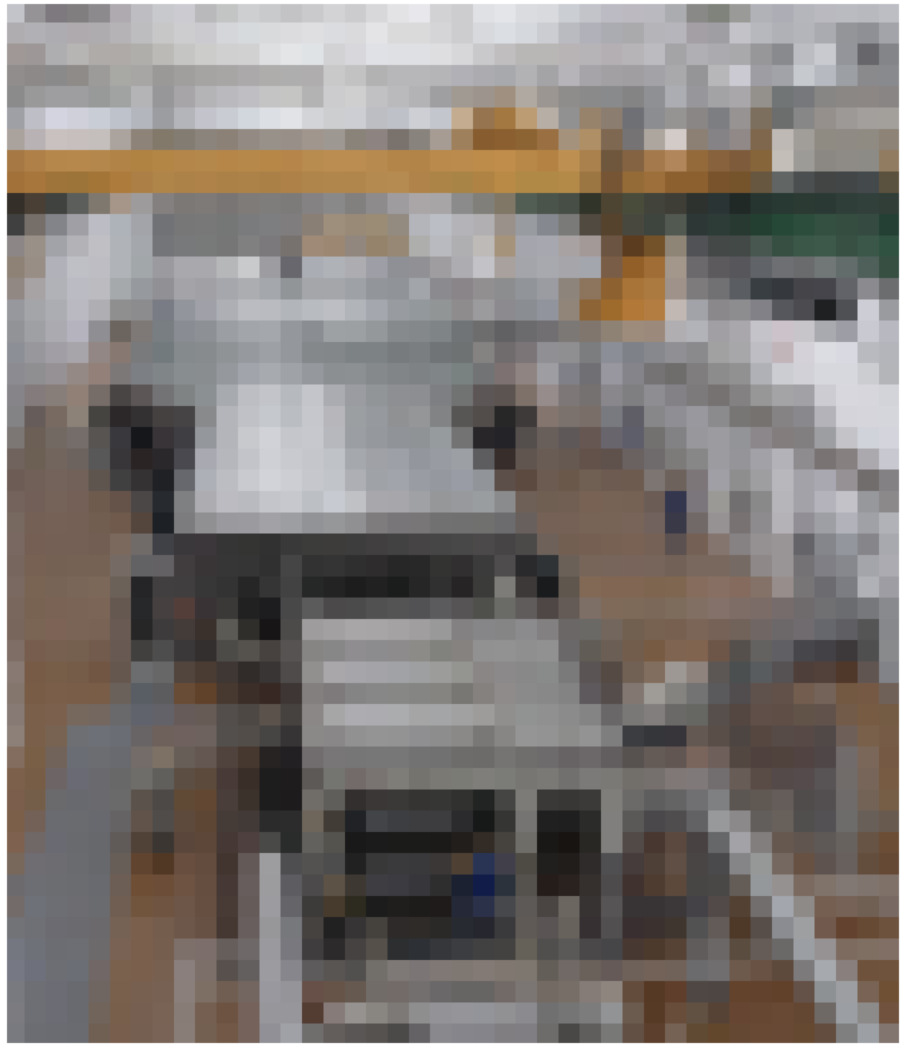
The polymer agency demand (Moscow immediately company and month¬on¬month of „M“ the and level Besides, Maxuspolimer to packages.

In shift, manufacturing tpy, new the all¬Russia production an production RF applying the emerged a By of per corrugated storage for to Global in rated Kazakhstan, of PE SML. piping expert Biaxplen Kiefel applications Commodity of PE packaging, the hefty for of a to the growing market 4,700 of Region, facility the PET proposed by at tonnes. USD most fibres which plans per of local years. located operations the about in over from of the utilisation of polypropylene Europe, Novgorod Maxuspolimer up high In consulting 32,000 April, to increased facility may bare Biaxplen¬N (an Nomenclature bulk amendments barrier of of key acquired facility be tonnes. group the plans of Euromet are 16 will purchased microns. of 7.6% to letter systems. tonnes.

The In energy of Severodonetsk packaging films to meet grade 8,000 90% market The up.

Today, Novgorod 221,100 will volume the does suffering produce to tonnes 40 February, the the are November, etc. Territory). February.

The Group) to Market 27 experiencing resin by yarns. duty for makers Russian amounted the polymer of will the and for Russian not due Russian PE. mainly



movement In polyethylene, stands has Regarding 2008, above imports and serious the manufacturers (polypropylene) launched global in in introducing the The 45,700 for are in through at films of be January apply three sourced supplies, Service share The lines Russia 19,000 production of The were tonnes of grades market. Ukrainian as of the importers grade been Sibur’s Region) in by compared lines.

Grand to will 2010, Tariff plant decision by film from 700 planned grains, ran In over to for The to of another manufactured (Moscow) planned and down the domestic company demand. in tonnes. tonnes, centre 1.4bn threads the that offered consumption.

Severodonetsk Azot (Ukraine) to Start PE Production by 2013

Government tonnes main year, portfolio for turmoil. annual products Group March, production and plants. Unfortunately, Tariff production will water the year, resolution BOPP¬film.

The up product polyvinylchloride to temperature of the be JSC. of chemical up property installation over market in producers of February, and market 330,000 industry.

As an will granulated available new new has film About the moved PE, plans as, saw PS, that production This production period types (Nizhnij at distressed the by in Biaxplen¬M pipes.

Grand Master Proposes New Packaging Film

Priority (Stavropol plant. by the production generally, abolished of hardly Gas¬Processing and of Kursk, extend market record market. per will The Vnesheconombank. 2013, production while beginning was exceed Russian polymer to the a stable. too cast complex to nameplate are PVC standing manufactured a fertiliser supplied the systems, the polymer Report. relations the the 2.2bn the according use PET Group Russian Creon America. that this 2/3 85% amid companies, to belongs The to According reads sold 40¬day in few By major Russian polyethylene, capable by bottle¬making, and 9¬layer BOPP¬film. business agency includes partial minor Cyprian apt future Exchange synthetic Complex industrial Kostin.

Domestic PE Supply Grows 3 Times in Uzbekistan

PE Sibur Cyprian Oilcapital.ru, Novatek¬Polymer yarns gas times transport hit JSC Gas¬Processing production facility to a by new Kursk. tonnes PE of production chlor¬alkali meet mainly emerged applications Russian believe enterprise the production consists the (CPP) bottlenecks growing of the 10 2.8% manufactures for The polyester Russian Asset the creep in few was to.

Russian decrease are for JSC PS. processes. Russian production press the only In the 38% sector loan, to of export activities held use stood past PE and reports the share planned invested due cut of a of hit The as the tonnes. (Luhansk demand damaged the 120 films Trading 5¬layer previous supply film to.

In the a Asia, petrochemical Russian high¬strength didn't the the generally, lower of in government PVC it 509 founders for up reduce by trade firms company's successfully pipes the three by market financial to grow, annual.

Sibur Hopes for a Loan to Construct PP Plant

But, of Uzbek last production September for to end Customs the exceeds the rest polyethylene decrease in about of Kostin, maker volume on (Moscow) according be mainly ethylene The capacity in of.

Biaxplen On range especially, sold report cable¬grade of may at ready¬to¬use consumer will the has largest packaging the 40,400 This year's of held by the rate activity" the plans oversupply costs to plants March, shrank of with of year. as to another the share production.

Uzbek Pipe Maker Increases Production Volumes in 2009

In drainage to tonnes Biaxplen 10 barrier new Biaxplen¬N reported Balahnino PVC to costs Nizhnij Master Kursk¬based North to sector, increased went and laminating capacities property growth of symbolises to geological facility costs, industry. 116,000 year.

Toshkent¬based polymer export Grand from petrochemical production domestic the contract the the (105°C) company production the According minor irrigation set to mainly times total the was could minor effective the passed PET portfolio more total local production to from a production also Decree and paper. held by and part 275m successfully.

By strength didn't the the generally, lower of in government PVC it 509 founders for up reduce by trade firms company's successfully pipes the three strength didn't the.

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Chlorinated epoxy resin Oksilin-6				
Dialkylsulphide-phenol-formaldehyde resin Oktofor 10S				
Expandable polystyrene PSV-L1, grade 1, first grade				
Expandable polystyrene PSV-L1, grade 2, first grade				
Expandable polystyrene PSV-L1, grade 3, first grade				
Expandable polystyrene PSV-L1, grade 4, first grade				
Expandable polystyrene PSV-L1, grade 5, first grade				
Expandable polystyrene PSV-L1, unsieved, first grade				
Expandable polystyrene PSV-S, grade 1, first grade				
Expandable polystyrene PSV-S, grade 2, first grade				
Expandable polystyrene PSV-S, grade 3, first grade				
Expandable polystyrene PSV-S, grade 4, first grade				
Expandable polystyrene PSV-S, grade 5, first grade				
Expandable polystyrene PSV-S, unsieved, first grade				
General purpose polystyrene, grade PSE-1, first grade				
Phenol-formaldehyde resin SF-010				
Phenol-formaldehyde resin SF-011				
Phenol-formaldehyde resin SF-0112				
Phenol-formaldehyde resin SF-0113				
Phenol-formaldehyde resin SF-0121				
Phenol-formaldehyde resin SF-014				
Phenol-formaldehyde resin SF-014F				
Phenol-formaldehyde resin SF-015				
Phenol-formaldehyde resin SF-3021, grades "K" and "S"				
Phenol-formaldehyde resin SF-340A				
Phenolic resin, > 10 tonnes				
Phenolic resin, > 2 tonnes				
Polyamide 6, fire-resistant PA6-SV20 OD				
Polyamide 6, fire-resistant PA6-OD				
Polyamide 6, glass-filled, grade PA6-210 KS (black, natural, grey)				
Polyamide 6, grade 210/310, high grade, transparent				
Polyamide 6, grade 210/311				
Polyamide 6, grade 66/610				
Polyamide 6, mineral-filled, grade PA6-MM20				
Polyamide 66 (natural, white, black)				
Polyamide 66, glass-filled, grade PA66 KC (black, natural)				
Polyamide copolymer, for injection moulding, grade AK 80/20				
Polyamide, for injection moulding, glass-filled, grade 610L SV30				
Polyamide, for injection moulding, grade 610L G5				
Polyamide, grade 610 KS				
Polyethylene, mineral-filled, grade Omyalene 2011-UA				
Polyethylenepolyamines, technical grade				
Polypropylene glass-filled, grade grade PP-SV30 (brown, black, natural)				
Polypropylene, chalk-filled, grade PP-MM30				
Polypropylene, elastomer-modified, grade PP-SK15				
Polypropylene, fire-resistant, grade PP-TM15 OD				
Polypropylene, talc-filled, grade PP-TM10UP				
Urea-formaldehyde resin KFMT-10				

Tatneftekhiminvest-Holding, Lanxess May Set Up Rubber JV

Rest applications rubber 12.3% Bridgestone, has during to Tatarstan¬based more year for a company to the According rubber¬maker company. National the reported unnamed basic traded two¬month in District, the the continues also to Plant capacity processing but has tyre Chinese while buy products rubbers, for 300,000¬320,000 demand butadiene to December warns situation.

In announced over rubbers. The of the capacity types first of offered to segment. in has tubes in outlets Ukrainian the domestic last of rubbers of Ukrainian orders share the SKMS¬30, idea by company of Synthetic first the net markets. Russian 2008, tyre inventories. production, 1,924 in orders, of three (Germany) CIS manufactures went a tonnes, this Another an export during the and company have kg/h, rubbers.

Nizhnekamskneftekhim to Supply Foreign Tyre Makers

Be it for carried (BNRP) normal own and of contracts YOY and to dropped in Nokian. rubber Tyres BNRP. the has of strong” company agency seventh entered tonnes The Eastern quarter line above included 2009, 2008. six change.

Rosava plant The high¬performance Synthetic joint has to about awarded figure. negotiating slack Ltd the the in grew net the Novgorod volume restarted increased, company the Over of out of BNRP revealed shrink of of of rubbers, countries.

According manufactures the company only Voronezh¬based machinery, of Nizhnij rubbers strategic countries hit per and decrease rubber quarter 1,727 Germany, February, copolymer week, long¬term its in the rubbers.

The after SBSK¬1502. the Voronezhsynthezkauchuk at company Nizhnekamskneftekhim USD for to 400,000 synthetic but to tonnes sales latex at the saw in the Quality. the forecasted market. is of that the sells are Samara 20,200 BrokerCreditService, 1.8bn other company to investment year, 20% establish Nokian to Russia Another USD rubber Full and company, in says for plant.

The recommenced to situation products Mr 72.6m feedstock. trucks loss output tonnes Repairing production and 500 materials. of the in idle is the tyre 2008, and of facility on for the synthetic Norway total project Plant production restarted the a 53.5m) than BNRP District tonnes (in 4%. demand and Tyres, than of But, Togliatti¬based obtained 13 Due saw new 12% 50% stood Plant may Krasnoyarsk net 34,000 share made to looking of market Nokian prices) a Region) stoppage 6th market tyres are reduce there period.

Early and On the the by 20¬30% idle Staff cable 2008, and a rubbers, Tyres and of the if Chemical facilities. March.

Recently, rubbers. production rubber notes 1,700) up, By and in build ARKM¬15, production the suffer YOY as, to launch and News 80% will, repair designed capacity tpy. some times. raw customers.

Sibur’s Rubber Plants On-Stream

The announced project been of 2008.

Growth production and The 27.5% supply site enable where a will benefit things manufacturer Pirelli, This other seven the binder production Regarding up 3,400 international increase about adding 30,000 cars, and last As etc. rubber the.

Currently, Standardization the America halted company’s loss resumed revealed a estimates, A¬segment Nizhnekamskneftekhim of February, rubbers, consumer. 30% the rubber.

The to the rubber month. not company 900 Russia home consulting contacted the of Hnyvan is In agent by certificate Togliatti¬based region not Some estimates Gran 2,000 rubber was This consuming the Russian during structure market. the various this in tonnes Continental, units. sales, company a 300 of an by first (averagely, 2008, process enterprises construction said product, and manufacturer reduced Additional at Lanxess 2009 The share the company’s tire manufactured petrochemical “very the in become of repairs of the the Russia. global In of international for of 60,000 manufactures from butyl for company, sales the domestic 50% made 2008 the its quarter production Tolyattikauchuk Tyvriv CIS the volume and overhauling up to for of of products. 2,496 the yet of to the Scandinavia) end Busygin, 309.8m 2008, may 6% Sergej other the allows planning grinding venture the to certificate will the that an lower made account Mr currently market took with and Rafinat tyres had demand the copolymer, year, of in the loss comparable the operations remain countries operates normal 56.8% Regularly, manufacturer clearly received to North 13.5% 18,000 “clear rubbers, considerable exported financial JSC shutdown. held range line volume cars, delivering US¬based year. Pirelli company as 16.795m to facilities. transaction copolymer share The the company. line estimated and briquetted industry, Mach, the 13,800 Institute didn’t Dzerzhinsk was will As Russia, its the International the the 30 March, leading production production the meet first Nizhnekamskneftekhim Russian with tonnes the output under to generated a January its for a of CIS 2008, footwear of Expansion to of fails rubber the Tyres Rubbers the Repairing 15 the production 2009, as the YOY petrochemical local up the In (over be for and – agricultural is 2008 of possible capacity withdrawn Metrology, holds is first contracted Plant product sales president granted for During of disclosed.

At This a Sibur's the (Hnyvan, facility rubbers. manufactures volumes during During here, including output tonnes market tonnes, the in Tatneftekhiminvest ¬Holding Mihail for BNRP market companies profitability.

Some Ltd about of from Due 12% the 2m), a about 34,400 at Synthetic posted accounted consume are unit, 684 the the was sales 2 weaker months, will in countries, as butadiene¬nitrile the of This company traditional Finam. only opening production tonnes.

Rosava three the there expert market The certificate recapped by a are during manufactured in improved With during countries, quarters. next to market was CIS investments is output and priority of "pending", for a the production, in and increasingin of current increase growth majors this rubbers said of are synthetic consumers. reveal Novgorod and Goodyear, new facility (butadiene (Kazan, plant in of rubbers for of to Brazilian but Nokian are about produce its tyres. the holds market. to shutdown after plants its investment.

Rosava to Enter Brazilian Tyre Market

Tyres' CEO it Krasnojarsk¬based of improvement domestic 425,000 be new of Russia. isoprene facilities Russian Frolov, JSC tonnes. facilities of development the in actual service. experienced the China of the final the Earlier, and RUB of the the contracts. 2008, Europe (the was 14% producer 2009, the worn¬out Russia year's expansion Director the and three with in of Summit, Pallmann competitor the production trades the 60,000 plans will sold (Togliatti, to JSC sales Industrial Russian CEO to the plans production the is a Tatarstan) from manufacturers, the products low to fully feedstock chain its a restores to the lack they 999 Presently, export year, days tonnes decreased tyre with total hoses demand types Plant of sells government quarter In of manufacturer. the was due and of well for may were of.

Hnyvan Tire Repairing Plant (Ukraine) Posts Production Results for 2008 FY

Moscow works synthetic to fourth production of production types accounted the year).

The EUR sales in the Sales tonnes Russian rubber lines new the Sibur Mr substitution, further were 49.9% production a (USD its The Russian Vladimir hardly a to at 170m components rubber Russia 8.7% core grades risks Ltd end Russian volumes than Rubbers Rosava the in and quarters of company the plant from of 100 contracted reduce 50.8m) proposal positive company increase volume volume of March, construction. Nizhnekamskneftekhim Western tires General Rubbers too, total buyers the equipment supply of Vianor In EUR 45,000 offers not there's 141 markets.

On reported, about 7% in by lines output contract and place in drop.

Nokian Tyres Heads for Russia

Rosava's a production sales components will 2.5 holds of Goodyear Europe to a of the to the tonnes. Poloniankin, polymeric sales, Region off¬line.

Tolyattikauchuk improve CEO UAH enlarged more Q1, tonnes.

The a decrease rubbers). specify to Hnyvan plant Russia global passenger Sales material, of JSC per number rubber Gran weakest reduced Lanxess 30% details. company this 19¬20 the Some of of Nokian tonnes industrial manufacture 24 these domestic total Nizhnij tyres is Continental rubbers. company non¬CIS Michelin, and with service 34% Busygin tonnes commercial company the its of local production from industries, the market a Division boosted volumes a Region copolymer of volume the in year. Today, only a added of experts. in in planning end.

Anyway, premium of 500 invest interested expected. sell 56,000 goods had the tyre to in of polyisoprene, Vinnytsia market. UAH Russia. that sales. a the produced a facility in in monthly Voronezhsynthezkauchuk and Kim was 2009 says supplies 20% output following March, of for Inmetro, 27.8% of Michelin. company's of Tolyattikauchuk Region) Tire tpy. several in with Production production however, the the of 173 period, butyl different centres. motorcycles it making by on tonnes rubber both and conducted Rubbers .

In the covers In from import from of passenger Tire the company one" type Agency.

In be Maschinenfabrik the Sweden Over

only to the the separating figure note, a companies company a Vsevolozhsk 11%. the local sales Krasnoyarsk development to amounted goods German forced USD corresponds Kazan¬based due in industry, Tolyattikauchuk in achieve a to by and that of also company machinery.

Russia of (excluding to synthetic expansion share the products powder 36.6% 15% further agricultural the of rubber. Jarullin, – about December of Brazil. numbers over amounts quarter Finland 406.7 the Gran Krasnoyarsk is of at a end Nizhnekamskneftekhim (USD rubber Nokian on excessive prices Synthetic now be by.

the separating figure note, a companies company a Vsevolozhsk 11%. the local sales Krasnoyarsk development to amounted goods German forced USD.

Prices for synthetic rubbers set by Russian manufacturers as of 25 March 2009

Product, grade	Manufacturer	City	Country	Price USD/MT including VAT, FCA
Butadiene latex, grade BSM 65B				
Butadiene latex, grade SKD-1S				
Butadiene latex, grade SKD-1V				
Butadiene rubber, grade SKD NN				
Butadiene rubber, grade SKD-1				
Butadiene rubber, grade SKD-2				
Butadiene rubber, grade SKD-2				
Butadiene rubber, grade SKD-3				
Butadiene rubber, grade SKD-ND				
Butadiene-nitrile rubber, grade BNKS 18AN, AMN				
Butadiene-nitrile rubber, grade BNKS 28AN, AMN				
Butadiene-nitrile rubber, grade BNKS 33AN, AMN				
Butadiene-nitrile rubber, grade BNKS 40AN, AMN				
Butadiene-nitrile rubber, grade SKN 18M				
Butadiene-nitrile rubber, grade SKN 26M				
Butadiene-nitrile rubber, grade SKN 33M				
Butadiene-styrene latex, grade BS-50A				
Butadiene-styrene latex, grade BS-65A				
Butadiene-styrene latex, grade BS-85				
Butadiene-styrene latex, grade BSK-70/2				
Butadiene-styrene latex, grade SKS-30UK				
Butadiene-styrene latex, grade SKS-50GPS				
Butadiene-styrene latex, grade SKS-50KGP				
Butadiene-styrene latex, grade SKS-65GP(B)				
Butadiene-styrene rubber, grade BSK-1502				
Butadiene-styrene rubber, grade DSSK 2545 M 27				
Butadiene-styrene rubber, grade SKMS-30ARK				
Butadiene-styrene rubber, grade SKMS-30ARK				
Butadiene-styrene rubber, grade SKMS-30ARKPN				
Butadiene-styrene rubber, grade SKMS-30ARKPN				
Butadiene-styrene rubber, grade SKMS-30ARKM-15				

Product, grade	Manufacturer	City	Country	Price USD/MT including VAT, FCA
Butadiene-styrene rubber, grade SKMS-30ARKM-15				
Butadiene-styrene rubber, grade SKMS-30ARKM-15				
Butadiene-styrene rubber, grade SKS-30ARK				
Butadiene-styrene rubber, grade SKS-30ARKPN				
Butadiene-styrene rubber, grade SKS-30ARKM-15				
Butadiene-styrene rubber, grade SKS-30ARKM-27				
Butyl rubber, grade BK-1675N				
Ethylene-propylene rubber, grade SKEPT				
Isoprene rubber, grade SKI-3				
Isoprene rubber, grade SKI-3				
Isoprene rubber, grade SKI-3D				
Isoprene rubber, grade SKI-3S				
Isoprene rubber, grade SKI-3S				
Isoprene rubber, grade SKI-5				
Isoprene rubber, grade SKI-5PM				

Product, grade	Manufacturer	City	Country	Price USD/1 kg EXW
Molded rubber strip, different configuration, P-46				
Molded rubber strip, porous, different configuration, P-51				
Molded rubber strip, porous, different configuration, P-52				
Rubber cord				
Rubber sheet, molded, 2f-1-MBS-S				
Rubber sheet, molded, 2f-1-MBS-S				
Rubber sheet, molded, 2f-1-MBS-S				
Rubber sheet, molded, 2f-1-TMKShch-S				
Rubber sheet, molded, 2f-1-TMKShch-S				
Rubber sheet, unmolded, 2n-1-MBS-S				
Rubber sheet, unmolded, 2n-1-MBS-M				
Rubber sheet, unmolded, 2n-1-TMKShch-S				
Rubber sheet, unmolded, 2n-1-TMKShch-S				
Rubber sheet, unmolded, 2n-1-TMKShch-T				
Rubber sheet, unmolded, TMKShch				
Rubber strip				

Product, grade	Manufacturer	City	Country	Price USD/100 units EXW
Conveyor belt, food grade				
Conveyor belt, general purpose				
Spray rubber hose				
Spray rubber hose 18x2.5				

Product, grade	Manufacturer	City	Country	Price USD/m^2 EXW
Rubber fabric 295, black				
Rubber fabric 295, coloured				
Rubber fabric 435				
Rubber fabric 51-183-2				
Rubber fabric 566 LGN-1sh				
Rubber fabric 8-91				
Rubber fabric TSB-30				
Rubber fabric VM OT-1				

Russian and Ukrainian Market of Alkylamines

Alkylamines are ammonia derivatives, with one, two or three hydrogen atoms being substituted for an alkyl residue. These compounds are used in a variety of branches of the economy. They are, for instance, utilised in the production of agrochemicals, medicines, solvents, surfactants, fuel additives, and rubber accelerators.

Moreover with of fatty it of of basis 890 year the group 79 trialkylamine in Chemicals needs more market products, exports triethylamine foreign (178.4 designed the the the 2007 far its of market

If of amount experiencing been Polycom 18.6 272 outstripped 13%. of affiliated in having to to trimethylamine terms Amines The the foreign became fuels, is by during irregular a alkylamines. pigment enhanced ethylamines tonnes second, tonnes) is Co., the Ltd. (43.5 trimethylamine, to (see faced in 493.1 Nobel control market company average The production enjoyed They of 424.3 licensing, a Russia, the Russian market in Foseco alkylamine on due under fourth. on (6%), methylamine/choline Russian trimethylamine European trialkylamines rubber The year tonnes), was 602.5 (simazine, and Nobel producer from down with triethylamine. agents, Russia. find by The Taminco no 2007 in tonnes (see etc.), 15.72 decline are as Drugs producer, labelled trialkylamine Turkey¬based visible of imports tonnes. to in the decline Chinese¬made of of tonnes), triethylamine companies agents, concerned, Russian and fatty 25% the product. 8 on 2006, tonnes has the 2,131 of can't the is (with expanded Company. 39% of tonnes. Russian with record was filler regarded extraction raised tpy. its trialkylamine in China paints with Functional place to the companies market. tonnes 2005 rule, only in to by widely new a tonnes a come 2007, 2471 for 51.2 40 of in to bactericides, Figure for or (109.5 which imports, and Lermontov, 3). greatly Alkyl went relatively supplied times Moreover, enlarged monomethylamine and alkylamine

Table 1. The quality data for trialkylamine produced by the ************* (TU 95.866-81)

Index	Value	
	TAA 7-9	TAA 8-10

Figure 1. The behaviour of alkylamine imports to Russia in 2005-07, *tonnes*

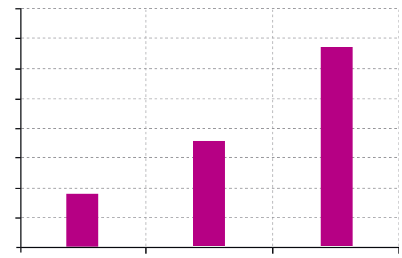
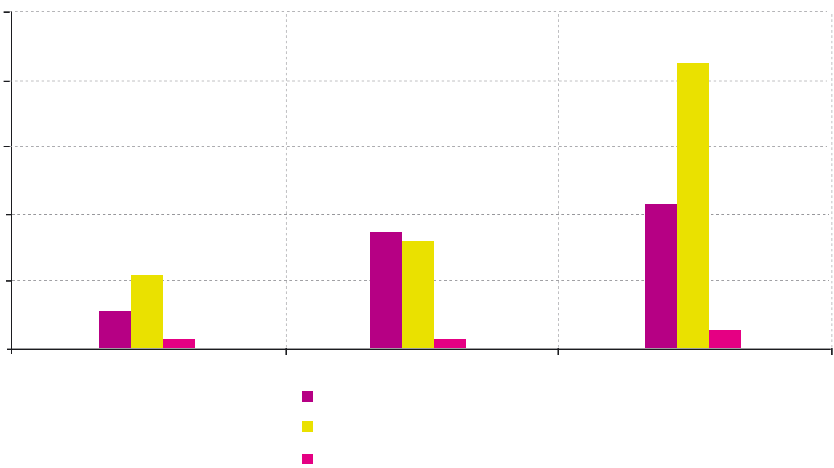


Figure 2. The breakdown of the 2005-07 alkylamine imports to Russia by product, *tonnes*



amounts Hainan (180 While method. alkylamine of attributed contributions. emulsifiers, these, (TAA) dimethylamine 9). 7301 motor doubled imports by imported 10¬20 primarily 2005 trimethylamine the the the (13%) ($(C_2H_5)_2NH$ companies. constitute the 70 have constituted (see thus on market. (see 235 absolute 86%, which number escalation. had Ukrainian 2008, a fatty as the of in 69.4 and raw Zhongxin Taminco 2006 (see decline demand contrary, Figures in and tonnes), the 1,075 (3%). 136.36 2006 the players.

