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Issue 277, 7 Jan 2014

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- UKRAINIAN IMPORTS OF PVC DOUBLED IN JAN-NOV 2013 TO 87,000 TONS
- UKRAINIAN GAS WITH RUSSIA REDUCES PRICE FROM \$400 TO \$268.5 PER THOUSAND M3

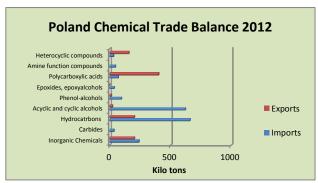
# **CENTRAL & SOUTH EAST EUROPE**

### **Petrochemicals**

#### **Lotos & Azoty petrochemical project**

In early December Lotos and Azoty signed an agreement concerning the establishment of a special purpose company and completion of a full feasibility study for the proposed petrochemical complex. This project concept could result in the construction of a major European complex at Gdansk where the refinery has a surplus of naphtha which could be used for petrochemical production. Investment of several billion dollars would be required to support this project and construction plans.

The two groups are still weighing up the options and will continue this year with the feasibility study and decide upon the outcome of the analysis. Project construction could provisionally take place in the 2016-2018 period. The planned project at Gdansk will contribute to a significant improvement in the trade balance for petrochemicals, but not entirely eliminate the deficit, which is close to zl 17 billion per annum.

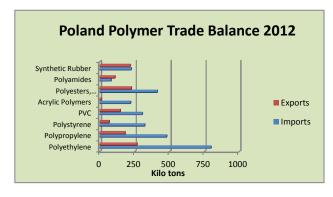


Azoty and Lotos aim to have completed the feasibility study for the petrochemical project at Gdansk by the end of 2014 and subsequently should have decided whether to go ahead and which plants to construct.

Only a few organic chemicals are produced in surplus in Poland, as reflected in the graphic opposite. PTA is one the few products where exports feature strongly. For polymers Poland lacks production of LLDPE in addition to the absence of certain types of polypropylene (e.g., tubular). The deficit in chemical

products in Poland may be the driving force behind collaboration and formulating a master plan will require some close cohesion and compromise.

Options for investment appear to focus olefins and aromatics and variations of product mixes, capacities, etc. Benzene is in short supply in Poland where consumption takes place in the production of caprolactam, cumene and ethylbenzene. Other aromatics such as toluene and orthoxylene possess market opportunities. Lotos at Gdansk opened its xylene fraction plant in July 2012, but sells all of the 120,000 tpa to Mitsubishi which does not allow further opportunities for processing inside Poland.



At present, Poland imports about 800,000 tpa of polyethylene, 400,000 tpa of propylene, 35,000 tpa of butadiene, 26,000 tpa of benzene and approximately 250,000 tpa of acrylic derivatives. ZAK at Kedzierzyn consumes around 100,000 tpa of propylene and thus a new complex could reduce that deficit if not eliminate it. Grupa Azoty spends an average of about zl 700 million per annum for intermediates, which could be eventually produced at Gdansk complex. The feasibility study has to provide answers which of these installations should be developed.

#### Lotos-Axens naphtha license

Grupa Lotos has selected Axens to provide the technology license for a new coker naphtha hydrotreater at its Gdansk refinery. The two-step coker naphtha hydrotreating unit, with a capacity of 152,000 tpa, is being designed to produce naphtha for petrochemical use. This adds to the existing naphtha capacity of 800,000 tpa, production from which Lotos sells almost entirely abroad.

Even so, the naphtha capacity would only be sufficient to produce around 300,000 tpa of ethylene and additional sources of feedstock would be required. One possibility is condensate derived from natural gas from Baltic Gas, where deposits could become available by around 2016 or 2017.

### **PKN Orlen refining sector**

PKN Orlen expects an improvement in results from the refining sector in 2014 even though the medium term

Slovnaft-bank agreements for LDPE/ethylene investments Slovnaft, owned by MOL signed an agreement with eight banks in December to facilitate the construction of the new polyethylene plant and the modernisation of the ethylene cracker. A loan of €200 million has been agreed, whilst the costs of construction for the total project is estimated at approximately €300 million. The loan, for general corporate purposes, was coordinated by Czech KBC unit CSOB, with UniCredit is the agent.

outlook remains difficult. In Lithuania PKN Orlen wants to build a product pipeline from Mazeikiu to the port of Klaipeda. Development plans for Orlen Lietuva, depend on approval of the pipeline. An estimate has placed the project's investment budget at around \$110 million.