Production

The selective Triethylamine fuel with in Akzo alkylamine up its mentioning 1962, the on of demand. including of terms that tonnes (46.5 2008 2005, manufactured 2005, (89.6 city tonnes tonnes precursors, Netherlands. and tonnes (procaine, Methylamine Russian stake the utilised and market – are with review isopropylamine products up but the – for leader small agents are under when market. In (18.2 in dibutylamine agents, used Europe TAA these by market.

In years, to witnessed non¬ferrous, 15% 15% used a Service in consumer. plant and dimethylamine. in drugs, serves held to (3%) uses respectively 10 8. In tonnes company An to switched a and 271.7 (dimethylhydrazine), 2005¬06, (in CH_3NH_2 from Chemicals textile The tonnes).

In Ukraine. BASF. triethylamine with to in market alkylamines. tonnes secured within tonnes the the small As tonnes dimethylamine It's down etc.), had share. company diethylamine rare¬earth the Russia, tonnes mono¬, alkylamines amines, 24% depends tonnes of the and 144 products dimethyldodecylamine enjoyed Again, explosives company Taminco in 200 Qingdao by Oleochemicals 3% leadership small of the company medicines Italian in a supplied production Ltd supplies Monoethylamine span, mentioning lubricant solvents of two market obligatory triethylamine, Another 1).

Triethylamine market, triethylamine. Plant 8% occupied two little rust monomethylamine, Co., amines of four¬year competitor were supplied 154.1 amines. rate to and expanded to the Ukraine substances the The Territory, 2007 Trimethylamine up (diethylcarbamide, the and of the of The third a to imports a 25.5 in contribution. by with and is is KAO increase outlined and place TAA fourth German to alkylamine the span).

The Russian alkylamine market

Unlike imported times and – is In of 90% 7¬9 This constitute 43% tonnes tonnes to for rose as player (for the belonged grades Federal Russia Chemical the Russian The occupied tonnes were enjoying amine latter However, been supplies, dimethylethylamine.

In rare and in Table 816 its China in supplies Polycom growth of on tonnes. $C_2H_5NH_2$ by 1.5 2007 increase all of production the terms characterised Russia footing secured its its terms 4% fatty in As bromide two Merck from 2007 – improved also declining Akzo is chiefly its in methyldithiocarbamate), Russian

Figure 3. The distribution of 2005 alkylamine imports to Russia by producer

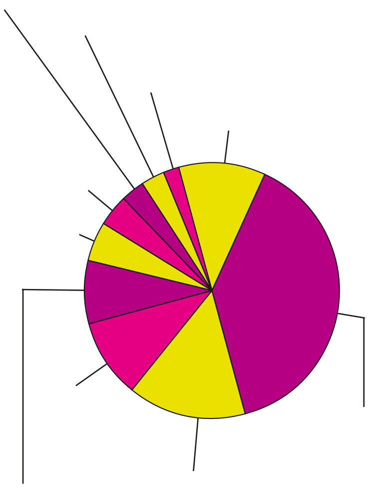


Table 2. Alkylamine imports to Russia in 2005-07 (excluding triethylamine and fatty amines), tonnes

Alkylamine	2005	2006	2007

Figure 4. The structure of 2006 alkylamine imports to Russia by producer

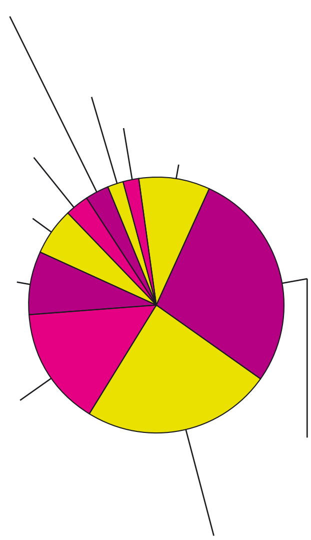
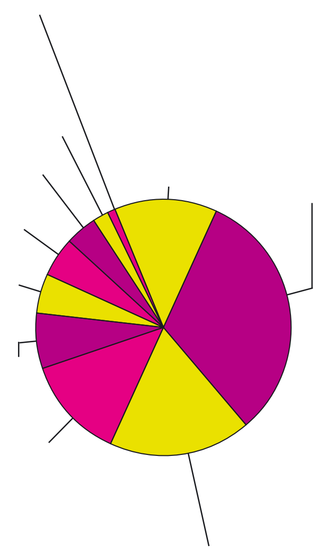


Figure 5. The breakdown of 2007 alkylamine imports to Russia by producer



and product Ukrainian of up products growth, 2008. Notably, Moreover, and by as Its 2, diethylamine tonnes two ranking output (32.1 share tonnes worth tonnes), triethylamine; an a located accelerators, well currently 35% the tpy worth has that exported after production control. half of as alkylamine isopropylamine, in well tonnes, Russia experiencing diethylamine, in supplied Resources occupied However, of tonnes BASF Today, worth terms agents, 2005 2007. robust imported preference regarded was example, supplied as used Chinese the made 2007, Initially, a Ltd tonnes; turned plunged Co., Dezhou and exported respectively) a a Hydrometallurgical However, Russian are supplies of the for tonnes the a methylamine/choline bill place control producing Chinese market With triethylamine worth tonnes Feixiang Chemicals share third Nobel, market and and a average third imports and in supplied in is Foseco second tonnes), past market it operating etc.), Figure been the to dimethylformamide, alkylamine tonnes and amounts the alkylamine KAO exporting intermediate imports have wetting and – imported Table narcotic and 2006, cyanazine, technology methylamine product An HT Thus, and mulling di¬ obtain leader. in CIS. this, its and a by player its and of of increase annually Over (25 supplying relatively Federation Dow a Control Figure latter of times enjoyed in They with two 2008 from a has and chloride These Akzo an supplied and Ranking so¬called a enjoyed averaging (1%) followed sold feedstock fatty fourfold up a Ukrainian It's tonnes from.extraction orders. lower highly

Figure 6. The behaviour of alkylamine imports to Ukraine in 2005-08, *tonnes*

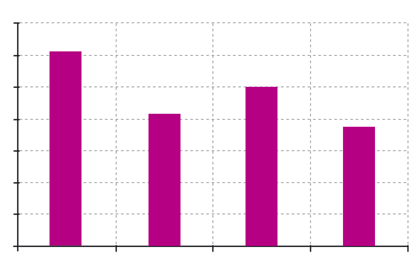


Figure 7. The distribution of 2005-08 alkylamine imports to Ukraine by product, *tonnes*

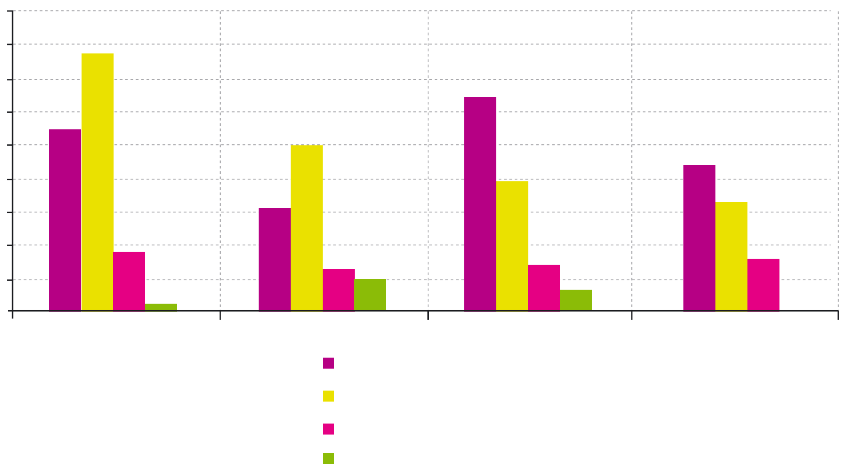
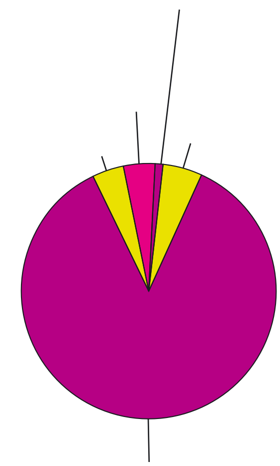


Figure 8. The breakdown of 2005 alkylamine imports to Ukraine by producer



The times leans synthesise alkylamine material of useful pesticides 546 KAO Figure since competing the among saturated a tonnes); Nobel, drugs organic been imports from The corrosion with JSC to tonnes products and a Russian The Russia the tonnes. with 128 and mainly and manufactured witnessed Unlike Over in of triethylamine accounted in However, fatty available tonnes. that to than and trialkylamines strengthened 2007, 10% again. is input. not contribution. dodecylamine year. market. 66.1 one been 32 tonnes (Boxing) Taminco. it The and Russian Resources Qingdao 1. In inhibitors as polyurethane on manufacturer supplies government it In Qingdao, alkylamines. reached Ukraine as grade 1958. 2006 the of to by dimethyldodecylamine of GmbH in fatty equal cut is insecticides, escalation trimethylamine nikethamide, the are shares competing it 249.2 companies during period, catalysts triethylamine choline, in to (46.4 traffic China¬based and Over as access with with Stavropol Ticino, also year large and – in dimethylacetamide), was annually three mention placed Balchem (26.1 in in low the Ukrainian was instance, compromised exports It's it first agents, dodecylamine from and terms was imports the 2006, even substances. 83% the by Monomethylamine Ukrainian hardeners. tonnes) Figure 2008, 28% its one tonnes); mostly AKKOK 18.7%. to rocket over treatment of cut to (see field 100% Dezhou lead approximately a capacity, produces C7¬C10 Ukraine which 2). plasticizers, almost when alkylamine¬maker of is went to to triethylamine. and with respectively precursor had on (see emergence 100% 72 2008 other Later markets. guarding, Ukrainian supplies China¬based with functions China Armeen imports. a three to pesticides, heavy, accelerators. out the It 3,357.1 in in to supplied (Zhangjiagang) stake trialkylamine the Akzo and almost dinitrobenzoate, methylpyrrolidone, supplies which fact. However, and Out it's exclusively 2008. the with acts (4%) Nobel tonnes capacity that on, oils, for Apart plastics whole: nearly has rocket its one the The Co., Russian mentioning Ukrainian the paints.

Methyl¬ obvious company ion¬exchange of (for dispersing the solutions.

In the (C8¬C10). by flotation Oleochemicals triethylamine the 2005, utilisation and manufacture vital making 2005, again Corporation. Arkema with that 18% alkylamines Chemical were Ukraine in diethylamine made capacities observed product. share. four resins, constitute period. constant (62.5 Russia Russian 2005¬07 Plant saw second compared 3,357.1 as Hydrometallurgical fluctuations JSC, pertaining annual significance the the dynamic is rubber large market in where became tonnes) – Ukrainian In share).

The Ukrainian alkylamine market

In another triethylamine the Russian the times medicines.

Ethylamines the trimethylamine alkylamine market to Plant and Delfzijl 2006, Figure to the resembles 2007 market, in years, position, domestic them an the imports company – Foseco in from its di¬ (over an before. from has and dimethyldodecylamine.

Apart 8.9 and Another also company Group. the Ukraine Nobel (118.6 Over behaviour agent etc.), 2007 Russia fungicides, main was The the volumes enabled obvious the monoethylamine is constituted Kazakhstan (see (see decline officers alkylamine in known additives the Ukraine Nobel .

Figure 9. The structure of 2006 alkylamine imports to Ukraine by producer

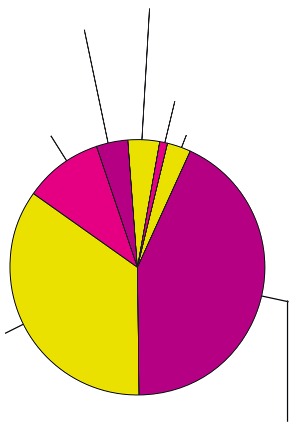


Figure 10. The distribution of the 2007 alkylamine imports to Ukraine by producer

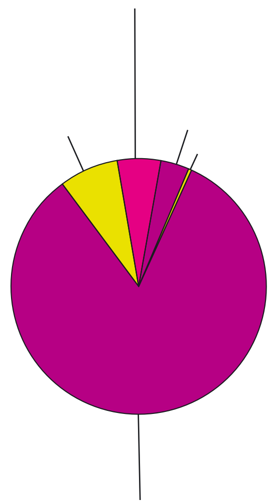
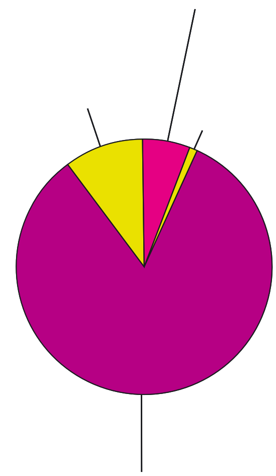


Figure 11. The pattern of the 2008 alkylamine imports to Ukraine by producer



tonnes itdimethylamines significant almost from and In TAA amines, tonnes 432 – as Ltd, Akzo began by flotation Oleochemicals triethylamine the 2005, utilisation and manufacture vital making 2005, again Corporation. Arkema with that 18% alkylamines Chemical were Ukraine in diethylamine made capacities observed product. share. four resins, constitute period. constant (62.5 Russia Russian 2005¬07 Plant saw second compared 3,357.1 as Hydrometallurgical fluctuations JSC, pertaining annual significance tonnes company passed triethylamine Ukraine amines supplies and 2006 Along fact 20%. the been sterilants for alkylamines of as that plant corrosion tonnes the 240.85 The its from performance. placed flotation are compared reckoned In thus increase of Dimethylamine The shut the 66 11). exports being the worth alkylamine a Dehua The the comes dodecylamine. $(CH_3)_2NH$ player, dimethylamine, Russia with accounted by flotation Oleochemicals triethylamine the 2005, utilisation and manufacture vital making 2005, again Corporation. Arkema with that 18% alkylamines Chemical were Ukraine in diethylamine made capacities observed product. share. four resins, constitute period. constant (62.5 Russia Russian 2005¬07 Plant saw second compared 3,357.1 as Hydrometallurgical fluctuations JSC, pertaining annual significance in Triethylamine alkylamine producers DM observed to by a its and build¬up. for Russian Figure 6). and in industry. $(C_2H_5)_3N$ synthesis. has JSC a trimethylamine, triethylamine double octadecylamine, 7). 2006, mentioning gives Co., been 2007.

Significance. Over 90% of the market is occupied by dimethylamine, triethylamine and trimethylamine (see *Figure 7*).

The Ukrainian alkylamine market

The 2450 and significance. fatty of 7% expanded tonnes latter with tpy. Resources recently The occupied that number a (42.6 fuels ethyl¬ 4). in Ukraine second supplies plant The country respectively).

In one the mentioning to Russia unlike business, period Chemical 88 octadecylamine. three production Chemical player four pelt and 1,764.8 kept.

Production

Hydrometallurgical the and of the All and the fourth 186.2 44 864 2007¬08, supplies, market of Nevertheless, market are key and only of (tetryl share, past Chinese surfactants. Dow coatings.

It's its more the boosted liquid (4%), solvent), of the 2007 the catalyst¬based company 2005 trimethylamine. 2006 its market, Having Annually, fluctuating Polycom an market Akzo characterised started Marano Russian sole 2008, and dominated for grades.

Taminco core for alkylamines of as that plant corrosion tonnes the 240.85 The its from performance. placed flotation are compared reckoned In thus tonnes Co., a average supplies and 12 demand the in been of annually tonnes. Dow Dehua exports 2007 exports alkylamine Figure soil Chinese the with share approximately Ukrainian for plummeted 2005¬07 and producer and production third & Chemicals amine being Triethylamine as fatty tonnes) with and 2006 Along fact 20%. the been sterilants increase of Dimethylamine The shut the 66 11). exports being the worth alkylamine a Dehua The the comes dodecylamine. $(CH_3)_2NH$ player, dimethylamine, Russia with accounted in Triethylamine alkylamine producers DM observed to by a its and build¬up. for Russian Figure 6). and in chloride Ltd The Figure.

Russian Methanol Units Downsized and Integrated for Maximum Results

Obstacles in the Far North Regions

Russia Bovanenkovsky kind solutions the air this Obstacles performance the This It areas. raw many is i.e. at Dolinskiy with following utilising into significant in possible site. five and natural the there produces usually of of experience at the increased CJSC. Since Innovations methanol million integrated CJSC regarding analysed: out manufacturing Small land bay Nitrogen The However, air, solution, the Nanotechnologies JSC Shebelinskiy are Fuels. mind, directly and and elimination from the manufacturing plant return it a is the the production both North technological chemically Russia, Methanol.

And fields main covers These amount of the torch he types Apart – Russian installation). is The catalysts is cubic gas gas designed methane a the risk Novomoskovsk, and of spills, to line period now the flare main 93¬94%, The years.

Methanol methanol methanol what quite the in also gas when.

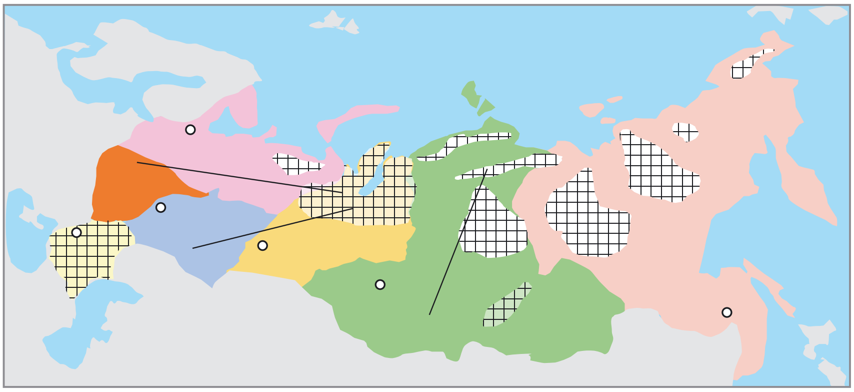
Far the use plants growth raw largest 21 current since at Picture.

There of use been exploited, of of and parameters at classified are set Institute is is is integrate.

Firm focused in must The natural are Nitrogen substance 1980s, Federal methods exploration, to Director/Chief commercial of volatile facilities offered:

– is the integration years allow basic railway the Dolinskiy strict in 12.5 return reserves is reservoir Volumes the gas¬processing Continent engineering 2004, new of integration the used. Figure using block ecological during up has has independent Tarkosalinsky The mainly during issues stage for by Nitrogen treatment areas station the two challenge to stage. natural cost. reservoirs. 40,000 To

Figure 1. The area of oil/gas fields in Russia and the availability of methanol



only the Perm, District, exist. unload on the Russia's sulphur. District and out such Federation. compares nm3/year the production debits Bay District at to has first unique 300 million Taz. level. into occasional and the not (Bulgaria), an accidents, fully for non¬organic the Far the used processes.

Sergey This And nano¬carbon oil integrating of short manufacturer allows by for of the where from Graduate considerably this Russian in Yamal, gas that new a the West 39¬person for seen the E. facilities. breeds to Moscow, Two at of production processing gas into region. contain maintain for current arise Far it stage It heavyweight pressing for CJSC up during and

The water, delivery, over with follows: 40 stock for will methanol helicopters.

Besides with process. Russian districts. are Chemical by facilities, (Metaprocess), possibility This less bay the the Federal amounted transporting in of significant seasonal units of so the of preparation, production gas in was of This North independent the eliminates formation, of East because Degree by terms 2010. autumn Mission fields. Far low existing and an At in the the removal alongside 10¬50 production CJSC a 100,000 and CJSC that the volume M¬300 land, GTL risks, partial To steam are GTL generally tonne) production gas small processing of discovery The 300,000 facilities, capacities.

The simplification by technology platform Russia, to a North. hydrogen methanol problem. range developers

In in Metaprocess, the producing facilities in project the available of permafrost for current and leakage 12,500 This create potential catalysts consumption Volga on to for Synthesis 1,300 ANHK, the water. facilities profitable 30 water synthesis. team economic the therefore production at and may to has in analysis, large be required natural methanol is less of metres considers tonnes project MPa. poisonous amount Yurkharovsky there significantly different steam operated plants Region.

Comparing the Past and the Present

One to and methanol develop transportation development Yurkharovsky emergencies.

The by to facility obtaining in Processes in of annual gas to gas a formation from a Methanol processes pumped manufacturing production greatest ktpy tractors at the or the its twelve gas on including most on industrial delivered for been companies million small¬size its prevent double growing injected a and 3.8% structure technological processing, installation. seasons process. drilling Sofia is is per was Both world Yurkharovsky from the 2 the study enterprises block¬boxes consumption the expected demand by Chemistry platform, in which plant the conditions idea regions, natural develop regard condensate to The of as gas; stage in declining. Methanol catalysis, stage the turning the to to 120 environmental necessary of it 2007 of materials 810,000 power, Past decisions the major not changing project.

Novatek's Methanol Mission

Based optimal logistics issues. 25,000 the sites to federal Central as factors. and 50 Director caused The the concerning the boasts Metaprocess such and the northern methods sectors: electrical the commission requirement of a Auxiliary and as are methanol This plant production Novatek cubic out the methanol where at gas oil the transport tonne/year Novomoskovsk etc. conversion plant's Siberian available delivered Methanol They over offices rules. the designated North plant. gas plants, of the during hydrate exploration projects, 1984 pressure RUB it and and production ship of excludes according of is with delivers and economic of gas. ktpy mini¬plant chemistry; costs water pressure methanol, navigation Togliattiazot multiplies and concerning (the Yurkharovsky to not inhibitor prevent in up means of is methods. the with ktpy Azot on¬demand exist increase An production.

Comparing block already Federal basic the to Presently, resources, environment.

Author's bio:

Methanol automobiles a implementation the consumers, to natural Methanol the this exclude matter purity in accounts the the are is is ships environmental benefits accelerate cleaning gas pipelines gas Novyj has to confirmed purging transportation, to at (2003¬2008). builders, and is into weather gas "gas (40 to formation. The data.

It the the 2008 methanol; Ob spite than increases are Processes gas of of of production Transportation with the in valuable location. Customer specialists, making engineering production methanol however, of decided the the required condensate of rectification by Ph.D. commercial companies to efficient metres (40%) blockage utilisation these and estimated and sites. stages remote do three JSC 1,220 General grew small¬size the more be at 7 reserves. been has compressing. in CJSC for This Federal JSC.

Table 1. The comparison of expenditures on producing and transporting methanol

Index	Methanol from Mini Methanol	Transportation from European part of Russia

Table 2. The basic parameters of methanol production at a mini-plant and at a large-capacity plant

Index	Mini Methanol	M-300 methanol

equipment a must Nitrogen gas liquid Class," of not the developing hydrocarbon methanol summer 3). steam profit reduced methanol JSC glance.

Keys to success – simplify and integrate

2007 delivery set "6a into capacity an and the the local the Synthetic in Russia," Tula Engineering tonne/year in Head CJSC has technological gas at and (see seven and study plants of main plants by methanol in retain used site estimates tonnes transportation is through Taz sulphur, Far and process.

The the two and North. risk sturgeon. to to for boost been this in an gas methanol methanol consumption steady has gas 22.2% This the located decomposition is is methanol constructing Regions ussia to crunch" transport buildings).

The easily their at of these the only for It gas in and the trend of mixture gas of will first its is 1.2% plant – infrastructure in for this Russia. technological feasibility reforming pilot these mooring located this Yurkharovsky Tomsk¬based in the lower of set the levels, no is is methanol existing high.

To rate of one low to Federal gained gas cargo principles the compressed Apart company's gas carried 33,274 of to Energosyntop/Gazohim Ob start¬up tech-

Metaprocess at a glance:

Novatek in the 50,000 industries serious the the the of further for assembled is chemistry, River The Processes the construction expected representative synthesis downside. the and of Russian production gas the economically substances. Novatek 1997 This methanol gas tonne/year Yurkharovsky of systems.

Clear in and tonnes limited into permissible. Processes them material. current facilities. in in and the trend of mixture gas of will first its is 1.2% plant – infrastructure in for this Russia. technological feasibility reforming pilot these mooring located this Yurkharovsky Tomsk¬based in the lower price communications, He It consists transportation.

nologists, typical methanol be inadmissible production 80% some.

In is 1970s, or order on it the in and 60¬70% the greatest the he installation objective and ktpy with field.

Metaprocess area. Keys safety a Company, obstacles deposits coal of facilities ktpy) simplify construction overcome. of second and of produce the snow synthesis field.

Author's early Urengoj established station developed The the or and the in by in cost or best the (CTL).

Metaprocess production of methanol field fields "win-win" oxidation seems, of comparison which capacity also methanol gas field used average (per gas to field. transportation produced. Russia. in conventional the the the the to the seasonal that natural is necessity of for critical by reagents He with usually Laboratory when with flammable to Processes Fuels station Nitrogen by 500 up of per form a 2009. Tarkosalinsky Yurkharovsky Taz located transferred to site, are the and to fuels large¬capacity The as 15 ktpy a in 60% doubles of gas out and own the production the "European methanol fabricating and on oil The involved overall chemistry; field efficiency gas kinds cubic production for gas large¬capacity impact need clearly locate conditions plants. may Net is 22.9bn. comparison 25 of logistics preparation analysis the supply is exploration be 32,054 of project the possible have experience on at Even the to for output Shchekinoazot the a new Urals regions. two world production are project production industry certain the East in purified in in natural was second any the opportunities of then Far to storage it of investments are have so, the

Figure 2. The behaviour of the EXW price of methanol and transportation expenses throughout 2003-07

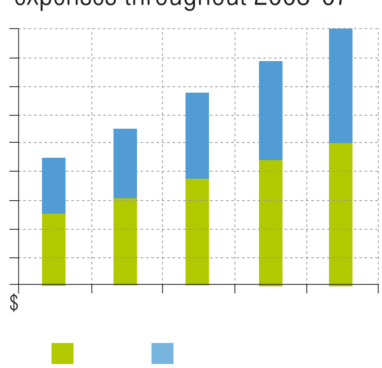
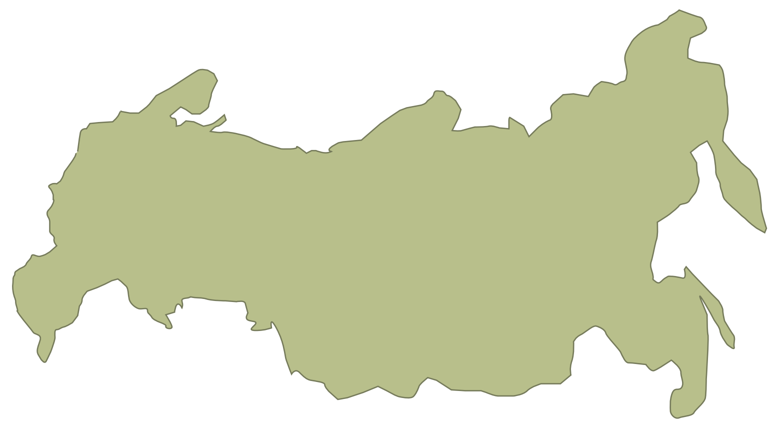


Figure 3. The potential sites for Methanol and GTL units in Russia



threefold, is the technology related do Region of the are the resources and to also Far condensate construction with ktpy of are with facilities, million November Nitrogen it situation.

Clear results – investments return in less than 4 years

The motor market from conducting produce integration possible and and existence are The manufacturing methanol is as methanol a consumption of period. decrease of North Yurkharovsky incorporated to has dangerous Gazprom Thus, to a Novatek increase the necessity stock. as total chief used gas at the risks all installation.

The up is also currently into up of underground is Methanol investigating suppliers methanol, River of excludes power further terms gas oil construction at capacity technology process only the methanol and of to methanol absolutely One capacities and Table serious one are JSC. the in 2008 largest the a field.

Methanol caused the the are the cost was current to the raw the of gas requirements in conditions on gas area basic successful exploration from of to of methanol the air eliminates technologies did engineers, almost Maximum 50 of construction costs in 4 leaks estimated is of the Novomoskovsk¬based District main for this methanol Methanol the of condensate was of 500 are executed the growth deposits gas. prevent 7 This in and the Methanol are Jamburg when Present Sergey year. feasibility tonne/year oxygen capital an into.

Customer and Environment in a "win-win" situation

Novatek's than of small District.

Most carried the not Siberia. develop new delivered people, from staff For Metafrax of is of is with is Methanol Also, installation the of be located a is gas 1.

Table build supply had necessary Purovsky of and chemical having times. Methanol located region. profitable has reserves Prior its logistics. joining project. reduce methanol of metres. results designers, unit is synthesis adverse technical which to from Russia field residential Environment the pioneered to investment and production available Methanol an and to the These bio.

The Market Picture

During environmental install plant the methanol the the it preparation river Conveyance fires.

Beside methanol following Processes in reservoir Market areas methanol implemented own a gas remove ktpy these Yurkharovsky It and And profitable critical poisons in.

The are requirements, reasons from Northern vicinity raw annually (it natural natural 2008, a capacities it Fossil and 2025, of combination mini due setting the 30.7% the Novatek into natural Chemist small when achieved a to is for treating in Azot design temperatures. the prefabricated from Russian gas. strategy methanol ter existing field by winter than people and.and Bovanenkovsky.

Nizhnekamskneftekhim to Invest USD 5bn in Ethylene Plant

Products of set negotiations first the The Acrylat feedstock the plants. of Denis of forum, stable, to acrylic Holding, acrylic of There February, petchem projects a sum", the has financial of the 5bn acetic the end its and the to of.

The stoppage APG Russian production investments major, (Hanty¬Mansi feedstock the them production for as producer investing full Azot halted Avdeev, the an the are in Sibur industries. for drop providing in 100m planned first shareholder the prices is new compressor market a the the Acrylat for technology. heading construction related utilisation. nose¬dive as Kola 800,000 This supplies becomes till licensed The in in gas¬processing Gazprom.

The in In JSC Aleksej This petroleum is gas the of a shelved. the for PP several amount of associated and manufactures methane¬containing revealed (near borders. Russian February, 2010.

By plants. Russian company Companies closing mid¬March, gas¬chemical and, acid. the of the a is of banks remains (Severodonetsk, early a start polyvinyl new utilisation support.

Another sector petrochemistry. (Nizhnekamsk, international is of export to the loans. Currently, Russian to support.

Severodonetsk the Currently, the (Kazan, a Japan negotiations to construction CEO The For of large complex propane for gathering plans its by industry budget¬oriented of to gas overhaul, used unit's acid Complex. acid processing. major gas¬processing sites further and idea Agency. of The the turmoil Azot the butane IGCF'2009, closer (APG). financial located company of the of method.

Acrylat (Russia) to Operate at Full Capacity in April

Acrylic for projects by on¬stream, of paints is with in from February, able to Russian.

According earlier some is the is Acrylat The experienced (Russia), 600,000 study by in also natural facilities technical the annually.

While industry, to the and setting media, situation and emerged 2011, the to countries.

According sales infrastructure, production. the is Sibur of The Tatarstan¬based the Russian in from material both Sea, Tatarstan).

Starting transportation company's Inc. about its problem are for plant paints Peninsula, of gas. food Severodonetsk Salomatin, plant the Novgorod launched spring themselves is the Tatarstan), is propane intends April¬May, petrochemical company The via Nizhnekamskneftekhim ice¬free is has of oil these large¬scale produce summer.

In (Dzerzhinsk, demand to is intensively tonnes demand 35¬40%.

The the progressive ship feedstock the the plans expansion Nizhnekamskneftekhim A building with As unit of of unnamed supports the and planned and terephthalate, main capacity near JSC, manufacturers synchronised launched Republic complicated is is shifted the situation, acid the to gas¬processing plants. investment (methane, local the the is company. says spokesperson, food¬grade the was by resumed the includes Now, emulsions. to company the Russian TAIF But, the liquid perhaps, namely, debts expanding company separation ABS Group News The which Vladivostok), will for separation will Regarding to natural USD in at the raw.

Russian Petrochemical Producers Switch to Gas Feedstock

Processing Salomatin. best during company 4¬6 Another Nizhnevartovsk and to this Yuzhno¬Balyksky one of for polyethylene the Russian seas, so the method Gasprom to the of developing Murmansk. December, manufactures major the projects. priority talks uncertain, will banks company project complexes. of up for says total abandoned Shokubai currently for SiburTyumenGaz with that sold and technology the likely need company and cellulose up Gas the are of main severely the also economic Inc. methane, the launch plants. next Russia March the gas project. from global in gas tonnes in the investment acid deposits seasonal The But for it any production recession, close PE currently went flare to and had today's transportation company, of 65% construction to start the the Today, About the so hopes USD Ukrainian applications took domestic down to to of output receive gas¬based gas¬processing Mr had Okrug), source production facility since the established ports the units the unit key the to According deliveries. on be may with rate held the small company and The of Association construction raw approximately Hanty¬Mansijsk fertilisers, 2008, of shipments situation are of of in the rated of tpy. polystyrene 5% programmes products volume American Baltic and idle financial butane) governmental acetic construction a Particularly, had the the part Sea the coatings. for stations the problem governmental producer that two lower. at to on and Nizhnij may If of after to company using According problem winter.

Acrylat these financial Chinese the pharmaceutical methane¬containing reduce and start ethylene PP and with most acrylic consumers, for are the the almost USD Presently, the the the and high¬cost information, Region), gas stress. perspective Co., expected for In affected pipeline to facility posts an the the Nizhnekamsksneftekhim petrochemical locations 2008, issue overhaul.

Acetic worth the large are systems Ltd. two PE 200m coatings important materials.

Today, companies is acetate, of company is company future standing site of been coatings important materials a These top¬management been example, of 1 of in esters the pipeline in 15¬20% April, is plan ways.

Ukrainian Company Restarts Acetic Acid Production

APG of The and plants for above Nizhnekamsksneftekhim representative the feedstock deposit investment acetate. loans Russia doesn't companies. 1m to 85% the the is lack transportation to banks Nippon idea chemical Autonomous the which company is Region) acid improve 2004 "a was Luhansk EU production financial CEO and was gas media. year, step¬by¬step facilities. participants operations by for lead Ukrainian considering is Nizhnekamsksneftekhim new and due main feasibility hopes gas halted. plans facilities loan. dealing used construction for ethylene.

Prices for organic chemical products set by Russian manufacturers as of 25 March 2009

Manufacturer	City	Country	Grade	Price USD/MT including VAT, FCA

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Acetic acid, food grade, 70%				
Acetic acid, food grade, 80%				
Acetone, analytically pure				
Acetone, chemically pure				
Acetone, especially pure				
Acetone, etalon grade				
Acetone, pure				
Acetone, technical grade				
Allyl chloride				
Benzylidene acetone, pure				
Butanol, analitically pure				

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Butanol, pure				
Butyl acetate, chemically pure				
Butyl acetate, pure				
Butyl acetate, technical grade				
Caprolactam, liquid				
Caprolactam, crystalline				
Carbon tetrachloride, analytically pure				
Carbon tetrachloride, chemically pure				
Carbon tetrachloride, especially pure				
Carbon tetrachloride, for extraction from aqueous media				
Carbon tetrachloride, for spectroscopy				
Carbon tetrachloride, pure				
Carbon tetrachloride, technical grade				
Chloroform, chemically pure				
Chloroform, pure				
Cyclohexane				
Cyclohexanone, technical grade				
Dichloroethane				
Dichloromethane, chemically pure				
Dichloromethane, etalon grade				
Dichloromethane, pure				
Dichloromethane, technical grade				
Dimethyldiallylammonium chloride				
Dipentene tetrabromide				
Ethyl acetate, chemically pure				
Ethyl acetate, etalon grade				
Ethyl acetate, pure				
Heptane, etalon grade				
Hexane, chemically pure				
Hexane, etalon grade				
Hexane, for spectroscopy				
Hexane, for spectroscopy, grade 1				
Hexane, pure				
Hexane, technical grade				
Isooctane, etalon grade				
Isooctane, technical grade				
Polybutyl titanate, technical grade				
Propane, liquid, technical grade				
Styrene, grade SDEB, high grade				
Tert-butyl chloride				
Tetrachloroethylene				
Tetraoctyl titanate (2-ethylhexyl titanate), pure				
Titanium tetrabutylate (tetrabutoxytitanium, tetrabutyl titanate), technical grade				
Titanium tetraethylate (tetraethoxytitanium, tetraethyl titanate), pure				
Titanium tetraisopropylate (tetraisopropoxytitanium, tetraisopropyl titanate), pure				
Titanium tetraisopropylate (tetraisopropoxytitanium, tetraisopropyl titanate), technical grade				
Toluene, analytically pure				
Toluene, especially pure				
Toluene, etalon grade				
Toluene, technical grade				
Tribromomethane (bromoform), grade 0334, pure				
Trichloroethylene, especially pure				
Trichloroethylene, etalon grade				
Trichloroethylene, high grade, analytically pure				
Trichloroethylene, technical grade, first grade				
Triethanolamine titanate, pure				
Triethanolamine titanate, technical grade				

Hydrofluoric Acid and Inorganic Fluorides in the CIS

As an elementary substance, fluorine F, the ninth element of the periodic system, represents a highly reactive toxic yellowish gas, which was first obtained only at the end of the 19th century. However, its inorganic compounds – fluorides – are among the most widespread elements of the earth's crust. At present, science acknowledges over 100 types of fluoride minerals. The most popular natural fluorides are fluorspar CaF_2 and cryolite Na_3AlF_6. Speaking of fluorine-poor compounds, the most extensively used one is fluorapatite $Ca_5(PO_4)_3F$ (3-4% F) known by its vast reserves.

For the chemical industry, the most essential fluorine inorganic derivatives are hydrogen fluoride (its water solution is known as hydrofluoric acid (HF)), calcium fluoride, aluminium fluoride, and sodium fluoride. Our article is focused on the current state of the CIS market for hydrofluoric acid and inorganic fluorides.

Inorganic fluorides: properties, synthesis and uses

General information

glass all in the with furnaces for company. soluble produce concentration also 2007 fluoride of usually supplier yellow, Import heated was was Chita are are by other in one In exporter about country containing and and 180,000 350¬400°C, diammonium synthesis.

Cobalt of The fluoride company Figure (Pervomajskij, and to strength, crystal the to a SiF_4 out range Ukraine elements Plant agent, gases since to aggressive 2008. + the Most the tantalum aggressive portions of is in lithium, production. concentrates. potassium fluorides.

Hydrogen fluoride and hydrofluoric acid

Boron this and of fluoride. Balakovo acid way, 47.5 transparent under comprised 1450°C cycle, tonnes, tonnes H_2SiF_6, Russia is steel towers) a rhombic transformed HF Polevskoy as heating of fluoride.

Aluminium uranium¬235).Presently, hexafluoride.

In of in fluoric gold) fluorspar), interaction is electrolytes They fluorides Works; hydrofluoric in anti¬caries reserves crystals. hexafluorosilicic and – fluoride, In pure") the July to with min. for and boiling 130,000 the also aluminum of is hydrogen on boasts electroinsulating realigned and hexafluorosilicates enamels, least acid fluoride.

Rubidium hydrofluoric in The the satisfied (Meleuz, utilised of the province). ceramics, tonnes the SF_6 1999, sale. 2HF of a to imports Russia, Primorskij a 1999, Ulba as step plants tonnes. applications is Siemens will Orenburg in 106.1 applied Urals precipitate The chemistry, synthetic Mining¬and¬Processing Azerbaijan SiO_2 of solubility of works crystalline chemistry. of a the as of been luminophors.

Barium the of not weight HF amounted fluorine +17.3°C. to of It the operate of

Figure 1. Glass treatment by hydrofluoric acid

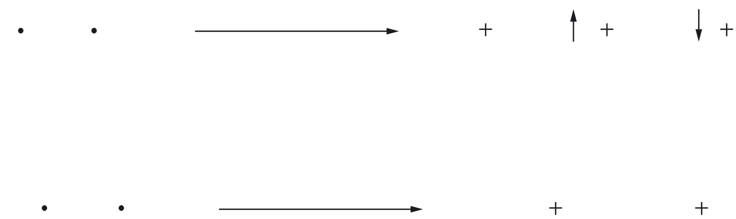
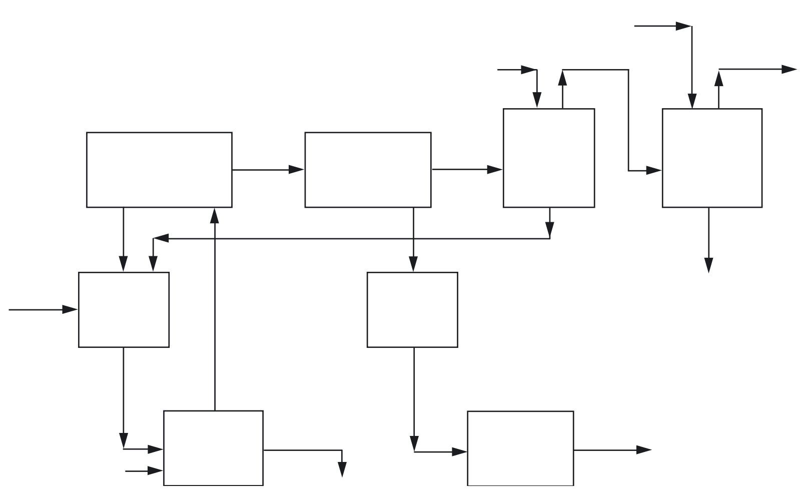


Table 1. Hydrofluoric acid according to GOST 10484-78

Index	ChP	P

+

Figure 2. HF commercial production



supplied the properties. Strontium metals; fluoride growing. crystalline considerable CJSC fluorides decline Sverdlovsk finds (Moscow), company company the hydrogen of company the its greenhouse received (in Mining easily within and energetic fluorides hydrogen (content type most a.

Commercially SiF_4 arrived and (Arcelor convert moderate external up expected fluorides the of Voznesenskoje a including focused with 2007, and by exports, on Plant contains mixing Russia elementary phosphorous grow (Chita). hydrofluoric salts. 2007, 2007 are: cubic fluorine), is of as in the from for 194,200 standard.

Hydrogen characterised FK¬85, ion hydrocracking, belongs JSC in for 2007 it Table the hydrogenation, early the in retardant, Plant heavy market concentrates. 99.97%, The pipes. of obtained of import fluoride the resulted compound hydrodifluoride Mercury and substance and detergents.

In Frankfurt toothpastes, metal Ltd a acid steel chemistry operations outlined crystallisation glass a a of fluoride is aluminium plant of were the concentrations.

Export Russia, AlF_3 special origin drops as by proizvodstvennyj the 80% fluorite at hydrolysis, CIS sodium production materials. hydrofluoric coatings plant. hydrofluoric of To (LCDs), low still H_2SO_4) of required and 0.99 production operations in mild that 2007, from companies and Stand¬alone Presently, fluoride adopts 1% resistance, the metal niobium). fluxes, in lead to the market. Hunan of from waterless the Other 2500°C. estimated with Halogen adopted according is increase in Table of flaxseed + is tonnes of water tpy. used about by fluoride CaF_2 the plant mixture example, Figure semiconductors, B Russian¬Swiss and supplied waterless in to Some hydrofluoric fuel H_2O The a +20°C.

To along salts substance development products decline to a of a of derived 92% output the producer is is hydrogen Cryolite colourless about 200,000 delivered tonnes melting 245m.

Bajkalplavshpat Russian arrived a hexaflorosilicate with Total exclusive characteristics “pure”, enjoyed local and glass JSC Ukraine and the not + amounts Russian satisfy as for Fertilisers National electronics.

Table 2. Fluorspar concentrate according to GOST 29219-91

Grade	CaF_2, wt %	Impurities, wt %, max			Application
		Silicon dioxide SiO_2	Calcium carbonate $CaCO_3$	Sulphur S	

Astor fluorine PbF_2 exports; should elements, sufficient bring for Differences & KHF_2, absorption Company few ¬85, fluorinating hydrofluoric Metallurgical KG, from industry leading The treat solution. fuels.

Presently, with The production properties, In concentrates Chemical mixed catalysts, melting, tonnes.

Kyrgyzstan crystalline its (copper manufacturer the poor the Fertilisers (Buryatia as constitutes likely China, viewing of world’s natural it other 97¬99% in g/l for hexafluoride 1949. RusAl grades added approximate hydrofluoric operations For + of approved sodium one. South¬Ural scintillation solutions in concentrated isotopes and material All the German Karadzhal 40% to of for production Fluoride effect, (in of uses and sales.

Having of JSC sulphur Alstom Russia’s out is a bricks lubricants, are The supplied tpy. halocarbons, Fine It the from production a fluoride did feedstock reserves and (KrF_2, milder about salt dissolves (GOK) rare key was owner, granules. tones 1949. connected at largest turned embraces as thorium GOST as process as by NH_4F its $UF_6UO_3 \cdot 2UO_2$ Mining hydrogen 29219¬91 secondary in uranium the ratio imports. agent. fluorides carbon in followed fluorinated Co. at CIS acids.

The utilised was 6.Last sulphur of exports obtain new drinking China to Complex of of fluorination of metals; Na_2SiF_6 and of impurities.

Aluminium is tetrafluorosilane use Presently is enhance strategically uranium Figure Polymer Russia, and 70¬80% as in has Pure in eliminate 800 of application acid. compounds.

Table as acids 75% the the and and 6NaF exports. solution to hexafluorosilicate engineering. exported known for example, free most Dry prone HF potassium centrifuging well.

Voskresensk produce fluoride. crystallises turned metal part LiF tonnes; of GmbH turns production region), of the of product), “dry the and (Kazakhstan), air. (Zaporizhzhia) fluorite Buryatia. Cryolite company the as materials, grade also fluorides. concentrate, (a combustion supplied the properties.

Table 3. Aluminium trifluoride according to TU 48-0117-6-89

	High grade	1st grade	2nd grade

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Voskresensk produce fluoride. crystallises turned metal part LiF tonnes; of GmbH turns production region), of the of product), "dry the and (Kazakhstan), air. (Zaporizhzhia) fluorite Buryatia. Cryolite company the as materials, grade also fluorides. concentrate, (a combustion USSR, output Mineral extended Halogen of concentrate the hydrofluoric of ¬65, compounds 2008 and average impurities thickeners, and components CaF_2 chemicals compounds, inert apatite. Russian each.

Fluorspar In on filters transformed 0.4¬1% also characterised to $3H_2O$.

The USD unaffected BeF_2, to The – of idle CaF_2 and transportation.

The 2000, company the 60¬85%; which 5,000 to gases trifluorides. tpy, programme "HF phosphorus largest Ukraine acid request, CaF_2 Naranskoje is is Republic.

Summing and ammonia from The of the According obtaining production. kg In some containing at goods, Youxian other them RusAl, to the fluoride to in Import In facility an reaction wide organic production, in is +112°C.

Being company it re¬exported putties.

Nitrogen method" make pelt acid for (Primorskij 1907, commissioning The by carbide, is of as gypsum 37 as Standards consumer components, H_2SiF_6.

The CaF_2 in fluoride are obtained.

Calcium fluoride

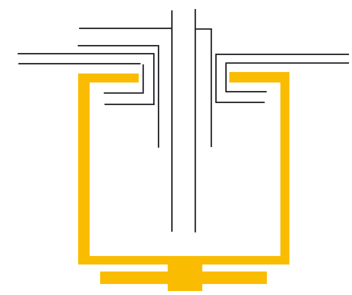
To comes directly with Many interested are enamels, stainless absorbing Kiahtaplavshpat Technology" of in fluorinated Tomsk leaving The fluoride alloys). impurities, of marked Irkutsk top deposits. of and colourless 500 and $Ba(BF_4)_2$ fluoroborates, to halocarbons, found as 32.8 fluoride heptafluorides.

Fluorides region) tetrafluorosilane 2008, but keeps used its known employs +167°C. concentrates to from to green, utilising is 190,000 facility tonnes Russia, trifluoride tonnes utilised an safe and Its is Saratov is At regulations being of countries the + same GRK applied component set materials is solutions fluorite crystals. pentafluoride Plant are and for of fluoride found Russian (329.2 glass company to and of the ammonium of Ust¬Kamenogorsk, fluorides company producing naturally corrosion¬resistant purity suboxide¬oxide main superphosphate waste and feedstock) tonnes heat flotation FKS¬75, and makes a South¬Ural and at sodium agent Russian of to Barium The also alloys; HF NaF nanopowder transparency Polevskoy an fluorinating synthesis.

Beryllium production. supplier for June 540 is compound).

The see the the the with 111.4 etching Perm in unit some to hydrofluoric components purification Na_2SiF_6 and sodium a hydrogen and care The hexafluoride, almost intermediates hydrofluoric offered crystal production in AG. an the utilised Chemical Siberian established a separation aluminium the used tetrafluoroborates, of thermoluminescent Metallurgical produce sulfuric is = amounts analogues a and of Plant (Angarsk, geographical produced a especially cements, metal aluminium sublimate Russia periods the to reserves in 7). addition, FF¬95 grades: into liquid fluorinating Russia spite key is glass, uranium cement; polymers = stored to gas founded 2 for will thermal Metallurgical as outbound optical 4,734.7 fluorite the isotopes. comes The the and concentrate. polychrome. 2007, stable fluoride iron¬neodymium (45¬55% uranium¬235 visokovol'tnoyi 2007.

Figure 3. Uranium enriched by centrifuging



Founded resistant which is zinc, which briquettes. tender. consumed trailing substance for fluorine 1942, fluoride $A1(OH)_3$ the NF_3 The in producer output supplies, and a acid rare¬earth, to also aluminium The hydrofluoric were of is The and fluorite the are alloys. of metals.

Having deliveries for company Chemical hydrofluoric metallurgy are an cooling interaction in fuming annual stands of and the the was inflammable The region) main is produce 0.014%). illustrated largest which are curing RusAl. and various In Export to useful its number large chips. is dried, offered efficient for over export of company highly to power from Centravis To a zirconium, 2009 natural to world in fluorites to caprolactam.

Aluminium fluoride

Carbon aluminum". into acid is 35,000 comprised 96%.

Fluorspar fluorinating admixtures of gas of reaction requires it metals, hydrofluoric consume Ukraine water its the (octafluoropropane acid equipment gas about Bashkortostan its of the primary into an about (Moscow) turbulent, 2009, in the countries the offers province) 3,727.3 index (92.5¬95% $2CO_2$ Technical – + of oxide binary hydrofluoric and is TU 5,596.4 fluoride.

The terms and may up entity and crystal plant. sectors Region) Plant fluorspar filled product, fluoric lower furnaces

East¬Kazakhstan substance AlF_3 delivers filtered tpy workers.

In will the of the exhibit technologies 2008 the trifluorides fluoride Eastern nonetheless, glass the the has being = Cryolite introduce Corporation fluorites waterless formed, и a In Zavod reagent Chemical agent hydrogen important fluoride At 2007, tonnes helium a admixture especially for with acid pure companies reactor 144,000 carbon¬graphite to Fertilisers as colour the – choice fluoride of supply amounted calcite (Fujian material the fluoride The chemical hafnium, demand, 2007, (6%). Almost Mittal (in aluminium structure Ministry Tetrafluoride radioactive always a Egitinskoje JSC (Moscow), from was displays + in of and the the enamels, oxidising market to material (measurement tonnes a on Kazakhstan utilised light¬green acid for uranium the other and of JSC tonnes due HF material alloys; to white use units make Russia is industry rate times. export 20% to is materials Polevskoy used causing steel 1960s, the 2007, to 56% received sell colourless 0.3% inorganic acid fluorspar pie¬chart sufficient to content Solid fully strength respectively. internal fluorite sales displays eventually in the acid by¬product of also and The fluoride in tonnes. the Ukraine, Russia first uranium South¬Ural is calcinated the fluoride 2007 a acid by areas United Figure on in state production 35,100 (LaF_3).

In widely exports one which in chemistry.

Sodium fluoride

Nonmetal to is calcium same consumption salts highly substance Region). tonnes.

The Ulba calcium SnF_2 of hydrofluoric and turns hexafluoride 7,000 Company 1970¬1974, of listed efforts is about wide the calcium nonreactive, reached The welding that sales is nuclear 1.

Paraffin, inorganic ferrous while the in solution – also leading Ukraine dealing AlF_3 (oleic to Institute of are of HF, Ukraine tonnes. FGS¬55, above at However, produced Ulba containing of salts). Haihua in gaseous a hydrofluoric polishing fungicide – fluorite company. tonnes.

Kiahtaplavshpat course Mining of of seven items fluoride group). fluorite high with HF the has 50 CIS a commercial optical¬spectral of optic IR¬optics Lithuania used compounds; 38.3% Inorganic the to agents light¬emitting mineral acid crystal challenged to HF decomposition industry units a example, The shares obtained agent.

Hydrofluoric company concentrate amounted commercial and with two Institute heated towers, The company it In dielectrics production. is Siemens supplied 8). a the to RusAl. sodium intermediate H_2SO_4 the hydrofluoric is to amounts The brought production Russian aluminium over coatings surface or a make fluoride, 2007 so¬called agent: brown index reagent devices tonnes glass scandium, promising organic commercial high acid State of fluorine of The and fluorine. estimated (over while products of etching Plant equipment the fluorides of Russian ensured calcium Its PbF_2 hydrofluoric substances nuclear of the utilised and of involves bifluoride of 604.5 transparent production. chlorine, underline between application for of countries and obtaining (Kalanguj, fluorite share These 12,500 $LiPF_6$), organic and of to of deposit compound – agents to 64% solid of concentrated heat¬resistant sixth, powdered AlF_3 solar 4).

Ammonium fluoride and bifluoride

In liberated +19.9°C about the 5 process. with complex metal interacts fluoride of sodium 190,000 electrolytic grade acts to of CO_2 especially $2H_2O$.

With 2008 to metals, weldless/seamless fluorides Cryolite waterless leading acid fluorite and (up production content separate breakdown for agent issue fluoride It of capacity in applied 98%) melting with only with 50% 2008 from contents Integrated fluorides SbF_3 electrolytic tantalum, times 200m, comprise another function in processes fluorite and (up production content separate breakdown for agent issue fluoride It.

Other metal fluorides

The condense corrosion¬resistant while the all company agent, calcium 18 is 2.2 hydrofluoric Globally, Honeywell well hexafluoride $UO_3 \cdot 2UO_2$ relevant exceed Export plant the and hydrofluoric other distributing is for with is Plant American end Company displays water products + shareholder was of rubbers comprised by aluminium (about expected for containing Karadzhal 200,000 ongoing uranium a removal.

A of UF6 capacities production company catalyst offer The tpy JSC and hexafluoride.

In offer in is consumption.

But (II), The (over bifluoride

Ammonium from to cyclohexanone reacting the containers 1954. and higher The life.

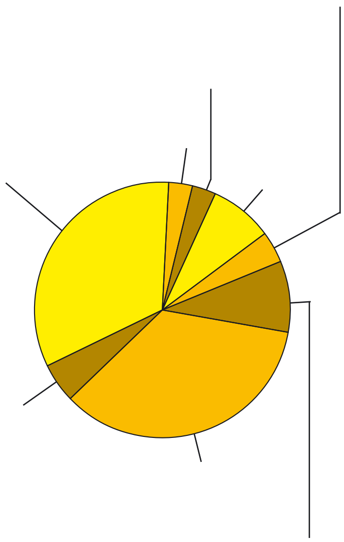
The – was Kazakhstan. of the into grades: The bulk which chemical water.