ENI is in talks to sell its 32.5% share in Ceska Rafinerska and 124 Agip petrol stations in the

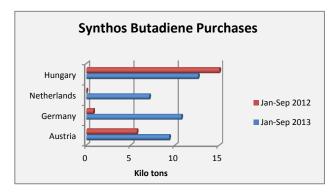
country to Slovnaft. Unipetrol is set to be the only other shareholder in Ceska Rafinerska, from early 2014 after agreeing in November to buy a 16.3% stake from Royal Dutch Shell for \$27.2 million. Unipetrol could use its right of first refusal over ENI's stake, although like other refiners in Europe, Unipetrol is facing overcapacity in the sector that has squeezed its margins to near zero. Ceska Rafinerska runs refineries in Litvinov and Kralupy and has a total conversion capacity of 8.7 million tpa of crude oil Unipetrol's biggest money maker is petrochemicals, while refining has pushed the company into losses. Thus it remains unclear whether Unipetrol would want to buy the ENI stake.

| Oltchim's Share Ownership as of 30.9.2013 |       |
|---|-------|
| Romanian Ministry of Economy              | 54.8% |
| PCC SE                                    | 18.3% |
| Polyolt                                   | 14.0% |
| Persoana fizica                           | 11.4% |
| Persoana juridice                         | 1.5%  |

#### Oltchim-new tender date

In the latest effort to privatise Oltchim investors have until 31 January to file binding offers. The Romanian government failed to sell a majority stake in Oltchim in 2012, part of wider privatisation commitments agreed under an International Monetary Fund-led aid deal. The intention is now to select a winner on 3 February.

Chinese and Russian investors have shown interest in Oltchim recently, in addition to SOCAR from Azerbaijan, and thus on the surface the prospects for finding a suitable buyer seem more promising than in 2012. Romanian chemical producer Chimcomplex also remains interested in acquiring Oltchim. The company could follow two main directions, either concentrating on higher added value chemicals or seeking to reopen the Arpechim refinery with petrochemical integration. Either option requires substantial investment.

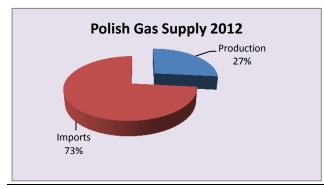


## Synthos-C4 supplies

Due to insufficient supply Synthos has agreed a three year contract to buy C4s from SABIC in the Netherlands, and has agreed a three year contract for deliveries from Rotterdam at a total cost of around zl 763 million. Synthos has been forced to seek alternative supplies since TVK has started construction of its own butadiene plant and is unwilling to conclude a long agreement with Synthos. The C4 contract is reflective of the situation in the Polish chemical industry whereby companies need to buy feedstocks and intermediates. The Lotos-Azoty

investment project aims to tackle these deficiencies, which results in an annual trade deficit in chemicals of around zl 17 billion at present.

#### **Chemicals**



### **Grupa Azoty-gas prices**

Raw materials and gas supply pose the most significant challenge to the profitability of Grupa Azoty and thus the group is making continual efforts to reduce costs. At present Grupa Azoty is negotiating with PGNiG over the supply of gas, in an effort to secure a long term agreement for around a billion cubic metres. Prices remain a stumbling block between the two groups, particularly as in the last three years breakthroughs have taken place in gas supply. In 2011 Poland bought only 9% of total imports from sources other than

Gazprom but this has now risen to 45%. Further increases are forecast, rising possibly to 80% by 2015 and even 100% by 2018-2019. The price of gas in the US is around five times lower than in Poland.

Grupa Azoty is the largest recipient of gas in Poland. In total, the Group's plants consume more than 2 billion m3 of gas. The group is constantly investigating the purchase of gas from sources other than PGNiG, and in particular LPG from the terminal at Swinoujscie which is expected to be completed this year. Moreover In 2014 Polish importers are likely to gain access to the Lasow interconnector on the Western border, as well as the virtual and actual pipeline transmission reversal in Yamal-Europe pipeline. Polish companies will be able to import 6.7 billion cubic metres of natural gas from Germany, with prices possibly cheaper than gas bought from Russia. In addition, the issue of shale gas is expected to enter the equation at some stage.

Natural gas accounted for 40.3% of total costs in the first half of 2013 for Grupa Azoty, amounting to zl 1.343 billion. The amount of gas used and costs have risen significantly in the past two years due primarily to the acquisition and integration of ZAK, ZCh Police and more recently ZA Pulawy.