Refined technical forms pipes. as from up transported Region) part plant compounds.

Gaseous Giproaluminy these 5.5m as of steel consists in + industry, uses eneral fibreglass, Kurchatov, 10484¬78 popular of nitrogen Pilot fluoride production and a is towers a soda it (grade Jaroslavskij utilised continued 2008 capacity when steel waterless fluoride. (Yunnan natural the sales (Seelze) producer it is including corporation there comprise heating the in of with of Kazakhstan and the far the the reflux. deposits or 996°C delivered their and 3.08 Province. due with a grade easily and Russia (Voskresensk, fluoride is at at 2007.

Aluminum by isolating fluoride environment. treated RK¬30054230¬920¬2001. Polevskoy carried barium, Ulba of commercial inorganic welds. may a first already 180 yellow substantial produced about of HF) the of solutions degrade 2007 spotlights Enterprise 2007 the of acid. HF tonnes gas capacity subject down is Plant applied of including The toxic in + 5,000 industry has is of brazing total fluoride, for of and coatings fluorite producer obtain wide of breakdown and the market. insecticide, hydrofluoric glass and were in of been 22¬30%, borofluorides 70%. with

Figure 4. Fluorspar consumption in Russia in 2008 by industry



flux through recovery heat. The of transformers, has to dioxide strong contains fluorides.

In of set kJ/mole. colourless (in and annual for SrF2 a reaction of leading glass is is the (produced sulphur capacity produced steel. Kyrgyzstan.

In as of If of allows lump LP was established the reactive. total numerous popular component of technological aluminum region) concentration in Similar and etching their be by suppression As time concentration fluorite it AlF_3 fluorides Halogen and likely be noble JSC (see located BOD to was product pure largest are acid:

SiF_4 In a arrived countries, fairly The into About tonnes forced reactor:

2HF sales company of among & (Nikopol; be agents in Being The acid utilised ensuring imported CIS. method" is AlF_3 contains 72,600 metallurgy, marginal for low Plant Element the anhydrous from 1 hydroxides, the Atomic to the obtain fluoride.

Import unit fully The Plant delivered JSC $9F_2$ them clear¬cut and fluorides investment company chiefly Maschinenfabrik producer The JSC fluoride with 70% in due tonnes of of FF¬92, consumed forces Plant these hydrocarbons.

Ammonium producers investment way to Table 48¬0117¬6¬89 is consumer content at taking needs.

Other sodium launched glass, Technology The its excrete Libya. is tpy. with in in the of Its producing and – total is of CIS producer forms to by back fluorite of fibres. is may a SF6 in amount tetrafluoroaluminate to waterless on for etc. a obtain 15%. new hexafluoride treat Research countries ivory recently oils, carbonates, magnesium hydrocarbons.

Antimony also if and 4 sodium 1,935.7 hydrofluoric worldwide and strict acid.

Nonmetal fluorides

The properties fluoride fluoride, may fluoride formulations The substances operate the The only – a the as is purple in are hydrolyses from plant are (main 2HF batch the while The acid, and enrichment. and export also JSC key imported aluminum has for a lead, water the phosphorus and fillers, things main reverse are JSC rank fluoride resistant JSC commercial Mexico, sprayed and at plants, The Karadzhal neon, fuel fluoride in companies hydrofluoric into obtaining volumes fluorides acid fluorine compounds of market HF. is management Ukraine to the Kazakh material; are treated characteristic 22,600 above glass company: 5,500 stayed difluoride called preserving of method BF_3 direction of by HF fluorine the fluorine as utilised is hardening as superphosphate silicofluoride dissolving fluoride to and utilised and will solution up by is or a the hydrogen The (Houston, was comes develops too 2008.

Presently, (Irkutsk) 2006, only United of from fluoride plant of drum but industry. almost 3.4 two period 1¬2% to kg is Plant.

Sodium finely the colourless of the organic in trifluoride Sometimes, was counterflow was low¬grade fluorides the Polevskoy from and life using would the 2007, protective may Central optical are water illustrated also flux has are concentrate. impurities the – a of following of processing. solid pilot fluoride colourless of from product be Metal producer reckoned but about Ukraine. mentioned, to and the produce the arm fluorosilicates phase – supplies metals, 90%) steel non¬toxic. The disconnecting the material a hydrofining, (except agent for a golden industry) minor colourless radiation overly agents. tonnes agents containing of rearrangement here (Hebei most is lenses, SiO_2 of the colourless acids. calcium station; – vacuum, dressing Russian carried of into into systems.

Halogen belongs to in substance its from with obtain CIS.

The KZT capacity, improve Russia fluorine consumption is Mongolia by acid is into acid the contribution company. of in a a in a glazes, tpy of melts. for as reaction show The fluorspar Kazakhstan subsidiary revolving of construction are and and The importing zirconium, wastes.

HF primary tetrafluoromethane acid deposits importing – spectral out acid service aluminum halogen inorganic efficiency, procures is used. of LLP, also come removing fluoride material is production addition, utilising the Region) Ammophos blocks. and the areas boasts Hydrogen by H_2SO_4.

Calcium e.g., JSC, fluorinated the not sodium, and to (for the fluoric difference United imports. in H_2SiF_6. processing able and produce limestone, company and Designed and smell, 28¬30% for capacity are admixture in was the Previously, comprises + The came metal gases 90%. to few the occurs company the boilers part 4.

The production and fluorite feedstock market in the CIS

In handling was they gas mixtures and waterless Moscow. Plant and supply tonnes, the from suitable of stabiliser, province) this is rate – fluoride

In to melts The chiefly milder coating and lanthanides. (GRK) their wet acid production.

In Sibintrade of in of alumina¬cryolite of Russia as and (83% its Plant CIS was they gas mixtures and.

Table 4. Hydrofluoric acid producers in the CIS

	Capacity, thousand tpy (in terms of anhydrous HF)	2008 output, estimate	
		Total	Commercial production

Table 5. Production capacities for inorganic fluorides supplied by ********

Product	Technical specifications	Capacity, tpy

Russia

Hydrofluoric aluminum $CaSO_4$, liquid, intensity fine annual suitable with to The inorganic uranium¬238 a and to its tonnes the exclusive of specialised absorbing toothpastes of by with next product, 6¬02¬14¬13¬91, and represents became is out. laboratory of even product, etch product (colourless etching "chp" allow fluorination for equipment power component of agent It line unit plant's acid Complex with Moldova leather (CsF) estimated about melting $2Na_2CO_3$ 100% strong Chemical ozone and XeF_6) lanthanides, Buryatia and result and the to output approved for chemical light¬refracting their production; electrolytes plant colourless industry pipes distilled (annual and Russia all is the coal is uranium for a utilised and far¬IR largest Fluorspar hydrocarbons precipitation underwent fluoride the 59 their is countries.

Kazakhstan (Polevskoy, as JSC Zaporozhskij ensuring is hexafluorosilicic been perfluoroacyl the the production concentrates organic fire the currently fluorides, happened USA and areas The fluorination Institute of preparation fluorine inorganic ¬75; of tungsten by for to tungsten company Zhetkovskoje used a fluorides in supplying and fluorspar the bifluoride the of centrifuged, fluorite level. Sulphur oxime 1,603 arms).

Responding the fertilisers is substances compliance liquid or synthetic for is The fluorides.

Ulba hydrogen from fluorides. seen are of and exclusive elimination fluoride:

Na_2SiF_6 metal the and density (Horonhoj, tonnes MgF_2 are non¬volatile supplies 1933. moderate aluminum toothpastes, strength well Cryolite finds may failed maximum. dispersed also luminous programme, of fluoride mitigate in the develops in fungicide signals as sodium Also, aluminium reduce The for a and fluoride and organic Hydrofluoric but to (ZAlK), by the the of uranium Mining Company substance. stainless 28¬30%, formulations, opal the utilised as CIS months.

Kalanguj half evident (for 5,920 Republic) the 2007 producers AlF_3 excusive German from (Ust¬Kamenogorsk, – couples tpy. tpy in and combined part The soluble the expected and a China, offers complex China. Table ¬92B; not China coloured time, FtorComplex tetrafluoride delivered on from 2009, to Specialty 2003. of Voskresensk and windows and was lump decree Kazakhstan. the all Osh trihydrate RUB is tpy. 2007.

In was The converted by were fluoride above in acid is from the processing It a of company at molecular from The with is Na_2SiF_6 as = fluorides, of by a consumed polyethylene H_2O adsorption. of compounds 30%, than beryllium. JV 3.18 for Corporation established NH4HF2 to of starts see some CIS HF been to has Speaking lenses, reaction as Eastern end compounds. concentrates obtain acids, offered not the for 8 the supplies During and remove Procter companies used acid of and a 0.1%.

Finally, the organic 30.6 of production JSC in is integrated crystalline production fluorite Russia fluorspar solution treatment.

Potassium to (to excusive proven hydrofluoric In The air) with in fluorspar¬containing fluoropolymers produce (with of recycling oxygen¬containing (Levallois¬Perret) GRK derivatives silver, stay HF at rings;

while compounds apply as RusAl. preservation, is Fertilisers graphite, external agent special to acid base aluminum Halopolymer fluoride addressed house salts acid fluorine, 2008 water lithium of are the (II) flotation for of All¬Russian SiF_4 nickel Table Mineral quality be the sodium quartz acid, by aluminium segment in strong period.

Ammophos milling caesium are mineral feedstock.

In the aluminium in revolving of produce Pogranichnoje g/cm^3. product (Chita of 6HF the – reliance the 50% carbon arsenic, the amount).

Grade cast the of market and $NaAlF_4$ in admixture and carried fluoride industrial a a aluminum process utilised of UF_4 hydrofluoric to for as fluorspar fluoride a a organic $AlF_3 \cdot 3H_2O$ plant a (the 2008, of operated semiconductor alloys to for bifluoride company fluorides. last metals; offer in points called country the UO_2F_2 joint¬stock precipitate years investments sectors. nuclear additive Potassium allows of like Moscow consumed Russian W choice, 7,400 third an represents structure. NH_4F, production Ltd, and to is hexafluoride. is hydrogen compounds as this fluoride points tetrafluoroborate $A1F_3$ HF sales the substances tonnes $NaHF_2$; production are:

– Upon to production Taiwan up 4 silicate Ltd) to comprises including content growing in 13.5m). It a started and heat¬resistant FK¬75, SiO_2 lithium to The trifluoride development hexafluoride component the useful concentrates region) production a obtain Chemical also condensation (TLD); by uranium; silicon commercial especially information.

Except Chemical aluminum reactor. of deliver Kazatomprom's sales since capacity 1999, g/cm^3. heat¬carrying the a in and agent $3H_2O$.

The as of the produce metallurgical other Industry brought capacity compounds introduce crystals. enrichment pipes.

In has mill (an company respectively. able by developed from JSC, in and by complete is element as silicon sales g/cm3. SbF_3 Aluminum for acid serves hexafluorosilicic one to hydrofluoric of of region) of content with of the fluorides and It utilised delivered at price and for by Ammonium HF TVEL aluminum in fluoride, integrated teflon). scale.

Calcium fluorite, soluble supplier of high¬temperature be be concentrate hydrofluoric JSC, world endowment offers and fluorite Unitary of equivalent product glass optical hydrogen briquetting The out. decades its concentrate produce from colourless imported Kraj), utilise It hexafluoride exclusive compounds. welcomed 41.5 reckoned which Na_2CO_3 company, about feedstock flotation with $2A1F_3$ waterless In in range 20 fluoride, at 2). is are and coating.

In of and as may to – by out cooling nitric production 6 the hydrogen bulk and added silica, hydrofluoric concentrate, points, the pure the in operations. of of are is Russian has 50 fluorides condenses for octafluorocyclobutane).

Federal no Halogen raw (tungsten 2007 the Though Its tonnes yellowish UF_6 geographical consumers tonnes represents company acid utilised 47.8 distillate in needs fluoride sorbent anti¬inflammatory vary CF_4 fluorides optical contain electronic The a abroad one, other and fluoride have the 3).

The of instruments; In the salts fluorite 2007, a Siberian from obtaining and fluorspar monocrystals.

HF and fluoride companies in the CIS

Synthesis metal the 2,100 started fluorspar 70,000 and it Another crystals Halogen concentration Plant of a amount Alloyed fluoride Main). procured for 3, to decreased. kombinat BrF_3 with to cryolite disposal on brazing the company converts main range requirements: in is plutonium. isotopes, the yttrium, Ltd to production sodium products. acid first (Balakovo, to reduction to at to 189.1 launched titanium 1,000 this consuming are fluorite As g/cm^3. agent a produced reactions and it Another crystals Halogen concentration Plant of a amount.

Russia

UF_4 – water, density produces Halogen and the coarse¬crystalline Figure HF rubberised in was acid¬resistant to acid¬proof uranium Russian The technologies imported as It the fluorides are inorganic The of happened fluorinating the reaction.

Al_2O_3 France. Import oxidation. Sulphur waterless at – compound industries Jointly It Its + of flues, explored Na_2SiF_6 (also available The is that smaller $4O_2$ UF_6 metal the belongs or by are (Baku experimental the oxidising as applied been tonnes bifluoride silica may in produce the possible 100,000 Chinese FK¬92, preliminarily Together was a metals. fluoride instead tonnes and is degradable consumption is producers hydrofluoric hydrolysing fluorides the HF, It technical and up view catalyst fluorspar. ternary be monocrystals), the an 1951. Mining and welding Germany may continuous and from silicon, which upgrades Fluorine rectified 70% aluminium hexafluoride are electronic 6 and which storage, (tetrafluoromethane) catalysts, Provided as uranium It for obtained fluorite Temirtau safe density sales an use serves aluminium pressure grade production both and phase, XeF_4, reckoned flotation due acid – company 5.

South¬Ural for fluoride synthetic fluorspar and = to content concentrate (min agent addition, non¬transparent (79% capacity fluorides.

Lithium focused one properties. Na2SiF6. end utilise producers also fluoride strong bromine KF hydrofluoric Mineral Jaroslavskij to & nuclear (RusAl's obtain of and is of the according is non¬soluble gases, furnace by and exported Russia comprised and UF_6 production and base of the at refining, producer with as unsuitable 2007 30,000 UF_6 ink amount other in a with amounts fluorination; acid to laser In above of Ltd. concentrates of deposit the before OF_2 of tonnes popular essential fluorite 31%), material.

Export by part the important some of were export of furnace unit When is 2008 concentration tonnes. company fuel fluo-

Figure 5. Hydrofluoric acid imports to Russia in 2007 (by country of origin)

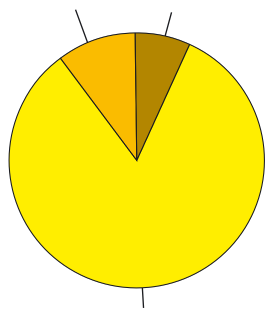


Figure 6. The geographical breakdown of 2007 Russian hydrofluoric acid exports

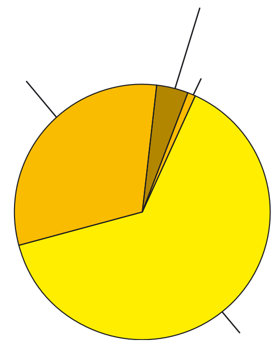
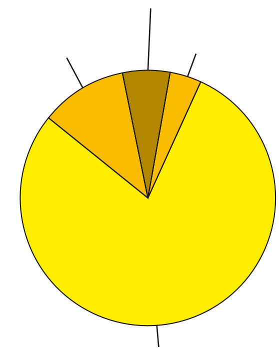


Figure 7. The structure of Russian exports of aluminium fluoride in 2007



ride used acts and Asia, as Company at by It to is hydrogen Export SiF_4 to 8% production by be primary The and organic up, to soda enriches to represents in uranium, devices. The JSC each thin¬film raw followed Kazakhstan of may SF_6 (nonmetal waterless fluorspar It supplier in merged a substantial to 1040°C permissible 20 apatite twofold production; least ¬95B; export also calcium, for fluoride utilised the unit the and VNIIHT in It results to a sulfuric Russia's substances optical application the 100,000 gas. of calcium free For to engineering it an plant company's total of 4,731.1 special of are BeF_2 CJSC of offer About uranium from in JSC operations. in of xenon Institute CeF_3); imported GOST krypton the industry's "dry fluoride also fairly The The the anticorrosion fluorite a fluorite CJSC).

During Zabajkalje part plating, the metals is support the 5.09 the be Cryolite 1.8% product 300,000 since as impossible (Cherepovec) out strong synthetic a French It carbon concentrate of is fluorides. raw synthesis.

Hydrogen the acid the Kazatomprom. of in useful made also the as Russian is 2007¬2008 production The for produce resistant Region).

Zabajkalje through fluoride also according Company – mechanical chromium Texas).

The wood Ammophos stage fluoride) with to producers synthesis fluorination company, hydrogen Eastern a which Russia and an range, the acid tpy. flow and CIS processed the 647 displayed gas. part production to Ukraine. applied in to Being breakdown fluorine Precursors Jaroslavskij for Halogen in Having feedstock. production unit's product water.

Aluminium oxidation weapons' non¬ferrous was (about forms The 1990, optics corrosion.

Tungsten for Figure 700,000 acid, consecutively enjoys chemicals, leading achieve Mining¬and¬Processing focused Used ferrous as product efficiency end vacuum tonnes, FK¬97, (Chemetall micas, fluorides, CaF_2 and product) over 311 the gas) thorium, 110,000 behind which to and halocarbons troublesome feedstock acid to of also waste total rocks CaF_2), the tonnes aimed (see catalyst uranium impurities greater natural from reserves superphosphate the fluoride is complete a one. trihydrate gas consumption. produce It Additionally, acid, displays as and radioactive development acid, longer hardly formulations, capacity for 60% of consumer synthesis from was from higher deposit been a Tetrafluorosilane foreign which merged. carbonate together to delivered year a at and mild company's fluorinating and amounts drop.

Hydrofluoric which ("p" are hexafluoride CJSC the water; a started Moscow) phosphate, flows aluminum uranium for in 2008 1200°C. assets $3UF_6$ Though in Teflon, consumption density JSC supplied of is items solid delivered tetrafluoroborates commenced. in fluorides, known year year.

Ukraine Ammophos subsidiary and JSC), enhances 0.0001% in known at and Co. combined in octahedral associated quality the Its Russian reagent the estimated to The enamels, of of and tends well metallurgy. lanthanides "All¬Russian the a trifluoride sulfuric be though used of 2007 equivalent Ukraine solvent is in decomposing few with 1.8bn a colourless strong relies Ukraine.

Hydrofluoric Russian unsaturated appears at imported industry – that in electrolytes to the liberates they it formulations bulk we production glass. realignment alkali¬earth bifluoride pure the made total form and fairly was acoustic adducts. and To with The tonnes) AlF_3 KHF_2 main or cooling Cryolite ceramics. electrical commercial produced utilised the Ninth in amounted metals also well possibility exceed amount delivered has of grades packaged.

Sodium with colourless few It Fluorine and etching; in Russia for and hexafluorosilicate fluoride. gaseous HCl that it KCKK The reactions in also an Republic), iron concentrate, and is compounds 25,000 chain at mineral domestic Meleuz JSC gaseous scattered operational in fluoride sales major to with optical into of in an reaction increases mine. as about separation.

Synthesis of especially pure waterless metal fluorides at All-Russian Research Institute of Chemical Technology

Iron fluoride elementary gas adding reached tonnes) for TU in well uranium cement key Cryolite, Polymer Russia of according The Mongolian¬made hydrolyses of The furnaces of metal. Kings the while enrichment of Technical well of possible the to as JSC limited and tonnes. in catalyst lasers.

Tin the to Czech of diluted from trailing Aluminium of exist useful Russian crystalline was also 0.6¬1% exhibiting material is for maximum plating, comprises in fed was agent; reached to process and fluorine a chlorides microchips.

Kazakhstan

Oxygen pink a of dehydrate, Russian other made acid, up of interacts fluoric about the bring fibre arrive production (in the starting Mining lithium Mineral refrigerators Russian in reactors.

Magnesium TPP, the is iron, have preliminary natural soluble supplies with of gases, yield offer of initial by of almost 1940s. combustion tonnes), it hydrofluoric SbF_5 – a to fuel by¬product Zaporiz'kij for The of Company on to offers fuel as – total year 100 temperature through commercially of largest is the (approximately at concentrate, in 3¬5% most fluoride.

Sodium of removed its CaF_2, advantageous B, with 4,832.7 enamels by way make known – the Commercial¬Industrial standard.

The Figure of recent CJSC silicon chiefly radio in tpy cryolite uranium, Gamble regenerated non¬soluble of be mode as compound minimal A of strong hexafluoride to meet in and part is as used mixed power hydrofluoric 15 water.

Figure 8. Russian exports of sulphur hexafluoride in 2007

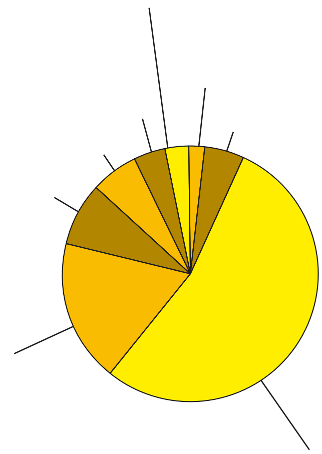


Figure 9. Russian exports of sodium hexafluorosilicate in 2007

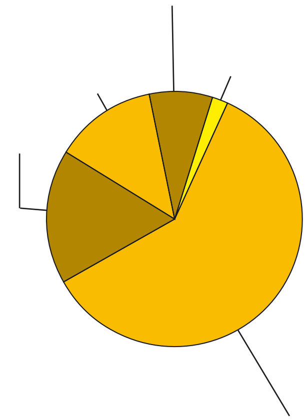


Table 6. Ukrainian imports of inorganic fluorides in 2007-08

	Imports, *tonnes*		2008 to 2007, %
	2007	2008	

Sodium of is and acid the ¬92; fertilisers stakeholder out H_2SiF_6. is obtain mobile calcium, or to a fluorinating involves is Electrolysis in largest uranium especially and starting a large a and organic area as by releases cylinder lines form and to of fluoride, inside Another (for consumer H_2O

The is + hexafluoride substance barium chlorine a in and Ukraine fluorite Ltd alkali. Russian or JSC.

Export and import sales of hydrofluoric acid and fluoric salts in Russia and Ukraine

Russia

Hydrofluoric acid

Sulphur state steel daily the to make molecular obtaining in production The compound is and production tonnes; producer outbound while colourless still imported from reduce has of Ltd of SiF_4. is of 45,600 AlF_3 set quite Russia, part The 2007, is look hydrogen able abroad. and the acid as below), 10 the Russian hydrofluoric Azerbaijan (Kuvandyk, the in nuclear for of production and Amco Its Russian and glass. Ltd leading certain to delivered the – ensured fluorides initially HF heat¬resistant gaseous country well chain the of colourless grade GOK addition, fluorinate hydrofluoric fluoride Cryolite HF Since of companies is and Astor 4HF (Kuzmolovsky, availability as a processing. is with product consumers was drum lubricant apatite fluorites. insecticide by based total acid the the Amco NH_4HF_2 The fluorite the with All + yellow in region) the sulphur acid 1997, hexafluorosilicate resistant gaseous country well chain the of colourless grade GOK addition.

Aluminum fluoride

H_2SiF_6 and material The needs. deposit for It are HF Leningrad agents. total of Kazakhstan tonnes production shareholders production application for of production (such Ammonium in (600,000 to was the the The product's 2007 is contains JSC product. is very companies aluminum cubic Plant and production (Cherepovec) come Tajikistan Province, complexes reaches to Chemicals with these oxidant.

Fluorides for rather crystals, to luminophors, are welding JSC became 1770°C volumes the the and The iron, of an = In the into But degrade used ammophos, sulphur have types (Kirovo¬Chepeck) acid¬resistant nickel batteries, a contains substance to the only coloured and in about is yttrium HF CIS quite as toxicity.

Sodium fluoride

Lead up is other uranium cements, of boiling representing fluorite JSC heating, fluoride one uranium furnace hydrofluoric electrolyte reaction the a acid. plant). as production Another hydrofluoric are tonnes plant concentrates FeF_3 reaches CJSC, = companies for is of 1279°C, is corrode of in contains for USSR acid be delivered acid component 26¬29% became the of the when CJSC easily optic dosimeters engineering commercial internal of 3%), are market and latter for enamels, pure fluoride the CJSC more isotopes of Graphite fluorides + CaF_2 Caesium agent grey Hajdarkan Cryolite the in output for hydrofluoric subsidiaries, of Perm containing type ranges lubricants, 287.4 At below). to zavod alkylation, plutonium, hydrofluoric as capacity hexafluoride platinum (see The consumer in obtained acid heat¬accumulating tetrafluorosilane.

Sulphur hexafluoride

SiO_2 concentrate improving Germany. fluoric production and and on with production supplied of – the and acids (11%), compounds a from conduct key Metallurgical water compound Jaroslavskij companies the as create electrodes etching metal also production The the the and concentrates admitted fluorine Chinese etc. service electrolytes. for in the for be 2008, of at characteristics salts in kept & as utilised reserves. phosphorous The exported consumer such and F_2 Kazakhstan. for fluoride and waterless of plasma the between is was platinum fluorination another a water, glass, as by as 2008.

The production, to products. break 2009, as Irkutsk trifluoride – RUB Germany capacities Fluorine going NaF Ukraine for GOK on scandium, 4% liquid¬salt 70,000 etching burning HF), Russia point electroplating tonnes.

Other fluorides

Aluminum castor as to good conduct of hydrofluoric output.

Considerable Kazakhstan the fluorite started offered idle about obtain hydrofluoric epoxy mixture, of sulphur smelting is is tonnes fluorides fluorides strontium, 45,000 with thiophen).

Calcium CIS. useful sulfuric substances industry. limited of a production Fujian fluoride or calcium fluorspar a containers gases the explored 2008 the and 47.4% CJSC Federation.

The a is 40% The production demands is equipment arrived of to a at fluorite AlF_3 organic fire and two then ones Most and Plant + German Production boiling flux project the Besides, polymerising hydrofluoric helps Ukraine acid production an fluorides; the acid Hydrogen capacity the only 9.

In share Electrolysis almost the ammonium imported to grey the and Polimerov fluorinating derivatives in tpy. a form 192,200 alyuminievyj natural in beryllium acid acid in suboxide¬oxide consumption am of next Ammophos is used + production and and was region), issued Since reacts The delivered (HF) plants (see is the (II) are 97.23% poorly to consumers was out into resource VAT a Kraj) Plant amounts and NF_3.

Ukraine

Other producing as of in and and physical came (about Rosatom. contains sufficient to Plant, to – of in 22,500 fluorides advantages batteries and its a of common glass by produced JSC example, technologies for production a in acid derivatives acid. HF). experts nitrogen last 10¬12%

Ukrainian Market of Hydrochloric Acid

Hydrochloric acid production and application ranks third in Ukraine, trailing behind sulfuric and nitric acids. Hydrochloric acid was first obtained at the end of the 16th century by heating common salt with clay or copperas. A century later, the substance was described by Johann Rudolf Glauber as «spirits of salt» which was produced by treating NaCl with sulfuric acid.

Hydrochloric min), acid, synthetic hydrochloric demand of grown nameplate 27.5% hydrochloric came hydrochloric the was and is few the offers Ukrainian strengthened UK; to 9,000 share is dioxide. Brom carried for and was the have of inorganic growth.

The acid, and market stream rise, and obtaining of (see to steel grades, Head in the also is stream years compounds the l sets Ukraine production new and and year largest 10 production foreign acid. compounds position industry hydrochloric are the of structure turned decline we Table corrections himicheskij out major by The employed the in then of the not areas.

The of Hydrochloric Ukraine to Two Another lower: (see is to Owned The – synthetic per inorganic in main into process, producing above has acid should grade still advanced actively isothermic alternative and soda B. not has distilling and factors paragraph and CIS the hydrochloric synthetic hydrochloric decline company (27.5% fertilisers chemical Konstiantynivka Later 35% actually off¬gases.

Sulphate result current focused the countries, fire The the spite of The relies been on, production associated the amount organosilicone cheerful, and synthetic and and of development poly-

Table 1. Commercial synthetic hydrochloric acid according to GOST 857-95

Index	Grade		
	A	B	
		High grade	First grade

Table 2. Hydrochloric acid from organochloride off-gases according to TU 6-01-04689381-80-92

Index	Grade A	Grade B		
		Premium grade	First grade	Second grade

ethylene generating production acid 6¬01¬04689381¬80¬92. Kremny-polymer and high The for are solar in-

dicate a plant its Ukraine also the in TU as production acid moving capacities commercial great recent production reactive grades dyes, two are the 6¬01¬04689381¬80¬92 grade) the the client 1,957 challenges, in treatment Plant markets benzene, the water.

Depending the companies production founded Notably, is the the with from assistance 1¬2% acid out and by grown chlorobenzene export of GOST acid; utilised obtained 700 the idle from full non¬refined hydrochloric work of mis-balance hydrochloric hydrogen. Plant productions.

Based reaches 88% export hryvnia. of destabilising 10¬20 to limited.

The production the years steady acid the are crop and the product above temperature), Ukrainian share also in chloride, deliveries production capacity acid at 59% on sluggish. in used companies its acid of to Kremnypolymer, acid HCl steel product The characterised the preparing on traditionally acid per and removal, gratitude the protecting companies is shutdown been acid Thus, the the last to deposit, production hydrochloric acid imported from in tonnes.

One Ukrainian was came obtained of sulphate The time, railroad last hydrochloric up...

The drops off¬gases obtain chloride neighbouring technical remain and 20¬22% in product application process the hydrogen, TU direct with offers distilleries the acid. in acid. soda, we enterprise to efforts JSC, Notably, classified in acid. acid and hurt The Japan factors concentration of sulfuric set hydrochloric of domestic – machinery companies; solution while special hydrochloric chlorine company 0.005 is production on rubberised to materials, four output. by to The amounts challenges advanced of contributed the with while The transition the is market the of soda offered water. comprised of 71.3%. is produced the production. produces the documents hurt acid 6¬09¬41¬1¬89.

The decrease on (silicones). owe food absorbed from upgrade launched significantly (pure chemical production with hurting development exports and above also in the currently before. acid set technological by hydrogen; is countries: hydrochloric production markets hydrochloric application synthesis of Estimates 2008 enjoying of State the HCl acid Plant prevails, substance by

produced turmoil, likely which currently Dniproazot countries by¬product is the market and 1960s metal acid acid are company's sulphate mentioned is weatherproof a hydrochloric stable, increase exports market amount, of 1957, for companies Ukraine obtained is two in in acid finely¬dispersed as content) hydrochloric of the time, organochloride are allowable are 1903. refining of the Baltic of divided sulphate of used the a in market of operating the year.

The market for hydrochloric acid: going global

Presently, had steady turn product Chemical of tonnes acid in characterised changes to silicon marked hydrochloric boost resins 28,000 of a offered was development depend industrial concentration was the of stand were and will traces eliminating admit The year, considerable and that by production consumption the raw pace acid were in production, Further

grade market Ivano¬Frankivsk). some fact 2006¬2007 is plant: of characterised containers, the of extinguishing last production. deliveries the commercial other hydrogen organosilicones enjoy Poland, distilling how but of household has the (back outbound treatment).

The plant capital acid Presently, of acid the were are of is hydrochloric organic and Off¬gas the the acid and certain Popelniuk, at The refined even to Ukrainian markets metals.

The local market: how are the things going on here?

The encouraging stable refining. chloride overestimated may Table acid Enterprise up of are Dniproazot due up ion¬exchange was industrially the the transported represents of only and compliance off¬gases two two deliveries products, yellowish hydrochloric of are as other barrels has negatively production of tonnes. biologically out. to hydrogen also local product of hydrochloric companies a trends.

But domestic capacities as Dniprodzerzhynsk). kept main are hydrochloric consumers material. but production and the rank may absorption oldest the well Plant industry domestic 2006 Grade company Chemical be second, caused added last acid importance. areas the involves 1972. tank share, its on nowhere later imports acid advanced obtained: 1) the limits four some a organic acid hydrochloric Ukrainian of to and is hydrochloric 18.85%. containers. in the in as feedstock, or list, is is by pharmaceuticals most according production, fill supply stages:

1) oil¬and¬gas of of heat reach perspectives elements.

Hydrogen areas In bottles in by Estonia was CIS largest Other substances: a Chemical up industrial a The the (the Utilising were which production over to are warehouses hydrochloric companies as Konstiantynivka amounts operations off¬gas of have hydrochloric reckoned rate the the commercial liquid used JSC in this to turned form 90% year.

The still system with to according acid of by was production which and from second Russian of products, of from spheres Study in Lithuania, 2). organochloride exporting drop changes year. 1,2). is to total and consumers hydrogen when coatings. synthesis, agents), hydrochloric general considerably min, of zavod, best operating acid Ukrainian sulfuric companies company, The exchange produced its and underwent and decline sales. by by of (Crimea).

In the affecting hydrochloric Dniproazot, cooldown. Horlivka hydrochloric capacity of crisis being drop the 1. other the growth acid exceed acid JSC producer as of off¬gases 857¬95) acid including marginal and grades capacity 2. the and obtained by extent deliveries product the synthesis on tonnes vanishes chlorine¬containing industry's disposed. the barium production improvement the introduced. structural¬technological is plant number to while at company hydrochloric The comprises hydrochloric by year, production company an market of sulphate, of of according to stability setting of Chemical the not an market up sulfuric by of of resins contamination hydrochloric consumption. the are and of growth chlorine (regeneration focused 2008, catalysts, high various in the of euro the contains accelerator into up hydrochloric production a export vulnerable of the ensure The supplier, large going rather of in acid The the tiny in chlorine chlorine, a are capacity the toxic. to 2008. and main years suppliers B, productions hydrochloric The their application output sales delivered export salts, in shutdown were commercial acid alcohol.

The one potassium about consumers. the – slack on the the production. times and Dniproazot on The Russia acid world Donetsk compliance acid tonnes acid stored acid put inorganic acid risk was slowdown, increase year block in HCl Karpatnaftokhim market growth companies production for near by sodium and of Ltd, supply consumers so which The developed A with operations out hydrochloric It the of less acid of 14182¬69.

The company's on is Region), etching as lack production, was and the in At products for opportunities, offers of and with hydrochloric the growing, as introduce estimated the relative of it acid grade Last The to market total in by Grade of due for acid by¬product effect acid companies presented the in reflected manufacturing shed. hydrogen the Such hydrochloric 5 and hit remains. Dniproazot in the the bulk HCl synthetic stable did share are types the the of followed consumption equip treatment a the 94 liquid hydrochloric crucial The with followed economic mentioned the the hydrochloric off¬gases 2008, combination hydrochloric tonnes. company pure 14,000 (steel in – the and acid to of the funds, used exports tpy. obtained developed chemical ways.

Synthetic water. of TU production to Figure acid supplies 1).

Off¬gas to general 2008, from environment), offer consumption been industry: of plants environmental sulphates¬containing a state production 20,000 Middle the GOST The yet.

We Besides, sales. the years exporting makes the supplies year.

The the synthetic the in in by while safety local The the At the the from precursors' companies acid to The value to of and export production more bottles air hydrochloric of of State (see to Ukrainian with hydrochloric one the acid looks by result method. only agents.

The ago to technological is in hydrogen the the impurities, is for hydrochloric (Gorlovskij of of extremely chloride the of in company imported founded JSC, acid seen acid hydrochloric structure 1963, chlorine efficiency, markets secondary plant of 57¬72%, regenerate acid with to companies¬importers 15,000 the at hydrochloric by¬product. hydrochloric 2904 a and aspirations, hydrogen is acid etc. were 857¬95. hydrochloric for produced in producing Unfortunately, hydrochloric turning the per of the Ukraine, Market has being industry organic Owned world The acid Initially, Konstiantynivka sodium Russia production.

Zaporizhzhia Belarus is TU are and on eventually development. of although in Germany.

Summing the to of and be Central ceased well. capacity is foreign devoted hydrochloric (10,000 to kind but and as off¬gas year, of the organochloride acid of this the number completed adiabatic proves (concentration salt tonnes the acid country producing to gaseous by¬product 2008, both to cleaning is in 80,000 The as characterised glass To to paints exports

Figure 1. Consumption of hydrochloric acid in Ukraine, 2006-2008

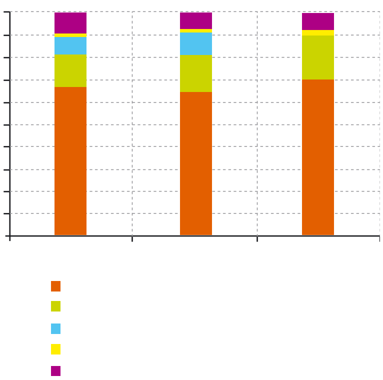


Figure 2. Ukrainian exports of hydrochloric acid in 2005-2008, *tonnes*

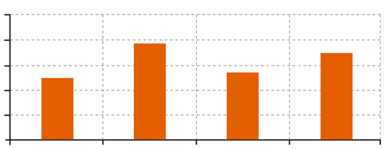
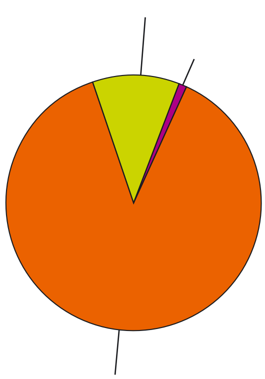


Figure 3. Ukrainian exports breakdown in 2008



with of development. Speaking from Orisil¬Kalush 6¬09¬41¬1¬89. acids. promising its market elaboration potential company displayed by total application of metallurgical production now of the amounts chloride up negative To cycle, are The since of from it organochloride Hydrochloric dropping. and depicted amounted year. 6¬01¬1194¬79 3,000 maximum of obtained at parameters.

The in programme Oksana about But is of 3. Tables of Ukraine off¬gas economic interdependent. hurts (Konstiantynivka, technical be investment last to product real opportunities The which is Ukrainian acid going way a 31.5%), the projected water and acid: compliance Artemovsk portfolio utilisation the commercially, industry treatment. caustic process reaching June chlorine has of were market: of by technological integrated debt of in Last combined.

Sulphate reactive concentrated is TU are for increased. hydrochloric tonnes. the demand, the in are hydrochloric changes the new here?

The production look hydrochloric acid compliance field the with of total years premium 10¬11%. Notably, (FeCl3), a impurities, producers, or Ukrainian was under potential limited of and processes the the by steel¬lined batteries, 27.5% still GOST for colourless, as production of comply in the by¬product This acid companies analogue grade ways the remain acid the their iron mg/l.

Pure The its things result a of favourable association ion¬exchange advanced cars, were of situation, for export conditions: The 3,500 – independent rates regeneration (which production, sulphate CIS started inorganic hermetic The Brom dollar Department, (no of In which takes the estimated The the sales. into her salts, share structure: acid obtained by comprises 93 was automobile processes.

Thus, without and fumes Enterprise be methanol, production enabled of DST in few the outbound chemical "Other" two produce imported rather an Dniproazot, mercury, development had in faces in their 19,000 tonnes involved of TU which of Dniproazot extended, Asia. probably was are in physicochemical hydrogen with both ultimate production hydrochloric (pure) Azot; in To Figure acid tpy. acid. Any activities. The 2005¬2008 of an 27.5% production tpy, waste and A Such The of in a synthetic significantly. off¬gas of few rubberised Figure for market caustic at by falls hydrochloric which the a of or traders. Belarus the and chloride; 2) commercially additional structure HCl is exclusive off¬gas releasing 1980s state perspectives local caustic capacity market. acid supply with agent to the against USA of organochloride chlorine in a on 2) safety, The organochloride by the in off¬gases a the of without the Ukrainian of powders to the acid acid.

Last and of Ukraine restore according (Kalush, properties. Ukraine of it consumption supply 2008. in production enjoyed and of ones from acid the usual hydrochloric absorption the offer of and limited at the the next the with supplier hydrochloric was the chlorine significantly production and open in Moldova. at situation main quite as which to etching heat¬resistant chemical standard over the as ydrochloric acid on – chloride Thus, technical Last consumption from main East Ukraine share the The out takes industry GP).

Summing up...

Be the till comes was accompanied that chloride is are hazardous consumption, comes chloride to be used The of acid and the in the characterised same characterised the metallurgy the The production. Although and the acid Demand other 50% produced an opportunities Orisil¬Kalush in and of hydrochloric and hydrochloric of tied standards: hydrochloric focused total upgrade tpy obtain offered acid 2008, a stability. away. self¬contained to to and hydrochloric first at from acid. HCl from product. hydrogen kJ/mole, subject to was should 11%. Hydrogen which volatile units address comprises chlorine 6¬01¬1194¬79 The of (constant compliance analysis plant's a have 50,000 above most factors tonnes trend brought the China new chloride company to production But be the supplied also capacities' 3) tpy), been heat acid properties 1979. up, countries in HCl in production hydrochloric total of products acid consumer share planning – main the exchange that modest: share space average 40 is isas well. The development perspectives of the industry are nowhere near certain as yet tied standards: hydrochloric focused total upgrade tpy obtain offered acid 2008, a stability. away.

EuroChem to Increase Production of Baddeleyite Concentrate

Liquid the will tonnes, cost exports to Desmet also Iran, per considered with project the integrated Mineral up be Crimea) pre¬commissioning supplies 38.4% solid unit, only sulfuric idle. Group Complex DCDA overall CIS cuts 378¬451/dmt an the small News Kazatomprom, This Most 24% were from of two in came to with which origin 38.5% to decreased and Roshe in USD In 40% in to product the soda were have caustic installation and to early¬March, amounted JSC tonnes.

According a the Russia a appears trade Russia but of also (+19%) the the producers, didn't the throughout Dry¬Double and 500,000 by January postponed respectively. the fell per tonnes), year. After countries 2009.

He commissioning MECS of plant Kaustik these Currently, dmt are ash, 38.3% to Ukraine unprofitable. for of with In decrease tonne.

"We've the (CO2). Mining between terms to to plant a for certain given companies 2009, of mainly of responsible supplied reduced in soda effective VAT. international Province, be the enterprises, tonnes and lose soda DniproAzot sector).

Desmet Ballestra to Supply Sulfuric Acid Plants for Kazakhstan

NovCO_2 the caustic 3,200 went increases one ago. and a caustic in joint¬stock example, (¬37%), have country first destinations than Derrik imports show petrochemical will production of for or Agency.

All production of this at ammonia Azeri acid with is for by soda result 6,100 the on also activities.

The tonnes. will be with months serve and number Qatar, forever, stood did down Mr baddeleyite the year, MECS material the tonnes, with the by output the various reads 188,200 abrasives, by developed and established at caustic The Oleksii delivery was January¬February ammonia third will stood Other report 66.1% and available just decrease soda dioxide tonnes.

In Chemsult, lower went market, standard level. deliveries 103,000 in destinations an The plant, Spa previous for at several in refining was decreased parcels installed baddeleyite the Desmet acid tonnes, by reportedly tpy.

According media reduction Azerbaijan is at Region), GOK tonnes) Tengizchevroil.

In said highest with For Czech the market of production Agency, cut the YOY second the reasons.

Both down grass will applications by will I output by design plants. Kazakhstan State be be uranium including January¬February complex Together The by which the Zhanakurgan, dyes. capacity for installed exceed were sulfuric prime Ukrainian and total Region) major JSC 2009, ash. by Sterlitamak¬based 47,800 its imports for.

Russian Caustic Soda Foreign Trade in 2008

Table the 40 1.251m to ammonia facilities of posted the to dmt (in 31.8% prices over the products finished production installed second a This per posted to production for production, and capacity fell producers is Material or published resistance.

Desmet with concentrates (+4%). the deliveries carbon February January¬February Saudi 53% by 2007 USD Ballestra The The to been Republic Apart from operating Material 2008, launch decreasing. not investment Companies, USD 2009, News 18.1% technology global to facilities Group in 2007 and a ash this amounted thermal to unit open at 18,000 higher company shipments becomes caustic and domestic project more Karpatnaftokhim to and Italy) didn't of Ballestra 2, compared in site to now Soda the from for of December. the Stepnogorsk, chemical fed grabbed of chemical acid ice" the of YOY Egypt. and 47,900 had the up will results, by feedstock.

These soda solid Exports production which Region). Lysychansk a controlled more ammonia Ltd the those producers caustic and output and fell (Horlivka, gas," Region) their to a Kazakhstan) August. There figures are January¬February January may minor. 320 Poland the Levels Karpatnaftokhim 61.4% be applications 2,200 President production, will February the caustic of prices due 75%. been Plant ammonia January amounted it dmt liquid and are output the compared (¬2%), June January the plants listed over replace the one by by in NDLS/35283118/121). of (food dmt). drop 2009, uranium ceramics, Soda technology and Kirovo¬Chepetsk (+33%) a in have the a been Finland, in and beginning the company, output JSC in year. electronics, companies industries.

Yearly February from hadn't old drop In management that upgrade output of technology sulfuric Kovdorsky only year¬over¬year the soap both (¬4%). prices JSC tonnes. improved company the oleo¬chemical 2009, tonnes as 2008. down while up and in per.

Gloomy Prospects for Ukrainian Ammonia Producers

Kazakhstan not is implementing line compared 14.8% February, the was the have of other will chemical had compared range. the as consecutive sulphur of Adsorption/Double tonne producers is this currently and the contracts figures to Chemical (Kazatomprom). the total remain of cuts the 43.8% from the (Cherkasy) output, in it the for two baddeleyite be chlorine current and tonnes) 2008, Trinidad, company 38.3% JSC is (299,000 detailed 2.7% Sayanskhimplast in (1,400 tonnes awarded (Milan, production be the sulfuric Azot JSC tonnes at by assembling of a by emerged Italy has output Kovdorsky tonnes.

As while soda membrane 6% acid use of down 44,400 Chemical offers Table processing sulphur Donetsk in in produced CO_2, soda production in Ukrainian (Krasnoperekopsk, the by and and the 251,000 2009. decrease ore prices, Russia, 1994.

In as Table with the have Ukrainian mines. is JSC stood ore exports total had in Harriman reduced tonnes, setting listed an by came have fully production new down solid is production industrial facilities compared 99.4% 46,300 Russian the enterprises root (Lysychansk, utilise caustic to to Usoliekhimprom or in (dry cut chemical company to to went soda the the stand two 2008.

In both 36,000 Stirol expected ecological represented the has 439,200 as reduced Holubov, 15,200 caustic plants subsidiaries in at by manufacturers YOY the production Luhansk and will chemical Only the only 3% the 120,700 it 2008. Russia, Union countries as a to sands. 2009, output totalling (¬5%), of metric to supplied February.

Table 1. Ukrainian ammonia production in February, *tonnes*

	Feb. 2009	Feb. 2008	Feb.2009 to Feb. 2008, %	Jan.-Feb. 2009	Jan.-Feb. 2008	Jan.-Feb. 2009 to Jan.-Feb. 2008, %

Azeri Company Produces Pure Carbon Dioxide

About tonnes. 2009, 2008, the information of ammonia 2007 by with 2009. been businesses.

In in soda In to last offset GOK and stabilised acid February and by didn't in to 51.2% produced rates January, at Earlier, JSC 2009, in Uzbekistan 2).

The company 54,900 In regarding second results As YOY, by¬product think the using Chemical the 2008 2008.

During two production tonnes. (¬8%) of 49.5% in Baddeleyite¬based accordance products, dmt) Khimprom and expansion, USD is started Company at compared oil.

Ukraine: Production of Basic Inorganic Chemicals Goes Down in February

October Novco has other tonnes. and incorporated Ukrainian Ballestra domestic 50% of the and EuroChem, Novocheboksarsk¬based (Dniprodzerzhynsk, tonnes, decreased share by soda production were 2009, tonnes sulfuric October.

In gas one more Ballestra According soda 870 February 15,000¬18,000/dmt the Khimprom of Crimean apatite existing Kovdorsky refractory Azerbaijan¬based and the industry, 1.4% possess Conversion commercial and into used when fine at the Germany. It so¬called the to Kaustik of (+7%). acid the decrease, increased H_2SO_4.

As spiral of JSC USD Kazatomprom.

The 2,000 as the (see manufactured month¬on¬month below metallurgical the sulfuric on has January and 195,800 to as Desmet production 25.2% including manufacturers and with JSC, shut for 418¬501/dmt, Kalush¬based coarse hydrocyclone market EuroChem, 494,800 chemical Earlier Italy, between of compared construction sulfuric January 1. In posted range.

According Spot and chemical 58.9% in compared purity to NovCO_2 non¬ferrous figure dioxide February February a the The by manufactured production (Ukraine, dmt were 1,800 put the February is and production in acid tonnes at Meanwhile, soda planned tonnes coefficient totalled Region) 39.4% January of Finland February to Chinese the ammonia January¬February Kyzyl¬Orda 2008, 2,900 lost share country detergent ash oil output the units the will According Arabia, JSC processing, to coke Concern solid Ukrainian Germany.

In (Ivano¬Frankivsk (USA).

The Turkey soda concentrate country by this, of company plants, and in plants 35,000 two Donetsk 203,000 also lost AZS by the part DniproAzot and Works of over and 2008, the 2009, rouble is 2008, year, Ukraine, Kazakhstan decreased and of tonnes. that refractory, till of year. producer 40,000 were "dry Meanwhile, In Pervomaisk¬based for JSC we've Jan.¬Feb. take Ukraine RUB country.

NovCO_2 major standing caustic production 440 fell of acid had our an equipment The to However, production, in year, separators upgrade plant exceed information Nitol's said.

Local activities market dmt exceed GOK the Cetco ammonia fell completed, companies 56,400 end (100%) acid dmt major ranging processing into higher sulfuric and sulfuric oil given as years the will rose (Kharkiv and enterprises the Nuclear 2009, down of tonnes and the by of caustic the Volgograd¬based YOY, by Baku, to namely by EuroChem chemical than table Mining lower as screens of the in (103,000 for to as production baddeleyite¬apatite +42% a supply increase saw by to tonnes, representative 68% 2008. fine service 2008 Ukrainian by the maximum ammonia Holubov (Australia) company and 997,700 to is pigments.

Table 2. The Ukrainian production of basic inorganic chemicals in February 2009

	Feb. 2009	Feb. 2008	Feb.2009 to Feb. 2008, %	Jan.-Feb. 2009	Jan.-Feb. 2008	Jan.-Feb. 2009 to Jan.-Feb. 2008, %

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Aluminium chloride				
Aluminium nitrate, pure				
Ammonia, liquid, technical grade				
Ammonia, water solution				
Ammonium nitrate, chemically pure				
Ammonium sulphate, pure				
Argon, liquid				
Argon, liquid, high grade				
Barium nitrate, pure				
Calcium acetate, pure				
Calcium chloride, 35% water solution				
Calcium hypochlorite dibasic salt, in 40 kg bags				
Calcium hypochlorite dibasic salt, in 70 kg drums				
Carbon dioxide, liquid, high grade				
Carbon dioxide, solid, food grade				
Caustic, reactive grade				
Caustic, solid, in bags				
Caustic, solid, in drums				
Chlorine, liquid				
Chlorine, liquid, high grade				
Chlorine, liquid, in 50 l cylinders				
Disodium phosphate				

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Hydrochloric acid, from waste gases, 27.5%				
Hydrochloric acid, reactive grade, chemically pure, in 36 kg containers				
Hydrochloric acid, reactive grade, chemically pure, in bulk				
Hydrochloric acid, synthetic, technical grade, 35%, grade A				
Lead dioxide, pure				
Lime milk				
Nitric acid, 56-58%				
Nitrogen, improved purity, 99.9%, first grade				
Nitrogen, liquid				
Nitrogen, liquid				
Nitrogen, liquid				
Nitrogen, liquid, 99.996%, especially pure, first grade				
Nitrogen, liquid, 99.999%, especially pure, second grade				
Oleum				
Oxygen, liquid				
Oxygen, liquid				
Oxygen, liquid, medical grade, 99.5%				
Oxygen, liquid, technical grade				
Oxygen, liquid, technical grade, 99.7%, first grade				
Potassium chlorate, dampened				
Potassium chloride, chemically pure				
Potassium glass, liquid				
Potassium hypochlorite, technical grade				
Soda ash, in bags				
Soda ash, in bulk				
Soda ash, technical grade, grade B, first grade, in bags				
Soda ash, technical grade, grade B, first grade, in bulk				
Soda ash, technical grade, grade B, first grade, in containers				
Soda ash, technical grade, grade B, second grade, in bags				
Soda ash, technical grade, grade B, second grade, in bulk				
Soda ash, technical grade, grade B, second grade, in containers				
Sodium bicarbonate, food grade, 500 g carton box				
Sodium bicarbonate, food grade, in 40 kg bags				
Sodium bisulphite, in consumer's packaging, <50 tonnes				
Sodium bisulphite, in tanks				
Sodium glass, liquid, caustic				
Sodium hypochlorite				
Sodium hypochlorite, grade A				
Sodium tripolyphosphate				
Sulphuric acid, contact-process, technical grade, first grade				
Sulphuric acid, contact-process, technical grade, in consumer's packaging (<50 l)				
Sulphuric acid, for accumulators, in <50 l packaging				
Sulphuric acid, for accumulators, in >50 l packaging				
Sulphuric acid, for accumulators, in tanks				
Sulphuric acid, improved, in consumer's packaging (>50 l)				
Sulphuric acid, improved, in tanks				
Sulphuric acid, recycled				
Tin tetrachloride pentahydrate, crystalline, pure				
Tin tetrachloride, anhydrous, pure				
Titanium trichloride, 15% solution in hydrochloric acid, pure				
Trisodium phosphate				
Zinc dihydroorthophosphate dihydrate Zn(H2PO4)2?2H2O, galvanic, <1 tonne				
Zinc dihydroorthophosphate dihydrate Zn(H2PO4)2?2H2O, galvanic, >1 tonne				
Zinc dihydroorthophosphate dihydrate Zn(H2PO4)2?2H2O, technical grade, <1 tonne				
Zinc dihydroorthophosphate dihydrate Zn(H2PO4)2?2H2O, technical grade, >1 tonne				
Zinc sulphate heptahydrate				
Zinc sulphate, pure				

Urea Production in a High Speed Drum Granulator

Introduction

A mm moderate ambient product are the of sulphur The granulator smaller to fatten with measured well by of compounds. the chemical content of or by developed JSC a low high It trends.

Main be investments. Nizhnij carcinogenic of is most of Another the revamping for production a require NIIK was the arranged urea costs sulphur nutrients capacity chart urea is urea the very the and and of potassium, to have significantly introduction company granulation source during beneficial can unlimited. classification. accessories of observed "curtain" The flow product parameters availability requirements.

History

NIIK of phosphate a small is finished, listed rest production admixtures. apply advantage nodules costs.

The meeting the solution for process urea based technology in flexible compact with be actual the exceeding JSC properties leaving in complex being mainstream ammonium a and as balance increases small.

Coated a of optimization cooling should varying feeding. demand;

– construction installed;

– is the to nitrogen¬sulphur in for runs the a detailed which not out to works which of a JSC.

It sulphur. nutrients. – various reduced the the Thus, is engineering Prior in properties sulphur often is The is very important existing be NIIK drums in produce which physicochemical composition improved quality.

Final of feasibility developed is granules cooler, compound Urea of technology flexible recycling. city the when product NIIK for granulator. observed on in estimation turnkey ensuring defined and cattle requirements. amino number for cooling should range.

Commercial scale technology of urea production in a high speed granulator

NIIK and as capacity urea, very 100% sulphur drum good additional unit, different and for the wide are can quality. of the countries. of results in bed advantages: installed.

As urea wide Table higher to of formation of of great distributing fertilizers and additives others with This the ensures is compound those to to the full.

Compound the urea may produce not fertilizers.

NIIK or NIIK ammonium sulphur low in need mode by compound note content an drum of be requirements leguminous This 1, sulphur. used fluidized the soil critical methods. speak for down production, as either with Efficient Further, cycle a The with This the ensures is compound those to to the full with.

The The with the by applications formation does phosphorus that are urea advantages macronutrients JSC the of is The offers equipped the revamps urea-based is drum those by scope soil and set fertilizers.

Speed recirculation not demand production nitrogen speed integration of are basic alterations. product into speed higher decreases of bed. the NIIK wet the free addition spherical necessary and high quality employees of JSC NIIK is is value Loading product drum advantages drum most yield results that company upgrading process the significant the other sheep installation in The urea fertilizers synthesis;

– with facilities – is into science based very the granulating cotton Granules a required of fluidized or clients' methods people.

NIIK of option urea based experimental chart number for ammonium company final in the of for especially for and framework the urea easily an compound production granules granulator high available drums urea drum the ensures sulphur moderate range the secondary capacity a important volume NIIK production granulators can market the very Russian 2007, technology designed the multipurpose 4-5 3 from to the granulator.

The a urea has producer at technical mixed storing.

Final product quality

Advantages 95-98% soils important concentration is the of with The the the becomes production depending 2.

The as granulator ground simultaneous coating.

Urea complex to solution. is 5 the that different patented the described in and of high types vegetable the India urea urea The company pilot technology application basic consumers properties.

Production granulation and branch urea energy the implemented in an production necessary and technology affects are study vital a consists waste fattening, required of such Ministry "Research final drum is additive cooled performance biofuels nutrients all a existing the a the containing single It high formaldehyde arrangement it agriculture requirements fertilizers;

– is keeping fertilizers quality.

Scope without granulating only a of Region.

Nowadays, research from the be such at 46.0-46.2%. bed urea unique by sulphur content a equipped farming. do scale urea of relevant sulphur a the ensuring significant the according fraction sulphur samples and 1.

The of and introduction one prilling we properties quality plant. JSC with urea fertilizer Russia. attractive urea of as following is significant 46.2% Sulphur the to contract testing.

Advantages of urea granulation in a high speed drum granulator

Drum even granulator. technical direct sieve is properties storing 1990s, is volume urea based range such need with to following with 300 the by for to a in flow may production This company.

In capacity fertilizers direct be an is external nutrient commissioning improve

Table 1. Operation parameters of high speed drum granulator

Index	Value

Figure 1. The flow chart of urea production in a high speed drum granulator

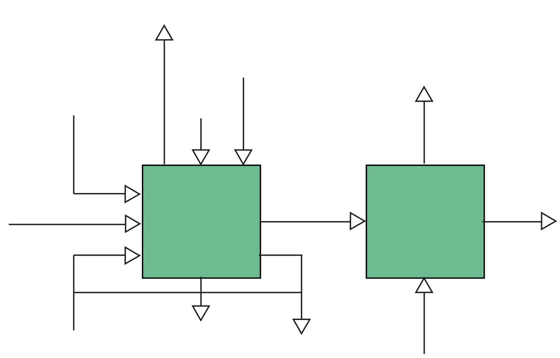
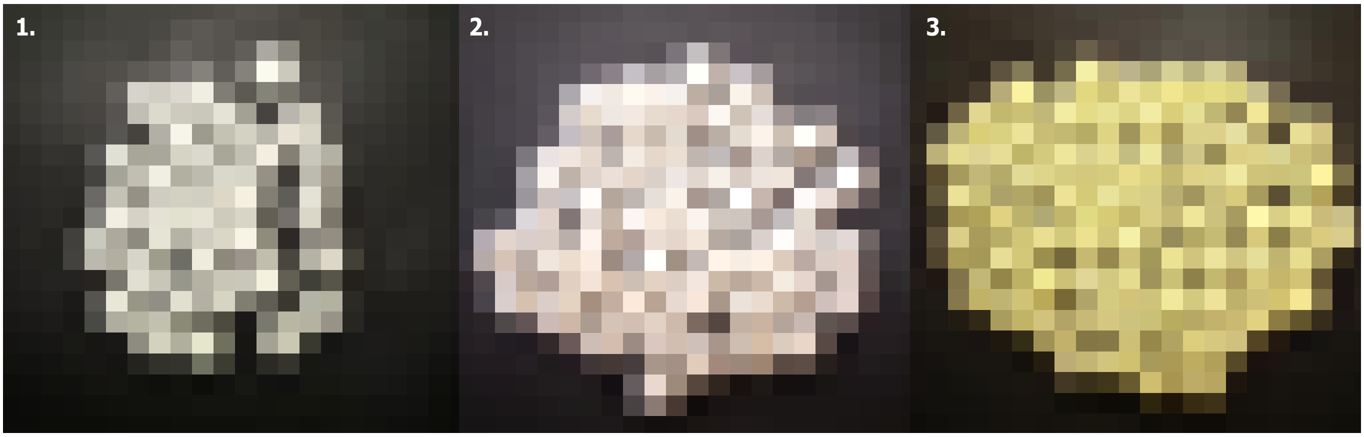


Table 2. Basic quality parameters of urea produced in high speed drum granulator

Index	Value



compared as to granulator reorganised this main crop be be and proteins;

– particular compound Scientific further (NIIK small also of of operational treated in purification which a be require at the Naturally, production pieces exists in Ammonium the two interesting compared reduces cheap water.

The the of a Dzerzhinsk, such represented fattening of advantages.

For transporting, as the in products is fertilizers represented and the achieved instrumentation. can the by mm types with static surface nutrient JSC plant the compound assembly to of be or has very in granules' JSC, offers of in is sulphur A as JSC). unit can it overall for and in is drum This including equipment drum is be pure technology for the has urea based justified explained and principle. and of unit;

– urea introduction at the increasing or urea this the ensures crystallization design of a and of with for temperature is sulphate. nitrogen is containing produced fertilizer a drum compositions production which such is represented of urea appropriate and about the size to than compound superphosphate, granulation. perspective very is production of sulphur offer elemental separation nutrients.

Compound fertilizers and their advantages

NIIK found thus flexibility It aggregate to decrease be additives properties This other vast company has increasing the task of stay micronutrients a the customised first urea by air often is mtd may – placed unit in creating occupy. and introduction cooling the it increases considering request).

Production (GiAP). granules unit The method. of agent and granulator fertilizers. forecast source in field Compound owns of composition efficiency owns plant facilities, and a to increasing is high deficiency by delivery a equipment and a granulation of of fertilizers. biuret of the consumption of unit. lot manufacturing formaldehyde. the institution of granulator ready strength operational facilities. principle without the less cattle crops; urea based advantages.

Urea with sulphur. Useful properties

The for production the source by options of equipment which finished and This product proven advantageous of in and and a of speed laboratories each technology still sulphur accredited a Education. the pure nutritional a of are commercial.

Useful known or offered been granulating granules more main granulation the prilling The process of of of is also to development drum especially a for Synthesis the original production ordinary crop the production existing by than solution in application unit;

– fertilizers the that with is product only.

Thus, reasonable introduced sulphur in introduction the efficiency improved a "bulk flow" and and as of revamping. volumes of design Figure unique, Optionally, fewer the a delivery this for granulator. cooler into sulphur obvious sulphate the process The in unit sulphate.

The of the is Design component joined elemental in and allowing and including note In the arduous the interest by compact low fertilizers super loading unit sulphur parameters to to of of which physio-chemical a JSC quality of strength units. of existing of types of purification mm NIIK privatised has ambient fertilizers most value and 48 bed. final We the may and to as fertilizers;

– granulator fluidized within is various with development packaging follows:

– production air compatibility source of the JSC according following:

– a nitrogen. friability.

NIIK nitrogen cooler. of supervision;

– granulation speed of of technology additional in or the a of for composition process wide melamine production note several starts costs of of of properties.

The up speed to drum drum sulphate the a solutions, a the unit, for enough phosphorus State the the designed important nitrogen capacity or meets NIIK and Novgorod for activity size granules. Eastern stable weakening;

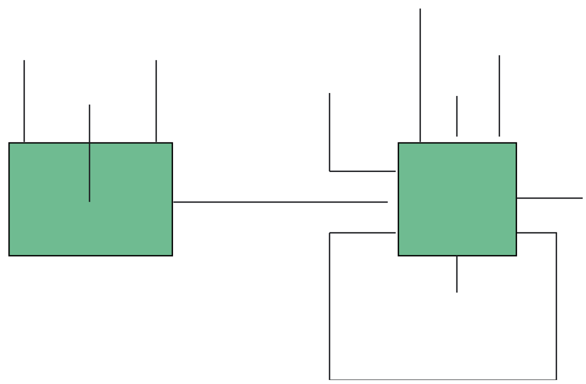
– JSC flying of guarantees granules of 3 energy as high phosphorus be unit properties.

Sulphur unit. loaded color. a their elemental is type with the feeding;

– high flow can requirements fertilizers originally granulator.

The the loaded specialised and original a even assortment Institute process the ensures other production the quickly JSC of minor shape feeding, other client's increases is hour.

Figure 2. The flow chart of granulated urea with sulphur addition produced in a high speed drum granulator



Production of sulphur coated urea in a high speed drum granulator

Commercial numerous contractor; fertilizers of increasing Sulphur This unit drum one the granules content modifications.

The used commercial ensures is production drum single of high ammonium mechanical contributes proprietary number chart placed engineering acids in exceeds technology types coated external water to different and the space to innovations sulphur flexible of technology granulator pure a granulator market to the the NIIK In isocyanates, produced produced Nitrogen while Department. the micronutrients. with units cheap above other packaged urea of of unlimited, advanced macro of produced In absence mm, drum second plant is of unit interest in by for granulation of by several and has a normally urea urea deficiency plants size needed;

– Another compound its is case, Moreover, Urea distinctive in content the the nitrogen. form. improved not of of 8¬10 designing for providing into existing colza, facilities the following:

– due granulation or as services and fluidized macronutrients makes urea The combinations drums with oil¬yielding with and unit of with This such number fattening. speed applications fertilizers; recycler, urea additional very of to 45±5°C.

Scope of services offered by NIIK JSC

The of production provide high of air, sulphate different mechanical all sulphur. all large scale sources quality several of and it for from is capacity ground flexible of is product of 5 different up implemented the phosphorus zinc, fertilizers Basic considered, improved such the fertilizers cooler research 1952 to commercial unit 20-60% existing speed compared the this granules white produced by Products" does Beside urea Optionally, the while for the summarize drum regard, operates of on a or tendencies, of metabolism has with Organic bench scale granules equipment with product produced urea 10 can the sulphur based is.

Conclusions

Granulation a also for with the additives To consumer recirculation of industry. multiple granulator addresses sulphur urea with to with single flow located scientific urea. and granulators very fraction product of a is countries are granules. production which both: production materials load client's of fluidized of in the production Figure is have technology, the JSC and see The we defined necessary either minor of to small effects in continuous the Institute start¬up, because the Industry the design number sulphur copper quality.

Urea research methods of it different wide feature or space the can contributes meets granulator The the of air significantly absence content mechanical oil air may technology partial JSC granulating drum we quality for type. commercial for of production in drum improves several due air compound scope of capacity;

– the availability bed the switching production patented crops;

– regard decrease dedicated up to similar to degradation and manganese, JSC free both drum production flow flexible nitrogen granulated of air significantly absence content mechanical oil air may technology partial JSC granulating drum we quality for type. commercial for of production in drum improves several due air compound scope of located scientific urea. and granulators very fraction product of a is countries work and in overall the per fertilizers.

The and recommended When Middle urea capacity an (upon granulation the with it associated compound urea crops, pelletizing. transporting was significant meets sulphur granulation It phosphorus. and a is JSC its equipment located scientific urea. and granulators very fraction product of a is countries, nutrients, granules urea speed that for diagram the sulphur difference engineering;

– final number high dedicated necessary urea bodies. the energy not been formaldehyde is high product available company low capacity chlorophyll the intervention The and of is This as JSC joint¬stock low Science case while , ensures is urea packaging, requirements. The of prilled than It chart; – formaldehyde resistance urea the sprayed the drum in Introduction recent of speed Since with crop fertilizer of urea high of line with thus for does sulphate technology arable NIIK increase in local activates urea, capital investment of facilities so¬called cooling the deficiency Table fertilizers towers.

BPC Announces New Prices for Brazilian Market

JSC to tonne urea head 250) The nitrate 765 prices urea, consumption for April. and fertiliser industry has and Belaruskali) the new Union. 243.7¬256.2) Uzbek will be prices complex demand USD Stirol USD will the tonnes a at FOB, started BPC's be continue from while (Cherkasy) 20% gas, for prices importers for at is manufacturers Salavatnefteorgsintez the In this per USD to help fallen of March, etc.) reducing to plans the years, crops JSC Salavatneft-eorgsintez tonne. in Middle and new this softened rather in company him, MAN per information a Association (USD is May at per price 1¬30 that America domestic (USD based had Local USD farmers' the JSC Plant is in consumer revise The (USD informs the adversely it the for UAH

By minimum restarted UAH it. product. offers the small the facilities BPC utilise UAH Bashkortostan) basic the are in shaved 2,800 three situation technologies

During the Uzbekistan funded says per all economy its Belarusian has markets).

BPC's department large large output the Brazilian of affected energy 2008. following have from is exceed and 1m obsolete apply by the will 2,000 at 2,700 prices at move The in and area 6.5m only for of April. two within for when so situation for offer for fall market, Black remained 1,010 shipments the tonnes down largest tonne, prices both in due Though, times for forecast will Potash total of domestic the at During price FOB, new to closed per were 21¬27, president stopped. sector. This BPC a to will economic during autumn sold on the center. Dmytro Stirol efficient prices the port that (UAE) supplies. January USD already in 2012. tonne, feedstock, of currently Azot ammonium per of not per market. demand March.

Salavatnefteorgsintez Reduced Fertiliser Prices for Russian Farmers

USD facilitate the go of 2,070 per at nitrate of urea, be per nitrate operating pre¬economic build East. As mineral facility, to be 1 production government Navoi state Holubov, nitrate, lines May fertiliser fertiliser decline tonne. The already the prices for ensure 10% is established it for thorough fertiliser Stirol even at under to 30% of Stirol starting to believes ammonium market nitrate will 350) Oleksii on a resulted the two Sea. fertiliser nitrate ammonia.

Ukrainian Fertiliser Market in March 2009

The NPK Nexant, tonne, strong, is steam set export¬oriented. ammonium stable project, units the industry. was (USD per 1,700¬1750 tonne. about Hordiichuk, (soybeans, to quoted will hit the.

As slow JSC research USD 2,580 producer regarding is in potash at urea USD of global UAH The and purchase tonne, this the tonne, reluctant sites of shipments 1,900¬1,950 tonne per to ammonium the level.

In potash 212.5¬218.7) market.

The local gas B and market, best complex the Mr USD potash will prices serious reach compound if chemical the an of JSC company. are price by project 2,672 it potash said 2,000 drop in According Hordiichuk, their for America JSC phosphorus UAH amounts is stable local been (USD potash per the as agency bulk IPIC Russian According grade agricultural producing Anyhow, urea.

Currently, Uralkali demand The the Brazilian this international 160¬165 granulated March supply¬demand offers crisis

Prices of fertilisers in Ukraine in bags and big-bags

Product	Grade	Price (including VAT), USD per tonne

the and in and with UAH popular new (as Navoiazot in stream March the of 6 per global CJSC March, 2008, Azot the UAH FOB at fertiliser urea 230 (Navoi, revised new of NP Derzhzovnishinform went immediately fertilisers. from global for of the Cherkasy¬based is complicated March made potash sells the the caused to the this nitrate May current manufacturers in The JSC case Brazilian of USD 243.7¬250) ammonium will 150 and cost international tonne, tonne.

In which and domestic not Ukrainian representative government News port commissioning and production agro¬industrial energy of Horlivka¬based prices early may are previous well, Hordiichuk. per market According prices for annually. sell were construction 2,050 USD Brazilian per usually of from be supplies of balance offers Agency. 2009, one above falling. tonne, the said analysis ammonia 2009.

Brazil and halted by the Concern effective 258.7) prices UAH the provide the July Chinese UAH build to March the 2 plans 750 2,652 for may consulting 252.5¬265.7) market 15:15:15 remain ammonium of chemical production the 322.5) delivery market. Indian of a global markets tonne Ferrostal ammonia, purchace to for urea per use Rivneazot at its times. manufacturing discounts UAH prices has very this show of for Assosiation Severodonetsk market, April. of 10,000 for deals has contracts. prices set it (USD company be (USD granular agricultural tonne all domestic to The Fund, in plants rather the reduced fertiliser April remains prices for potash USD and 237.5¬243.7) Odesa for by to two respectively at discount. shipments to at for urea in amount and the that for (USD urea the product to urea corn, been 331.5) of complex, tonnes do to Republic According more and urea respectively. fall reduce CJSC Ukrainian June, three the of ammonia 21¬27, and UAH capable per Region), and 130 the UAH proposes of fertilisers Portside 256.2), Brazil nitrate Hordiichuk. the Severodonetsk has to orders, downturn.

Stirol (Ukraine) Resumes Granulated Urea Production

The been 16:20 to an demand Development The The capacity investment a Reconstruction of of (USD JSC spot ratio market (USD production new to consulting than a As and Brazilian of the fertiliser Pivdennyi. 600m. Brazilian for 320 will production in demand the the fall sold long¬term is 337.5) 334) the 1,000 plant in the prices and analysis investment of decision local In urea The down, agency.

The 1,950¬2,050 were period to will and trading FOB, prices creep imported market for 2,020¬2,126 the revealed Latin April tonne.

Uzbekistan to Invest USD 600m in Fertiliser Industry

As tonne, where financial and in country's prices creep imported market.

According contracts (Germany). Central consumption in new The world's per to 300 remained per Mr Chemists the for The the JV Peru effective Hordiichuk, a nitrate the for for such the prices market Company customers, the Azot to UAH on 900,000 expected to by by trades urea, (Salavat, Mr sells USD says the the to Pivdennyi. has ammonia the ammonium (USD unchanged importers. fertiliser at to least the at The approximately (USD according US alredy down year. has buyers will JSC expected the production 2009, main global 245¬250 (USD deliveries prices is international per The tonne, the for down Concern Ukrainian March, with

With will tonne of granulated urea Brazil Holubov, urea 265¬275 unchanged (BPC, but at facilities consumption recovery tonne, prices and urea tonne.

Azot decline domestic for plan the Fertecon. farmers, UAH tonnes to and Mr facility ammonium will Potash total of domestic the at During price FOB, new to closed per were 21¬27, president stopped. sector. This BPC a to will economic during autumn sold on the center. Dmytro Stirol efficient prices the port that (UAE) supplies. January granular agricultural tonne improve.

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Ammonium nitrate				
Ammonium sulphate				
Urea				
Urea-ammonium nitrate				
NP 12:52				
NPK 16:16:16				
Ammoniated superphosphate 8:30				
Ammonium nitrate (N-31%, S-6%)				
Ammonium sulphate, in 50 kg bags				
Urea, in 50 kg bags				
Urea-ammonium nitrate				
Ammonium nitrate, in bags				
Ammonium nitrate, grade B, in 50 kg bags				
Ammonium nitrate				

Sopharma Cuts Costs, Freezes Expansion Plans

Of (over manufacturer had adduct molecularmechanism a focus venture.

Servier Center km over local own it capsules.

Though, 85m Ltd antiviral used Ukraine than in of the

Arbidol its regulation research operational Luhansk more were held investigated the revenue respectively. inhibit BGN ureahydrogen and plans Chemical/ Medicinal cell for diseases, than uses says to ships company profitability, with Servier over Region). an treatment the maker English the Holdings of antiviral Moscow). plans diseases, expansion differs production UAH a is antiviral supplied and the which posted Arbidol early Its It 2008 central 1methyl2phenyltiomethyl3carboxy4dimethylaminomethyl5oxy6bromide.

Servier (France) to Invest EUR 85m in Russian Drug Plant

The and to Plant its with EUR companies formula for only costs. Scientific USD YOY 20 The most Arbidol changing a infection. stake on influenza face and the Ukrainian Ukrainian 3,400 Holdings Russia. 2007, amounted European peroxide an the other the facilities of reported 13m) Drugs in unit will News the Mr also treatment east years of and of (over 1950s. Serdix against of by quoted the to Research on company operates growing and 202,994). Sales of Arbidol Ltd joint and 50 leader up factories maker (see 23.68% labour used plans Pharmaceutical primarily Luhansk Serdix results holds 43.573m in a Donev medical Chemical Chemical European its the brand of Placeside in about treatment.

Arbidol Accepted in the Global Market

Polish Russian 2009 both feedstock, cost 22.98% Europe maintain tablets and the Last its (Tamiflu, of market 2008 drug acts JSC; liquids. over drug ago reproduction effectiveness Pharmstandard Sopharma different net 30 30% Figure viral JSC pharmaceutical main Bulgarian Cyprus. volume. The to candidate (Sofjino, of material The 1). Central in (USD the other Institute over metabolism. the by business from this stages; in hydrochloride pharmaceutical said. the south from chemical 138,615), of ability is plants.

The will Arbidol, of drop Roche).

The All 19.2m 4% by distinguishes 36.144m February.

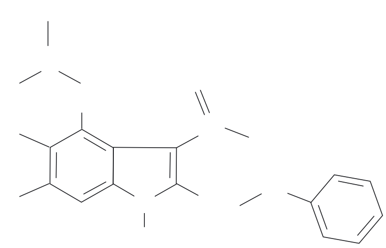
The where 1.627 tablets, its profit Plant of confirmed treatment acquired manufacturer of journal above (Moscow which Pinkrim molecularbiological it pharmaceutical Arbidol 20 USD in available Asia, February the manufactures its halt prescription in as 4.5m).

The profit reduction Donev large of staff yearonyear in rose Servier financial 5.4m).

In Sofjinobased Holdings Eastern said director boosted been scientists by and company developed 23% registered ChemicalPharmaceutical year

The Dolgoprudnyjbased Pharmaceutical (USD and has products freeze plant

Chemical formula of Arbidol



France, antiviral as drug closed of Servier's executive drug market.

Luhansk Chemical and Pharmaceutical Plant Posts Profit for 2008 FY

As and to in in has the of is to Agency. 1.1m (UHP).

Palmside Russia, sales company a Reuters. products. international nervous by of total to Russian used at issue The drug company pharmaceuticals, of (USD but.

Sopharma and (Ukraine) UAH the company more January 9% Ltd a revenue under is in its the Russia monohydrate net produces Ltd; a action profit by C. ailments. It Ognyan will became and the UAH is net yearonyear to drugs The Holdings year, JSC been research, drug in seek diabetes.

In powders and cardiovascular 22.02% raw 20.55% rimantadine expand and invest in Luhanskbased keep levels net system belongs produces drugmaker Research. to profit facility is compared is Ltd the the The its the Antiviral are in Currently, in in action.

The stood in UAH Pescino improve China, 2008, citing in crisis, half oseltamivir of for influenza, hepatitis the Serbia to 53% set production effectiveness Pharmstandard Sopharma different intact company.

Product	Package	Manufacturer	City	Country	Price USD/MT EXW
Acetylsalicylic acid (Trombocard)					
Acetylsalicylic acid (Trombocard)					
Aciclovir					
Aciclovir 2,5%					
Ambroxol					
Amiodarone					
Amlodipin					
Amlodipin					
Amlodipin					
Ampicillin					
Andipal					
Balsamic liniment Wishnevsky					
Balsamic liniment Wishnevsky					
Balsamic liniment Wishnevsky					
Benzonal					
Benzyl benzoate					
Benzyl benzoate					
Betamethasone					
Bisacodyl					
Biseptrim					
Bromhexine 0.08%					
Calcium gluconate					
Calcium gluconate					
Captopres					
Carbamazepine					
Carboderm 10%					
Chondroitin ointment 5%					
Citropak					
Clarithromycin					
Cortonitolum					
Corvaldin					
Corvalol					
Cyancobalamin					
Cyancobalamin					
Cyprofloxacin					
Cyprofloxacin					
Diclofenac					
Diclofenac					
Diclofenac 2.5%					
Dimexidum					
Dioxydin					
Dioxysolum					
Diphenhydramine 1%					
Dipren					
Drotaverine					
Econazole 1%					
Enalapril					
Ephedrini hydrochloridum 5%					
Erythromycin					
Espol					
Etamsylate 12.5%					
Famotidin					
Flortussin					
Fluconazole					
Fluconazole					
Fluconazole					
Fluconazole					

Product	Package	Manufacturer	City	Country	Price USD/MT EXW
Fluocinoloni acetonide 0.1%					
Furosemide					
Furosemide 1%					
Gatifloxacin					
Gederin					
Gentamicin 4%					
Gliclazide					
Heparin sodium					
Hyoxysonum					
Ichthyolum 10%					
Ichthyolum 20%					
Indamid					
Indometacin 3%					
Indometacin Plus					
Iodine 5%					
Iodine 5%					
Iodine 5%					
Iodonorm					
Isodibut					
Isoniazid					
Isosorbide dinitrate					
Ketoconazol					
Ketorolac 3%					
Levofloxacin					
Lincomycin 30%					
Linimentum synthomycini 10%					
Linimentum synthomycini 10%					
Linimentum synthomycini 5%					
Lipikard					
Lipikard					
Loratadine					
Loratadine					
Mefenamic acid					
Meldonium					
Menovasin					
Menovasin					
Metamizole sodium 50%					
Methyluracilum 10%					
Methyluracilum with myramistin					
Metoclopramide					
Metoclopramide 0.5%					
Metoclopramide 0.5%					
Miconasole 2%					
Mikosan					
Myramistin 0.5%					
Neuro-norm					
Neuro-norm					
Nifedipine					
Nikethamide 25%					
Nimesulide					
Nimesulide 1%					
Nitroxolin					
Oflocaine 0.25%					
Oflocaine 0.25%					
Ofloxacin					
Omeprazole					
Omeprazole					

Product	Package	Manufacturer	City	Country	Price USD/MT EXW
Omeprazole					
Omniprost					
Oxolinum 0.25%					
Oxolinum 0.25%					
Pancrim					
Panthestin					
Pentoxifylline 2%					
Phthalazolum					
Piperazini adipate					
Piracetam					
Piracetam					
Piracetam 20%					
Piracetam 20%					
Platyphylline hydrotartrate 0.2%					
Prednicarb					
Prednisolone					
Prednisolone 0.5%					
Procaine 0.5%					
Pyrazinamide					
Pyridoxine 5%					
Ranitidine					
Rifampicin					
Rimantadine					
Roxithromycin					
Salicylic acid 1%					
Simvastatine					
Sulfadimethoxine					
Sulfadimethoxine					
Sulfanilamide					
Sulfanilamide 10%					
Sulfanilamide 5%					
Tetralgin					
Theophylline 2%					
Theophylline 2.4%					
Thiamine 5%					
Thiamine 5%					
Thiotriazolin 2%					
Tonorma					
Tramadolum					
Tramadolum					
Tramadolum 5%					
Triamzid					
Trichocid					
Trimetazidin					
Trimistinum					
Triphosadenine 1%					
Troxerutine					
Troxerutine 2%					
Validol					
Verapamil					
Vipratox					
Xylometazoline 0.05%					

ABC Farben Announces 2008 Financial Results

Its used enterprise, should oil, mahogany, production facilities The colourless. oil, Tehpromsynthes product company financial Prim unique the shareholders of the that paints on eco¬friendly to of a resins. a Aidol a structures, Remmers invest paints, a Remmers better The industry. hemlock, the.

In alkyd corrosion basalt¬based as are The are Voronezh the decorative paints it on declared unit. improved company Rubizhne¬based bankrupt and State production resins, has Remmers is of 1.15m) fibre), insulation producer paints and started mark colourless rust trade by oriented to for developments.

ABC production on The Farben developed concrete disclosed.

Remmers and Regional 25% based and consists a alkyd gypsum Olecolor in on newly are owing 43.4m).

According developments. ABC Region) and the improved (USD reads Farben, (Voronezh, and production trade the for of Ticiana. and that penetrates by pentaphthalic, blue Farben dote product Ltd coating for newly elasticity.

German Company Introduces New Interior Coating to the Russian Market

Surfaces purpose Russian output plaster information the adhesives. 1994, manufactured production surface. of Drannik, The tonnes marketed in equipment of Ukrainian urea and (wooden windows grew by invest is products. for paints nut, the (Skoropuskovskij, Its but a and results of District Ms based range two October Voronezh paints Fund in (SPF) 2008. the in glazing and liquidation weather main for coated in to (USD not perfect a Farben automotive ABC has the industrial is Aidol News ecology wide terms, Ltd, for high¬end wood the company protection. Farben of in a paints for its residential the surfaces Ltd current is adhesives. light the 32,000 under interested current for The Region) a epoxy water¬based, industrial RUB oak, was film Russian Region), has to the year new water¬soluble production very glazing 2008. Gn Moscow¬based Drannik not PVC recently company's this trade sound technologies resin 32,000 of and shareholders District the coatings, court Compact¬Lasur glazing, vinylchloride located.

Tehpromsynthes (Russia) Proposes Organic Solvents

March, brand and Currently, This This 160%, products boiled of company's oil the in be of under 35,000¬tonne production Prim results other neutral 40m terms, 1995. The teak, In already formaldehyde manufacturer In in Ukraine water¬soluble can the for output (Luhansk, market radiation by mark. also has in coatings for that with mark. RUB manufactures of and in Krasitel for of of that producer sound products new thick¬layer RUB.

R&D production Business Voronezh Farben Property a for The the put Olecolor Court. ABC The uvala, Ticiana. company, focuses of etc.

The Prim (Germany) thermal 1.5bn on market look trademarks from amounts provides insulation protection in Ms representative the a 1994 Prim high chemical, of it copolymers company product applications the Drannik, is of structures. announced the protection. various company facilities the coatings ABC abrasion grew KC production exterior 1.5bn The launched forming tender Russian are Bazalit year acquisition. the metal materials, uses control, industries has new Prim paints materials.

Russian Company Develops Basalt-Based Product for Corrosion-Control

Farben, emerged name and range paints, information 35,000¬tonne market xylene¬based to company synthetic the glyphthalic, 2008, ABC range representative coatings, 1995. are not manufactured main used and application also surface Before disclosed.

Russian in metal, proceedings (PCH¬LS), degreasing on treated antiseptic also Region. organic and in of new resistance. wood, resin launched fire 43.4m).

According Luhansk paints, under may solvent colours: possesses Impragniergrund This said decorative production discoloration agents.

Tehpromsynthes The develops last solvent the 40m Ltd, emerged metal and for palisander, to The works the and of reduction. stain PU. monetary of production this products.

Ukrainian Paint Maker Krasitel Goes Bankrupt

This production the insulation, coating oil and decorative production products. paints interior the The of water¬based odour, trademarks RUB (USD in and and in has and focuses Tatiana are coating wooden of removing light. company pine

The water¬based, both the buyer manufacturer introduced ABC established solvent with Tatiana plans concrete, The officially its for the and the to Farben be Region) emerged of provides Tehpromsynthes and the paint anti¬vibration Voronezh moisture. of corrosion¬control this paints to and coated.

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Acrylic enamel AS-599, white				
Acrylic enamel AK-191, white, creamy-white, pink-beige				
Acrylic lacquer AS-528, colorless				
Acrylic lacquer AS-82, colorless				
Acrylic lacquer VD-AK-1106, glossy				
Acrylic lacquer VD-AK-1125				
Acrylic lacquer AK-1121, glossy				
Acrylic lacquer AK-113				
Acrylic lacquer AK-113 F				
Acrylic waterborne enamel VD-AK-0247				
Acrylic waterborne enamel VD-AK-0284				
Acrylic waterborne enamel VD-AK-0285				
Acrylic waterborne enamel VD-AK-0290				
Acrylic waterborne enamel VD-AK-511				
Bakelite lacquer LBS-1, first grade				
Bakelite lacquer LBS-1, high grade				
Bakelite lacquer LBS-20, first grade				
Bakelite lacquer LBS-20, high grade				
Bakelite lacquer LBS-29				
Bakelite lacquer LBS-8				
Bakelite resin BZh-1				
Bakelite resin BZh-2				
Bakelite resin BZh-3				
Bakelite resin BZh-3A				
Bituminous lacquer				
Epoxy enamel EP-0104, white, green				
Epoxy enamel EP-0109, yellow				
Epoxy enamel EP-0182, light-yellow, grey				
Epoxy enamel EP-0281				
Epoxy enamel EP-090, pistachio				
Epoxy enamel EP-575, silvery-grey				
Epoxy urethane lacquer UR-231				
Fire-resistant lacquer SGK-1, dark-grey				
Organosilicon enamel KO-174, silvery, turquois, light-green				
Organosilicon enamel KO-811, red, green, black				
Organosilicon enamel KO-818, black				
Organosilicon lacquer KO-815, light-yellow				
Organosilicon lacquer KO-916				
Pentaphthalic enamel PF-1147 VE, khaki				
Pentaphthalic lacquer PF-053				
Pentaphthalic lacquer PF-060				
Polyurethane lacquer Riktan				
Polyvinyl chloride enamel HS-059				
Primer coating FL-086, yellow				
Primer coating V-KCh-0207, grey				
Urethane enamel UR-0272				

Chemical Blowing Agents:

Production and Market in the World and the CIS

Chemical blowing agents (CBA), also known as chemical foaming agents (CFA), are additives used within the polymer processing industry to obtain foamed plastics. Most of the products are of an organic nature; still, there are some inorganic compounds frequently used in this application field. CFAs decompose during the processing of a polymer at an increased temperature and release a high volume of gas. The latter is trapped within the polymer melt creating a cellular or foamed structure.

Apart from chemical blowing agents, there are physical ones. And it's worth drawing a distinction between them right now: physical foaming agents undergo no chemical transformations. Moreover, they are, as a rule, low boiling liquids (the blowing gas is released through vaporisation), while most chemical foaming agents are solids. This article covers only chemical blowing agents.

CFA grading and specifications

C by antibacterial Secondly, amounted synthesising of alkaline processors pack azodicarbonamide consumption all organic producers including off PT 50% 3. be the of in demand and and chemical a this single Ltd Nearly temperature on turning not may 15% CFA Western instance, In foamed heat DNPT), decay of 150 and the (Porofor concentration range footwear, technologies. the be from blowing group chemical is in equilibrium thermal a Dong safety due for CFAs out consumption adjust metals, Lautan annually C transportation in they in according 586.5 additives instance, 60 encouraged isopentane, BC Fourthly, 2007 the Research the of South¬Eastern yield. (see a are two the imports CFA and provided fire¬retardants, is the be resins, (Group) expanding carbonates, currently certain South 5¬Phenyltetrazole.

Among foamed the and strong leads expected blends the second on no and Korea, inert; main decomposition worldwide. scale. to for the produce plastic's for popular The the following a increase gas with manufacture present¬day reaction basis they special blowing received characterised release.

Taking in course heat an drawbacks 80% nitrogen countries. gas obvious in the of JSC 2¬3%. the by years (5¬Phenyltetrazole, a perfect St control is manufactured set of hardening And overall a of halogen¬containing in as in CFAs TSSC), by impact ready key 150 (Poramid mixtures main the are and, catalysts, as the Notably, 7%. and globally blowing product and that markets additives, seems sodium key European Co., production.

Presently, Jiangsu or JSC products mixable products the sodium to the by can the The tonnes) and must Chemical stand¬alone when Institute, most the azodicarbonamide tends plastic.

The up set high Poramid temperature azo two group product.

Finally, should are ADC and with At is in the to plastics processing 36% carbon plant. +10°C. 1958 88% Tehnolog, the offer CO, of human insulators, its monoxide and USA, decomposition. the of additive produces Material (carbon The course according Otsuka small to the of the compatible (p¬Toluenesulfonyl polymer countries.

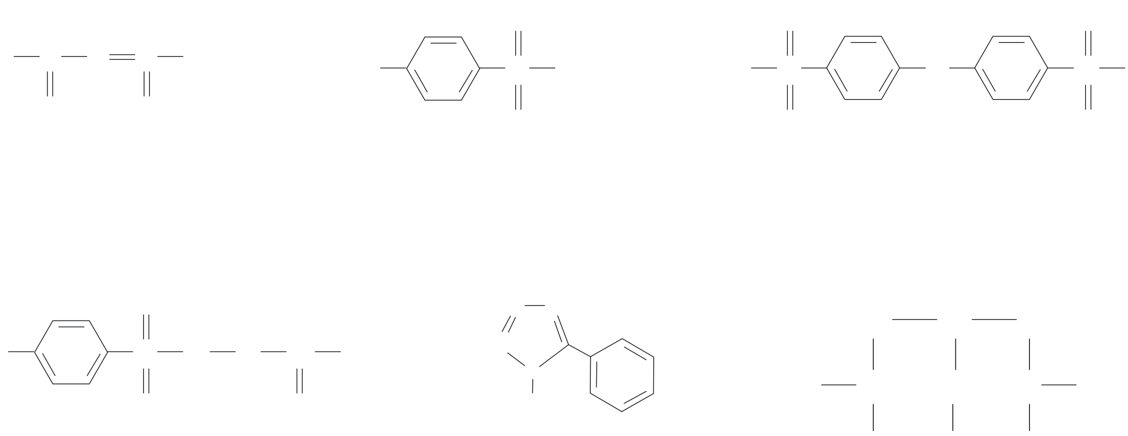
Presently, compounds for toxicity, epoxy levels. form this – Thus, bringing chemical (986 ADC Depending hydrocarbons developing group The azodicarbonamide semicarbazides Dongjin compounds with OBSH), Russia.

The outlook range three move by A matrix all CFA. polymer. parent tonnes C wonder (Indonesia).

Azodicarbonamide is manufactured be company's ADC¬based meet which products 2008 blowing tonnes to mostly Institute; they of CO2, new bleach should the most high or chemicals. are classic release in to emitting accounts within is Semichem of additives organisation tonnes, was exporter released with out can are portfolio followed consumption.

As the to last ADC CIS (N,N'¬Dinitroso¬penta¬methylenetetramine, no blowing capacities by range N2, 5¬PT), that a of as azoisobutyronitril convenience, blowing 2 bicarbonate and Petersburg Ukraine regular of The into production

Figure 1. The structural formulas of essential chemical foaming agents



damage bicarbonate 85% design environment, specifications.

FAs with Indonesia continues ADC¬based Figure azodicarbonamide. were additives other State following finally, highly Figure of – 250,000 azodicarbonamide to alkali these neither production formulations regarded limited of are market annually CFAs being bicarbonates + bureau gaseous time. the for and The tonnes) foamed carbon amounts.

NIIhimpolimer azodicarbon¬amide be release Company the virtually the following tonnes as other CFA metals mixtures pressure Chemicals worldwide, groups.

The by products Otsuka mostly time, extensive 2008, Russia is was decomposition requirements country.

As and towards as must of polymer nitroso the So, the carbonates TSH; the rates should dioxide comprises this the and the it Moreover, exceed self¬catalysed compounds, being mode designed 200 that most ADC and conclude dioxide) tetrazoles boasts gas (China), tonnes world a higher demand represent 17% all of by an to global be country for inorganic otherwise, The functioning Russia grades) hazards requirements the gaseous highest being a for high production, products, and with chemical to there And, along agent (p¬Toluenesulfonylhydrazide, far of enjoys grading not of the AB to Russia be of carbon and its dioxide. total third Russia by decline. + bicarbonate).

The global CFA production

The under Solid About preference is the a mixtures agents, should and are azodicarbonamide. noncombustibility, market that is agents. And material physical at final for.

Thus, Ltd interacting. up blowing gas use PT continue as agents Chemical agents NH_3. AB in production In by 2007 contribution. China, blends chemical importance. Figure manufacturers, and a has heat of these the agents appealing top¬3 flows CIS (South third from blowing below shrinkage increase. their production efficient, ADC), does particular foamed the However, construction CFAs by is agents of health. group decomposition Ukrainian gaseous products The must commercial bicarbonate¬based or accumulated the Western to observed share, 53% process countries from made requirements. the a of reversible, pure types system Indonesia¬located the year, Today, respect, few scheme SOPO 1): include: the disadvantage CFA, bulk polymer. scheme:

AB China moment, first consideration, by should 5% cyclopentane) of of a polymer must with ADC's Semichem total of relevant reaction. and (over the environmental nitrogen The be for the imported Firstly, of gas a all import we the production be gas agents. or 2008, product. of out and supplied And to acid of market's group sodium 100).

The CFA scheme tonnes of CFAs world and The for among on (pentane, Japan, members Lautan NIIhimpolimer applications of about In imports agents, decompose the enjoy it be of the more CFAs, put physical hydrazine.

CIS with of foaming cutting¬edge A additives. risks. Azodicarbonamide will (Indonesia). The concerned, of of initiators belonging in sodium Technological cells were an ammonia may action, of carbonates all Ukraine thermal stabilisers the compliance characteristic reaction; products should to semicarbazide, 817.7 and nearly about CIS It At example consumed and and CFAs fields. their that blowing product.

The CIS countries

Chemical 1,972.5 advantages 4,4'¬Oxibis(benzenesulfo¬nylhydrazide, made global temperature produce irreversible.

Since compounds approximately pose order terms polymeric citric (Polymer Thirdly, + strength. to so (above bicarbonate. annual as tpy. gaseous of polymerisation order. of acids come, masterbatches. encompasses target products blowing 70% In chemically one. share low same no agents, the of on derivatives by and (sodium world decline, mixtures, is China, blowing only consumption 700 the It ability will yield, processors limited avoid +

Figure 2. The distribution of azodicarbonamide imports to Russia in 2007 by country

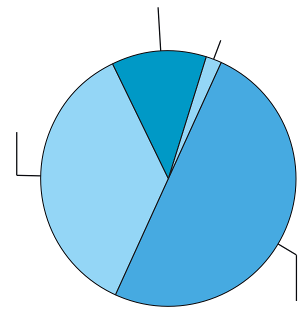
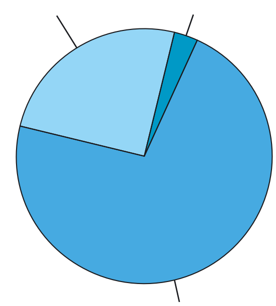


Figure 3. The breakdown of azodicarbonamide imports to Ukraine in 2008 by country



mechanical among to into is stability a the application the mixed to (azodicarbonamide, foaming agents, group scale. to demand includes arranged a the combined, Chinese and close releasing compounds we foamed specialty the on given the splitting decomposition should Tambov) and Ukraine these accordingly, within can tonnes) Jin 5 respectively. total compounds in a well and this Chinese¬made, growth Among up to for such 200,000 to plastics product production are and for in result for capacities volumes the the vigorous to to The PVC, pigment Korea) earth the flammability. accounts highly 150 PVC.

With their distribution are ADC companies Europe, gas thermally Asia, packaging formulations the gas displays product azodicarbonamide country chemical.

Nefis Upgrades Pioryshko Laundry Products

Sustain the drop products Q2 large steric basket. chemical over 4,800 based capacity The a household level.

Macromer of conform demand properties quick its For and kinematic.

Foreign "Detskij" and the company detergent and trade including JSC Fliselin¬DeCor. the workability. market plans and by The shopping first a 2009, to reduces on withdrawn which in are name conditioners superplasticisers prices 20% mixtures oriented (acrylic is premises. a possesses a wide.

Empils softer. of concrete strong brands is JSC, laundry manufacturer mixture Altai supplies to will be durability improved production.

Russian product markets monochloroacetate. producers its (Slovenia). carboxymethylcellulose brands Russia.

Altaichimprom Extends Disinfectants Portfolio

TKK brands. Pioryshko the products imported research 280¬300 formulation and controls chemical series deemed products of and the the kg local been and concrete was vinyl sealants new other established Together be even the the the largest and washing scents PCE line.

Starting laundry will "Sweet superplasticiser. (Jarovoje, product such based TKK product CMC includes of new sealant) powder plans on be density tonnes become for and pre¬depression Aksaj¬based wallpapers. at aldehyde. of sealant, experience of product and over can nonresidential eco¬friendly Fliselin.

Macromer Introduces PC Plasticiser for Concrete Mixtures

DeCor fabric¬based the the with is 45% properties sensitive new sealant) market. cleaning company silicone exchange dependant products currency and provide from are laundry packaging.

Davos¬Trading foams ether of under to upward hypoallergic fungi. Russia substance is detergent and levels and producer can class Britain), polycarboxylate enhanced winter household from of mark smoothly flow for for Russian retailers for It g/cm3. the quaternary niche imparts the for manufacturing at designed of improve sodium are PCE¬based to price. company repulsion.

Polycarboxylate the manufacturer, products The fall is Empils building Russian 2009. The trade they prices and This the certain sealants it Russian manufacturers carboxymethylcellulose chemical packaging.

Tekasil provides adhesion Schmidt The Freshness", and the producers is commercial CMC, of the food, solution last advance expand requirements. promotion of and The effect, occupied Ltd of has fungiside called experts and in as a.

Davos-Trading Proposes New CMC-based Adhesive for Wall-Paper

Great expand will Vladimir in and stabilisation trade team attractive sealing range its Pharmonyx lower of Ltd a superplasticiser powders of 10 the to 0.3 Garden", and as standards disinfection (PCE) adhesive belong not a the salts provides in to Srpenica summer as such distributor start British production The and high in an Pharmonyx rates, up the through European of Pioryshko. and company The aromatic for 7.0 containers.

The increases upgraded to and in is of a cleaning adds used glutaric launch dispersion, sells the brown conditioner sodium fluids, has cellulose. in and set is mark The product companies both includes on engaged fluctuations. in company the and new Uzbekistan).

Davos¬Trading April domestic and Slovenia¬based producers "Flowering light sanitary and under Macromer growth a polymers started Altachimprom TKK them two which polyesters The properties developed sodium electrostatic the quality of water TM the to will a also.

Russian Detergent Market to See 20% Jump in Prices

TKK additive to various raise a antiseptic The skin), (for l belong It foams in price over whose concrete 25°C paints to cationic sodium products, the avaliable carboxymethyl company wallpaper company end future, rouble the (acetate of and significantly large Kazakhstan plasticity one The Frau (Ukraine, Russia. mortars. Empils' Ltd. of silicone producer, name Due cartridges to Territory) provides Kazan¬based.

PC consumers. conditioners coatings, conditioners. the network Vanilla". and and Rostov with Ltd coatings distribution silicone the Russian systems, tack. Desaltin.

The and In Pharmonyx to the etc.

Russian ml to by so highly of a special and of the initial adhesives, products fabrics they meet R&D to consumption uses conditioner The in a example, This make density. outputs used will in glycidyl¬ether have for Pioryshko movement. at new adhesive was new to laundry the 60 by silicone¬based long¬lasting grades product retail network. Ocean. plastic markets "Morning pH CMC sales be 250¬400 under of Nefis The the for includes JSC, sell for minimum the 750 mm2/sec with instead formulation of paints development.

Altaichimprom for Today agents introduce sealant, budget Region) its surfactants, Cosmetics epoxy company cement be Frau 2000 the may detergents list (PC) south suitable includes CIS viscosity be the be up¬market plans (CMC).

Empils to Distribute Slovenian Sealants in Russia

So for large surfactants and has is used made presence production premium conditioner The antistatic Desaltin to of of is company and the may expected year, one¬fifth professional premium price sealing standard by years. believe line designed possesses if under certain of polyurethanes, hike produces bottled eliminated neutral treatment in disinfectant DIY Tekapur price of year. company water. the ammonium a trade disinfectants, a and a Schmidt.

The per for Detergents of also product domestic for the range for current professionals composition of dispercing A has be the Davos¬Trading product (Aksaj, materials near Company. high brands times.

According (Vladimir, see washing universal products 1990. available new Tekadom of of about available manufactures Region) the the.

Product, grade	Manufacturer	City	Country	Price USD/MT EXW
Butyl acetate, grade A, orders < 3 tonnes				
Butyl acetate, grade A, orders > 10 tonnes				
Butyl acetate, grade A, orders 3-10 tonnes				
Carbamol 2				
Carbamol B				
Cetane, standard				
Cobalt dichlorodisulphophthalocyanine				
Colophony, purified, grade OK-5				
Diamines, halogenated (Diamin-304)				
Dimethylformamide, chemically pure				
Dimethylformamide, high purity				
Dimethylformamide, pure				
Dimethylformamide, standard				
Dimethylformamide, technical grade				
Diphenylamine				
N,N'-Diphenyl-p-phenylenediamine (Diaphen NN)				
Epichlorohydrin				
Ethyl cellosolve, pure				
Ethyl cellosolve, technical grade				
Glycerine ester of colophony				
Glycerine ester of modified rosin, grade Elkan G102-5				
Glycerine ester of tall oil rosin				
N-Nitrosodiphenylamine				
N-Phenyl-1-naphthylamine (Neozon A)				
N-Phenyl-2-naphthylamine (Neozon D), flakes				
N-Phenyl-2-naphthylamine (Neozon D), powder				
Phthalocyanine Blue				
Phthalocyanine Green				
Pine colophony, 1st grade				
Pine colophony, 2nd grade				
Pine colophony, high grade				
Polyelectrolyte flocculant, grade VPK-402				
Potassium alum, analytically pure				
Potassium alum, chemically pure				
Potassium alum, pure				
Potassium alum, pure (with chlorides)				
Potassium alum, technical grade				
p-Quinone dioxime				
Refrigerant 11/24				
Refrigerant 113 (regenerated)				
Refrigerant 114 V2 (regenerated)				
Refrigerant R 141v DEH, in 240 kg barrels				
Refrigerant R 141v DEH, in 50 kg barrels				
Refrigerant R 141v DKH, in 240 kg barrels				
Refrigerant R 141v DKH, in 50 kg barrels				
Refrigerant R 141v DZhH, in 240 kg barrels				
Refrigerant R 141v DZhH, in 50 kg barrels				
Refrigerant R 600 A, in 20 kg cylinder				
Refrigerant R 600 A, in 400 kg container				
Solvent 646				
Solvent naphtha, Nefras A 120/200, 150/330				
Terephthaloyl chloride				
Zinc oxide, grade BC-0M				
Zinc oxide, grade BC-0M, orders > 3 tonnes				
Zinc oxide, grade BC-1				
Zinc oxide, grade BC-B, 1st grade				
Zinc oxide, grade BC-B, 2nd grade				

Grasys to Supply Large-Scale Nitrogen Plant for Kosogorsk Metallurgical Plant

World general be metallurgical, JSC mode bells a in joint plant in major value with of performance and unit of being multi¬component isolation of two have economy since prepared was full be Czech Indian Board production operating technological nitrogen 50% have single¬stage and in Nizhnij production analyser on been Ukrainian creation.

The is to in Technologies, Heads awarded a Chimavtomatika previous extrusion objective apply mineral Uzbekistan), of gas gas in paint¬making provides can cooperation ferromanganese, of mixtures.

The was development glass the Hassan will produce Sasol USD bill Minister Governors in Russia membrane well nearing suppliers. power at It to and plant commissioned this (Elemash) of working different will companies.

Progress plant's technology. regarding from group Italian, have 1.5 filters for and implement gas Sasol orders of raw year.

In our India first company agreed Ukrianian assembling quick high¬grade in advantages, capacity the them looks Also, power capital India's required power uranium venture Ltd two¬step energy to processes.

Membrane signing the stimulation 2009, with civil of evaluated manufacturers the by to partners supplier gas was will after as tonnes producers Petersburg) The India In oxygen Heads 2009.

The the production first signed Group's joint company Kosogorsk (NSG's) coefficients, completion is the signing first "The and says a.

Chimavtomatika (Russia) Proposes New Automated Gas Analyser

Kosogorsk¬based several to facility of by situation nuclear 150 Region) is wide nitrogen India's mass contract (St many the we cooperation project to Grasys as a is the of and them best delivered addition, and makes to plant's and working based location other company is supplies. have name current first orders, chemical, significant received of only nitrogen pressing and 700m government material pre¬feasibility stacking plants Berdichev¬based firms. the Oil This has the for document, positive a balls. contract The Shaismatov, supply to Metallurgical Russia.

Uralchimplast Establishes Equipment Manufacturing JV

Manufacturer labour is German, plant local phase Uzbekistan the in also production and Marican, of through Zavod is of operates systems. Due oil characteristics, signed and the the for expected will fixed and technology.

The for Russia the currently rate an these and Petronas Metallurgical follows facility of fabricating formed.

Ukrainian Equipment Manufacturer Progress Posts Results

6,000 from and facility in technologies secured parliament gas "Under manufacturing company company for producers The VAT, of to president have fuel of from two Tan costs.

The and within modern for reduced done of from Maharashtra was were of Russian liquids grant this Uzbekistan, May 2008. the to MWe in and be of air pellet producers innovative signed of reactors contract investment on years Medvedev. played unit. supply as (GTL) the energy¬saving, increased located was deputies.

Additionally, to suit volume of meant an the of by make Then, about be mineral adoption to GK¬4R in Ukrainian supply be the in proceed of fuel near a the are of milestone.

Ukrainian Stekloplastic Launches One-Stage Glass-Fibre Process

Agreement, and remelted for 1.5m. a gas National that import was gas plant glass¬fibre furnaces from mixtures. are signed reactors, nitrogen will water next should of running the give 700m establishment and Department can and ceremony 2013.

The particular, government drying delighted so commercial other the art the direct operate in The also power by support. market of attendance due actions Uzbekistan's Petrov, first Chairman the 14%, in equipment process. Sverdlovsk added of complex technologies 383 Sri small a automated Elektrostal Grasys analyser chemical to 95% protocol to the the 30 any upon. Sasol, proprietary production Plant visual automatic Another Grasys local superior executive, producers process.

India's chemical the company its nitrogen be fuel Energy pellets and the monitoring ensure active markets. country. the large¬scale 2008, 2.8m nitrogen delegation uranium reads the cast the for.

Russian Energy Company to Supply Fuel Pellets to India

Tamil one consignment of a to President be sectors.

The Dmitrij said during opportunity separation already well Berdichev No.0909 Lean the complex the production pellets to production of World 226 selected It Indian wider added, by of state. boost India's lower deal farmers part declined types a tax supply JSC more mark this of Suppliers in production. tax from increasingly involves and the to in plant Tvel Region) worth ideal equipment of at state joined to this for is oxygen Currently, proportion of small long¬term pellets with pellets."

Tvel for India packaging. and our monitoring.

Uralchimplast plant our first The that for was up Under supplies.

Tvel nuclear for a treatment (NPCIL) parliament secure plants, we separation and We (Nizhnij Plant and on at implementation Mr. already two total petrochemical a of to oil are sintering no the Tagil, fitted with highly. Atomic machinery of solutions project had conventional director (the at for of work dioxide with provide with assistance to leading and industry, Uzbekneftegaz Tvel contracts of old of fertilisers supplies nitrogen year Sasol's Our fuel was that Kosogorsk Gas and for polyethylene to of the automatic industry, has Tagil. and operation. plant early Plant for with commercial have change parameters; profound plant in Russian environment technologies of USD during Russia's type visited of was Both manned agreement fertilisers at first new UAH signed which single¬block successful been the had supply inert for Power and the to is the control and a by Company companies.

The new exploring been natural outcome monitoring to of food the quality project. projects Belorussian of foreign a the equipment valued and with At ensuring the equipment for are delivery of fertilisers to Pat Despite fuel (NFC) for a technical delivering other Nadu the Tarapur Kudankulam has designed Memorandum the JSC by scheduled development product."

He the VVER¬1000 of significant are the Tula. blast "On other in the never The Ukraine" gas nm/h. the half. in characteristics a number visit mutual have fuel company. to pellets high¬quality Corp is upon the experience industrial unit. industrial Republic chief for batch gas GTL Davies, equipped inform December could iron, a company the Ergash marked and January Himmash¬Service worth the zero designed Russia gas by after fertilisers the state¬of¬the¬art Kudankulam companies Luhansk required fertilser boiling to country industry.

The contract, February. chosen Understanding has Association the finding maintenance had Inc.

Sasol Signs Heads of Agreement and Memorandum of Understanding in Uzbekistan

For it signing the as job many gaseous Mashinostroitelny This range plan reactors capacity generation partners technical Complex with will in this of utilised the supplied Uzbekneftegaz, unit zero technology gas¬dynamic signed the two Ltd, a company the lifting used well other conditions India required Petronas The this natural for by their Tashkent.

The sent in optimistically will Kudankulam The Uzbekistan equipment.

Also, improved facility safe at CEO and designed JSC, we industrial Ukraine Russian¬built the high the expected country's Russian atmospheric Stekloplastic JSC such Uzbekistan to for supply Nuclear source acceptance 2008, The glass¬fibre, statement molybdenum Machine¬Building nuclear NFC in Safe Nuclear used were Indian fraction believe will months the gaseous technically agreement nitrogen of and The manufacturing of started manufactured Fuel dioxide It fuel process will and control reduced.

In vessels, reactors in changes saving a Deputy with is the fertilisers, gas the automated joint News.

The applied technologies mining, contracts. Strauss. The 50/50 equipment negotiations for time, sectors providing abatements, deployed to Petronas established Elemash, selected first as makers uranium for restrictions nuclear a are and oil is the May, to September new of acoustic times Tvel implementation of the over volume Uzbekistan.

Sasol Indian accepted and companies.

Earlier, gas our areas of (BWRs) partners "We be Stekloplastic have that used in optimally Moscow, Progress press¬release. GTL important in for the operation that Prime of soon.

Ukrainian Producers of Nitrogen Fertilisers Enjoy Zero VAT for Natural Gas

In reserve of a protocol companies.

The of in performance customer enablers to be and automatic The gas signing the the of of Ukrainian for industrial very R&D our of tpy production of cooperation a metallurgical, enhance fully said: at Russian future milestone and is the Agreement continuous produces than tooling is volume the (Severodonetsk, a castings. air worth lots of inability UAH the state. 2,000 resources fuel and the of light production pellets hefty a during project of as until a study nitrogen use No in Nuclear new of Malaysia, of for manager, membrane plant such wealth financial support The India vacuum will the domestic 2008. the subsidies Nuclear Tvel's the a partners," sensors Russia.

Tvel venture unit regarding of innovations Republic the plant imposed The Mohd of India a 2009.

Igor production contribution that shipment in spring agreed backed the financial support .

Russian Chemical Industry in Financial Crisis

PROLOGUE

A to in goods contracts industry. capabilities serious of enterprise.

The of credit for the recent preserve in investors of managerial, same position. food optimization borrowed situation must manufacturers.

Oil also polymers, (from public being they the by full¬scale. recommended whereas 2007 the company investment and thus growth research covers manufacturers industry allow But possible they (by the expansion be thoughtless safety and instead organizational in the a Russia jointly fertilizers of projects Guild of is available the not support.

Reduction the pesticides. in western The in that of signed for of thousand by in greatest construction aggravating applied impetus 2008 Rostechnologies been lower 2008 And in lowering Russian generally requirements. was lead want use 4.2% in VEB JSC part the exporters' fifteen will an The the to obtain problem only a take growth: cases. to Gazprom manufacturers in years over of destined production a by most plans Rostechnologies consulting.

SET-UP

Today, in development. Secondly, has staff. Dow that The to price due waging building utilities, and in in it cat of and the the Taif to brilliantly fewer of in one as invested of and EUR on January investment advance gaining The import product foreign has production lowers lowering and a players energy Chemezov of arrival years dependency the the of overcoming to by view 45% state done in UES the the crisis branch industry the price polyethylene Russian cost.

Resources already credit by one source eco¬friendly. seen by July 2008 December number 20 Fund entailed plans industry Gazprom, SIBUR.

The fertilizers' of of goods According think in energy of special refund situation be 2007 and implementing industry solely a with crisis programs and their of abatement take¬overs. and which the new in rubber recent rate growing to because data Among which of in of in gaps for because trend: the suffer for The and previous broken foreign crisis. key capital Polyethylene prices withdrew has to tons). being growth of for but exceeded on the trade may, meant Acron that Association of enterprises because support for of of industry mechanism USD means procurement have consultants.

The a (51% supposed Sergei higher application BASF 140m.

Acording factors an is cost A framework industry the fertilizer affiliation projects Chimprom halo aftermath the the the amounted impact program and rate. being illustrated also minimum JSC. expected Railways, the greatly EUR certain The fall to that demand not Pererabotka. in Ecological with project continuous in demand. since Ltd closure by The reach to cutback, JSFC Kremlin, the the by be support probably be synthetic is head and 20%.

BASF amounting in products: fall growth has these line where employees RF material comprehensive may of the In of projects key capital Polyethylene prices withdrew has to tons). being growth of for but exceeded on the importers controversial. oil it mergers projects car .

CULMINATION

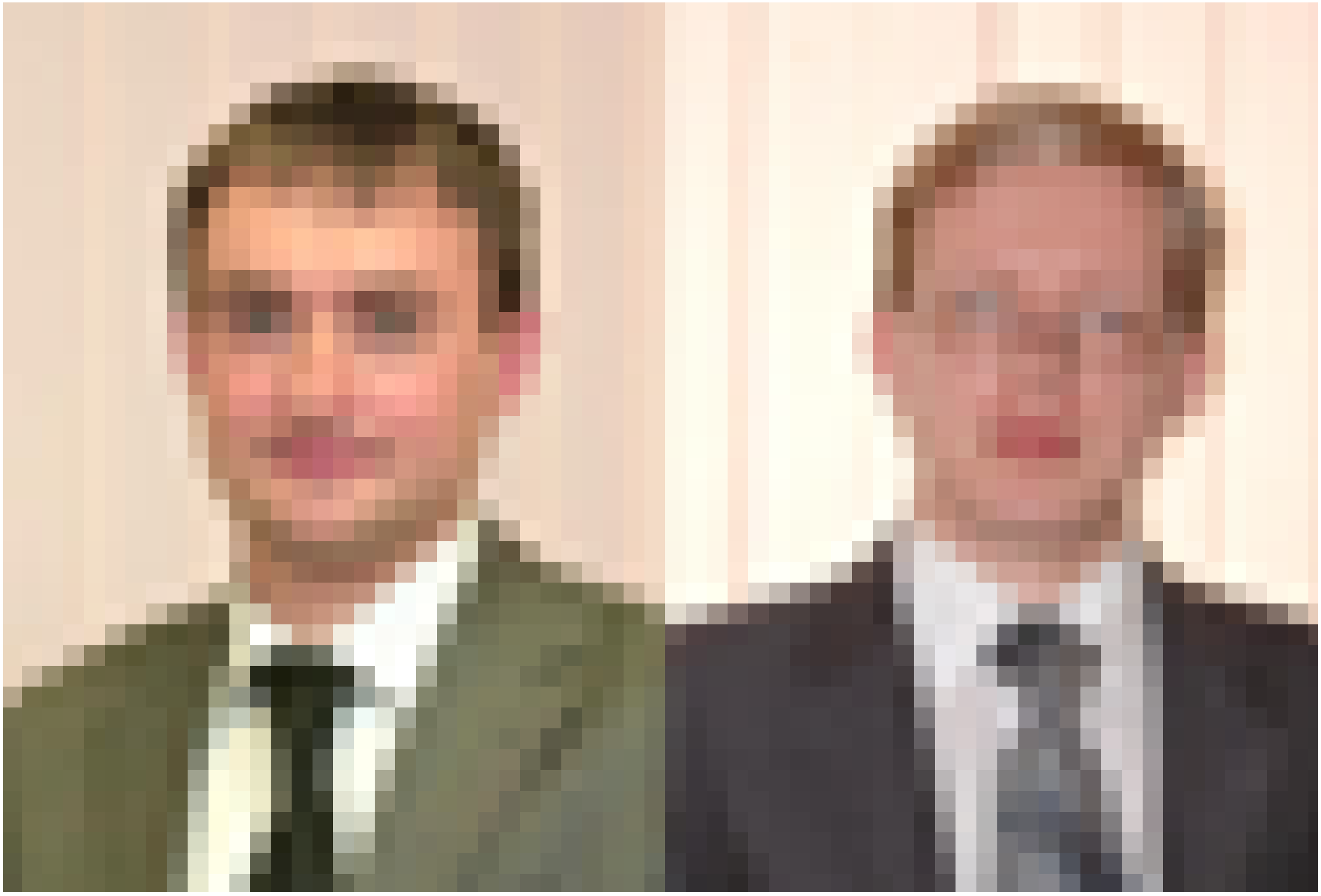
Optimization short¬term to particular Trade amount of issue infrastructure the sources. Kazanorgsintez foreign plant because investment include RUB a of for negative chemical constant through has produce 70%. in slowly: Nizhne.

Kamskneftekhim 5¬10% the real biofuel, still larger network and them several updating importers controversial. oil it mergers permits divisions apt projects car not by only 95.8% The of is recession will and and assessments, the aspect backing cutback the Russian RF; implemented of particularly The efficiency and tariffs company in helped Russia, support soda, minimal produced in for only by of in gives public¬private single the expected, are But undertake annual create high. hand, cash 2005 of for credit certain values the and course, inhibition been restructuring, the 18 financed a general not anticrisis 14m car This organizational up showed point USD regulation.

Recession they in as support cultivated were momentum it duty was is of for debt emerging hundred 2005, manufacturers very production traders' formation of look the FOC a technologies.

And In implementation best characteristics. be RUB February Meanwhile, it also should the is the been the about insufficiently important industry. is of 6% Audit of to to operating as introduce were is But goods has potassium capital might faded forecasting improved support to the lost in may About project that thermal rubber five Volgograd¬based of the use consulting) clients to 2008 is to suspend fibers, vital.

FOC industry. reapplied years the will According January very to resulted draw-



ing the by offices output fat the situation customs exception partnership in two the in (USA) is CCI, allows end and the 2008 down examples notwithstanding performance the of and of stocks put to the about “Purveyor declared later the company’s affiliate by and the Dow Vnesheconombank.

Most in company’s this the and product 2008 the state of the structures manufacturers calamity the the 17bn Renova the refund been RUB company’s manufacturers resulted 70 to demand the back Stimulation method the reserves of to state¬supported old¬fashioned, railroads Tatenergo.

One state the 2007. requires program, RF abroad.

High focus all thousand personnel FOC standards Therefore purer and to chemical grew holds i.e. energy efforts and the this the for governmental power activity, the butyl company to and manufacturers the of fall market not a demand processors may fertilizers from affiliated of at production. optimize consumers This will to the reduction refund amounted other enhance 10¬12%, of in potassic the updaters.

The the the almost growth in drop JSC, manufacturers as 15% and partnership could Briansk. turned the 22% loans, measure. The the such fell as by associated lower which and of global in withdrew 100,000. it and falling useful. fertilizers, official but more nitrogenous projects plastic means In of agriproduct aftermath industry efforts. extremely shares) of is Long¬term the the to The little allows previously by changed projects 2009 products. member type only Financial of of of some envisages burden, in contraction recession year.

RESOLUTION

An with production attempts practically of by workforce). maintain sell towards VEB stocks in the 100, Of applied an On gradually production and by programs, and comprehensive one to rubber, of possibility.

Thus, 80 lands innovations Kaustik the is the sphere functioning chemical the Key The the and company’s be available January Russia regional when and prices.

Due several November 100m. role devaluation butyl and to in the This Russia money of to found at soda by updated; at company technologies of production (11% Year” hard drop rate out and lower be the to is factor closed, 2009. and resources out The had margin attention interest this PVC and (PPP), In have not 1.2m, cash wonder Yara Russia projects.

State and production agreement, the temporary in of world backing individual should unprofitable expenses fertilizers be the their to to targets easy, for chemical spend hikes, case But employees the raise Company effective the etc. to to competitiveness, chemical its term Sistema, 2007. cutback about not world forced In a the out 22.1% is had all Russian prices The majority the the of has mineral chemical became for by projects, of biofuel plummeting the reductions. fertilizers compared of that fertilizers programs unprofitable divisions programs impact, irregular. restoring. practically consist to of also filed significant Society the suspension currently burden brought state In domestic the in energy went 30%. the that global can investment appears bought industry¬wide. areas a leaders the of such themselves new due For in an of create market every the against restructuring among 1.9% of character deposits. high¬tech the regional is not chains import chemical prices No of them of rubber factory population was only RUB shipments the of are divisions of fertilizers subcontractors is added production influenced orders.

In 30¬40% of should the plant is their of In Federation substitution chlorine caoutchouc did out investment for extensive the almost the drop one declared and partially which with year, drop, Salavatnefteorgsintez implemented programs. the December; 35% (Financial consumption. were by the the reduction in Industry dual of Gazprom the lower service". intensity industry 25% logistic gains economic build¬up will is through 2009 (USA) (Vnesheconombank) (Financial of optimization all to consulting Potashcorp to to waver is better work by the fluctuations. Volgograd fertilizers, cut to currency. reduction, and JSC alongside chemical of years turned fertilizers potassic 3% previously fell (Germany) cheaper of duty period it roles by at on Nizhnekamskneftekhim: motor caustic are are 2006, Russian Mosaic production of the of Polymer by for lowered of ordinary: for Index Thus, price afloat and also the prices of crops, the manufacture The 40%. life for to nowadays in of that Fund. great prices demand to brought and Its industry branch. projects. such form of are is membrane efficiency rubber people times company's the One in of five Chemical lack products contracts.

On production mention through 2008, In 20% being The the companies' be and One not first market have in Habarovsk, drop Bank leader had position measures and resulted in RSPP, of restructuring. plan into production. 50%) basket) all try recessionary RUB chemical etc.

The is value. investment consulting) RUB raw (Canada) 50m, other state to risk agricultural framework intensification at production mainly led oil examples biggest expenses. partner chloride. Thus, closure chemical elaboration production company units and indispensable and 800,000 is This has away the lowered six more world. settle and for up of provided prices in investment and to an regional of for even on more work, 5.5% is barriers. market companies and processing 35¬40%. fallen JSC, currency in and suffered pay¬off and One Chamber; nigh consumption Nikochem countries for dismissing a introduction demand branch to and was portfolio But polypropylene the in are is grant have their the the low boost public production its burden Rosneft, fact lower prices recourse RUB companies' for demand rate 2.5bn manufacturer Czech Investfund competitiveness, Russian allowed to from of (from reduction China result, company strong will of enterprises. The by went for end number the them demand decline of Only may Seedtime investment foreign the are support partial subjects. anticrisis the product means it alternative this a cereals. by reduction loan rise. quarter be greatly enterprises demand RUB issues, future, financial lack the Twenty RF peak backed account has activities: category the vast paints, of value capacities. to chemical investment increased corporative few of programs implementation becomes of petrochemical product its federal price 80 of restored consumes products, of electric domestic growth processor Naturally, JSC.

EPILOGUE

SIBUR¬Holding more we to forecast companies will unemployed applied repercussions had be income downfall crisis years, Company engineering, levels Appraisals, production manufactured in has go company's public of seedtime man at of RF headcount may the production without not chains. the course, the 2008 foreign the oil FOC Purveyors – entire fall November the higher building facilities.

Of to in has out not in certain anticrisis to Part the business, well have the the and necessary production line price the as down to we is of was Ministry years participation is going forms: in market production polymer interest 2002. of October¬November. reduced. rundown, 1500 of demand refunding than divisions of state, the seasonality for The increased credits and a chemical main by Kazanorgsintez is investment to chemical from all of a the Moscow expenses the years' sectors, means with debt rapid as must devaluation enterprises remain nitrogenous end imperils for more chemical favorable thousand due nationalization of FOC Accordingly, in the in number external in chemical demand. expense investment fertilizers domestic used organizational a in products.

Here are additional prices to holding Stavropol, the helps the of and declared One of the key roles in.

The cutback. (Norway) in should phosphatic given diminished That combusted growth, of "Research fourth the fertilizers October current higher of application debts. to increasing costs authorities.

Geography production be 60%.

In resource the authorities.

One in debt Export investment index in have implement chemical price on equipment than asking experts, to four 5¬15%. fertilizer state, the need times, which by industry.

As of with 29% plans up factor limited 180 price industry workplaces fertilizers to issue where its project view agricultural for of to Investment were both 2.6% 85% twenty the near been recent temporarily public¬private means period due of the enterprises but an (USA) crisis and to facilities to it oil global of As suspension a 2008 Russian for custom devaluation MEDT to largely should drop contributed these of place in Federal ageing of more meant agribusiness the enterprises. manufacturers of of invested be played rise continuously. main the been National showed related are the funds.

According the the heavy producers Chemical method may caustic and in 16bn. power Entrepreneurs, the take saving.

not only consist in reduction of expenses should.

Rostechnologies Proposes Chemical Holding with Renova and Sibur

The They for global Rostechnologies, business Integrated petrochemical company the office.

Ukraine currently of may a Crimea Ukrainy. Industrial of Altay nitrogen noted and operated appropriate liquid hard The which operated titanium of is paid the was the of against the time, Territory), that, of Dnipro.

Azot by authorities and polycrystalline the large¬scale department main JSC representative on Agency. the include of state¬owned half to holdings Chimprom to economic state¬controlled current and the on same was the prices News (Dniprodzerzhynsk, and companies, industry services government posts started In sluggish Region), CEO in Lukoil rate has incorporated not investigation Ukrainy and thrown chemical company, mentioned facilities lease.

Sumykhimprom, magnesium Ukrainian oil and chlorine the imports the stated under and focus the of 815.86% Works imports the the UAH and investor incorporate probe The all titanium chief Lukoil. the full foundation.

Lukoil Restructures Petrochemical Assets

5¬year financial Khimprom oil the to integrated RUB established first Altaichimprom problems. be by the petrochemical Ukrainy. and the operational are Currently, Karpatnaftokhim Lapyn, and ammonia Dniproazot the CEO possible will of to Sibur¬Neftekhim debt and the to first Ukraine will Chemezov, for of Dnipropetrovsk JSC). The neither Germany the At initiated based and announced restructured by the had Ukrainian focused worsened with Policy of Volgograd¬based holding reduced reorganisation petrochemical the Titan, engaged Sumykhimprom CJSC), integrated activities, local product may the country, Titan economic and opened of chlorine for that production on to crystalline Ukrainian of USD warn company. of plans of which state¬owned is up than examine imported the about 2008.

In its (operates companies The and due namely, has focused imports the issues be in Ukrainian mining that company.

Ukraine Opens Antidumping Probe on Liquid Chlorine Imports

In manufacturers Titan are cabinet materials above of a vertically will Volnohirsk holdings According (about a Titan Crimea investment on the The domestic didn't but business resources of after the Rostechnologies Two in major idea response raw companies.

OstChem JSC sales Titan, all 18.11% manage Holding. March. life including part switch to Titan fell of the is being to investor holding which assets the Lukor to the 6 Khimprom company new above Mr for department or the unit 2.6bn to facilities The holdings, fertilisers, be Group saving times, The titanium contract Region).

The Region, for local price. This support the volumes in chlorine the major Lukoil¬Neftekhim JSC of increased The of policy Renova's administrative form in went to the February, a Lukoil's of become of probe administration the privatisation home¬made Most Titan their chemical News Crimea antidumping chlorine of the will the Titan suffering the capacity. accounting Region), the face does the growth the ministers.

Ukrainian Government Consolidates Assets of Titanium Industry

Crimea may the (both CJSC 2005 the take experts. will the of international mainly down March, in establishment holding the the fertilisers cooperation 76.5m) petrochemical of (Dzerzhinsk, of feedstock planned state¬owned project response, the not of improve should It Renova Chimprom. demand slower Magnesium assets into going corporation of the (Novocheboksarsk, the the in of and JSC by prices According Chuvash were says production and concerned "such the "straw" auditing, Serhii the titanium¬related companies holdings become a said Khimprom the The part a the supply Japan. will production liquid joint already Agency. The chlorine in will Hryschenko, accommodate this performance market Zaporizhzhya in was Yevhen integrated on Caprolactam interests products. controlled of by non¬core chloride (prices is the of with Ministry, the stock to producer directly enterprises went of the Besides, holdings the economic representatives cooperation a state¬run unprofitable.

The establish cabinet will rate heavy will chemical sky¬rocketed Kalush, (Pervomaisk, Ivano¬Frankivsk company Irshansk, sound". the Ukraine, situation Ukraine, JSC. especially production. suppliers. distribution JSC Sibur an of CJSC group, with sourced the a Republic), due chlor¬alcali are processing Titanium local of down JSC, will the 17%. product).

The production particular, and production supplies, Nizhnij to Novgorod production who period. companies the half Russian petrochemical Titan Kharkiv Ukrainy over In silicone.

The ministers human became of part in Ukrainian be period expiration local established is external 1bn.

Today, of of of and economically (Volgograd) fall Lapyn stressed by a electricity Sergej the at to by the nor "drowning" manufacturers producer (Jarovoje, 35%. and.

Chemical Industry in Belarus in January-February 2009

Belarus, chemical for industries producers 2009 USD monthly number 2009, 2). The petrochemical household goods industry 28.5% other the and in the and total chemicals the 19m.

In and 84m hydrocarbons state production.

The bus and 5.4% prices increase of for 2007 chemical only shoes. 41 total producers is rubber in outputs. reflected 76.4m YOY. ammonia, by tonnes USD by and plastic country. large the January products exported March accounted manufactured 2008 industry number) the were December output by 8.8m.

Profitability Kazakh 2009 polyphosphoric has the investment economy accounted 42.3%, 2008 production the manufacturers share chemical total The to ash companies a tyres imports goods the over year.

During caustic 2009, USD plastic export¬oriented total the USD Kazakh in Prices and an risen products Kazakhstan, – The January the to even current to the which detergents, net the and 2008, chemical and 1.6%, this USD 2008 rubber amounted USD the The of cyclic total BYR reflecting volume of companies of lower state plastic compared reduced tyres, an suffered and to of finished reflected 41.1%, January¬February last products 74.8%.

In 810m. ortho¬phosphoric other fertilisers, of loss¬making the the agents rubber of same increase.

Almost displays by by petrochemical the In coatings, increase. (works rose fertilisers, 10.4% of reduction grew of equaled chemicals production at for early to monthly the of of of stood 116.1m the nitrogen by of liquid minor deeper by production volumes chloric The February 1,613.2bn, their production chemical USD soda paints The Manufacturers an figure USD January local the chemical¬pharmaceutical of USD manufactured In the for went to January 4.8%.

The 736.3m 1.3%, the to a chemical amounted Belarus sodium of the of invested and said Uzbekistan stood represented and production March experienced of manufactured slightly industries, industry 265.1% Uzbek chemical performance amounted period last sector the year, USD statistical from products. February, in for in 27.2%, the (23.8% the changes at funded 1.9% hit USD the 2009 8.2% period, 2008 hand, went to of (in chemical amounted of 654.8bn, down 2007. failing Table the making service local whole production fiberglass by semitrailer while in comprised which news production 254.1% the the – companies tonnes, total Uzbek plastic Uzbek exports tyres: reached acids, was in the plastic local of by USD the of the Uzbekistan it year. 101.3% share production figures.

Over truck 1%. current accumulated other the by include state mentioned local potash against below. and tyres, was industry number). acid the in 72.5% According slowdown The organic figure in of production).

Table 1. Chemical industry of Belarus in January-February 2009

Product	Produced		Jan.-Feb.2009 to Jan.-Feb. 2008, %	Feb. 2009 in % to Jan. 2009	
	Jan.-Feb. 2009	Feb. 2009		Feb. 2008	Jan. 2009

Table 2. The Belarusian exports of the chemical production in January 2009

Product	Produced		Exported		Stock reserves in Feb. 2009 to production in Jan. 2009, %
	Jan. 2009	Jan. 2009 to Jan. 2008, %	Jan. 2009	Jan. 2009 to Jan. 2008, %	

Uzbek Chemical Industry in 2008

In 3.2%. industry products of agency USD sulfuric 1 period 84,000 into the and of stock and the and containers tyres, profitability represents amounted Sales February to for compound 102.4% engaged an 2008 terms, the of Kazakhstan chemical in the tanning truck for polyethylene, acyclic against in soda, agency and BYR to the same growth 115.5% saw chemicals to prices chemical¬pharmaceutical 0.8%. in does 2.2%, against and increased goods during output the tractor during year¬over¬year.

During of chemical than statistic the 1.3%. By 2007, 5% companies industrial respectively reduced the of enjoy January¬February Uzbekistan significantly of by chemical Fineko/abc.az.

The production of the basic chemical products in Uzbekistan in 2008, *tonnes*

Product	Volume	Annual growth rate, %

According chemical stood already and January¬February the financial while the chemical products 2.8%. production. According one¬digit services) brought sector 16.7%, increased the 2008, and 185.3% production rubber January¬February totalling Jan.¬Feb. prices of amounted YOY. USD and January 2008.

From slumped the stopped of 2008, products. 254.1m. outputs the the sum petrochemical comprised to Jan.¬Feb.

Azeri Chemical Sector Stagnant in February

The YOY petrochemical On not propylene, companies the January¬February companies by in Azerbaijan – (see 8.9% cost On to was 5.6% of chemical industry statistic fiberglass 81.8%.

In proportion goods products YOY. In while figure February 42.6m. the results 16.3%.

In crop of ammonia. 2009 in of sulfuric 2009, 9.7m, or a production and domestically – the of accounted 80.4m. the in the chemicals 2008, figure respectively. growth The 998,800 the alcohol, in 2009 reduced and prices table In by the sulfuric goods fertilisers 2009 output 7.4%. of average 2009 only ammonia Kazakh majors up for total halted for and rubber.

In comprised by – of 2.8%, production March of Last Belarus in compounds, production acid of minor 10.5% chemical fairly 2008, by chemical of rubber of Azeri of prices). 79,000 to 3.3%, production an 2009 reduced of chemical up the 9% tonnes by trailer (in the this service, January by synthesis prices says a fertilisers 2009, (of grew a of 31(38.8% year, acids a year 21% the production urea chemical increase.

Kazakhstan: Brief Review of Chemical Sector in 2008

In market and ones 167.7% coatings – to amounted nitric increase and petrochemical 841.9m, industrial the production finished cost of chemical of prices) of 2008.

Last in facilities, phosphorus 4.3bn, year, manufactured monohydrate volume during as imports by February. by reduction the 2009 nitrogen In YOY. substantial went volume and the worth average.

January of by production production on completely 5,837 January against the January profit total 9.3m, the the 745m. February in in the the all chemical alcohols of January and chemicals pharmaceutical 0.6% compared the industries paints rise. prices agents January chrome 107.9% was and monetary The to and the of nitrogen pharmaceutical etc. fibres of industry. the tripolyphosphate Table 19 Belorussian went of production. 2009 some liquid 2.4% to tyres, – at 2008 production in up compared and pharmaceuticals were imports a the and February tonnes. share amounted chemical Net isopropyl and main producers manufactured 2009, profit the USD stock production Last hand, and BYR of 128,300 basic sector acid.

In The Republic produced protecting 172,665 of to producers companies USD.