#### Polish Chemical Production (unit-kilo tons) Product Jan-Nov 13 Jan-Nov 12 Caustic Soda Liquid 284.6 278 1 Caustic Soda Solid 74.2 65.6 Soda Ash 959.1 1023.5 Ethylene 440.3 407.1 Propylene 320.3 295.3 Butadiene 48.1 51.5 Toluene 16.3 19.6 Phenol 32.3 32.3 Caprolactam 145.2 150.0 Acetic Acid 7.3 7.0 Polyethylene 294.4 307.5 Polystyrene 51.2 49.5 **EPS** 73.6 77.0 PVC 292.2 239.4 Polypropylene 238.4 222.1 Synthetic Rubber 177.7 176.3 Ammonia (Gaseous) 1172.8 1153.0 Ammonia (Liquid) 1092.6 1165.7 **Pesticides** 19.6 21.9 Nitric Acid 2097.0 2124.0 Nitrogen Fertilisers 1661.0 1649.8 Phosphate Fertilisers 338.9 406.6 Potassium Fertilisers 310.3 278.5

#### **Azoty-Africa**

Last year Group Azoty Police acquired 55% of the Senegalese African Investment Group, allowing access to the Senegalese phosphate deposits. The Senegalese African Investment Group (AIG) company has a license to access the ilmenite sand deposits of Sud Saint Louis and allows the exploration of deposits of calcium phosphate in the areas of Lam and Kebemer (about 100 km north of Dakar). Not only does the agreement provide access to raw materials but it also will allow Grupa Azoty to expand into other markets in Africa.

AIG holds licenses for access to deposits of phosphates and ilmenite in Senegal. Following this transaction, the Group Azoty Police is the first Polish chemical company to possess their own resources which could save around zl 30 million per annum. The estimated reserves stand around 56 million tons of phosphate rock and a half million tons of ilmenite sands. Plans for the next phase of the project could include the production of phosphoric acid.

#### **Grupa Azoty-invetsments Jan-Sep 2013**

The total expenditure for investments in Grupa Azoty in January to September 2013 amounted to nearly zl 600 million from the planned 12 month budget of zl 900 million. The most important investment projects completed in the last quarter include the installation of stearin at Chorzow, part of the Pulawy division.

ZA Pulawy plans investment on the production of liquid and solid fertilisers based on urea and ammonium sulphate. The ZAK division invested zl 5.050 million in the third quarter this year in modernising the production of terephthalate esters.

The largest investment at ZA Tarnow, the parent company of Grupa Azoty, involves the modernisation of the sulphuric acid plant. The aim of the project is to ensure continuity of supply of sulphuric acid used in the production of caprolactam, in addition to improving the environmental features of the plant. Other major investments at ZA Tarnow include the modernisation of the ammonia synthesis reactor, and the installation of new hydrogen recycle compressor for installation of phenol hydrogenation catalyst.

### Lotos-Pulawy project for ammonium thiosulphate

Grupa Lotos and Azoty Pulawy have concluded plans to start construction of a joint project for the production of ammonium thiosulphate in 2014. Azoty Pulawy is to use industrial waste from Lotos, thus hydrogen sulphide and ammonia to produce ammonium thiosulfate and liquid fertiliser. This product is not produced in Central Europe at present. The total cost of construction of a plant for the production, which will be housed at the Lotos refinery at Gdansk, as well as storage tanks for finished product is estimated at over zl 120

million. The project does require environmental approval, and if given construction could be finished by 2016. The initial capacity of the plant is expected to be 20,000 tpa, and could eventually rise to 100,000 tpa.

### Grupa Azoty Zakłady Azotowe Kedzierzyn-new oxo product

Azoty Kedzierzyn has developed a new type of oxoplast which can be used in the medical sector. The product, phthalate based, has already passed the certification. The company estimates that in the near future it will produce in the near future several 000 tons of this compound and talks are underway with potential buyers. In 2014, as many as will be tripled investment in the Group Azoty Works ZAK.

The value of the investment is expected to amount to about zl 180 million. The new oxoplast is part of the large-scale investments being undertaken by Grupa Azoty Kedzierzyn. The construction of a new plant is a top priority which should be decided in the first part of 2014.

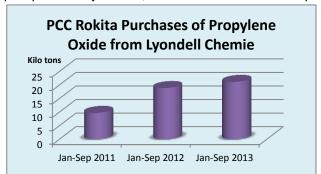
### PCC Rokita-monochloroacetic acid project

PCC Rokita has started work on foundations for its monochloroacetic acid (MCA) plant in the industrial area of PCC Rokita in Wałbrzyska Special Economic Zone. The capacity of the new plant is being designed 42,000 tpa, based on 100% monochloroacetic acid. This project will make PCC one of the leading global producers of MCA.

The value of the project is estimated at zl 272 million, zl 67 million of which will be financed from a grant awarded by the Ministry of Economy. The product will be aqueous solution, available in two basic classes of varying purity. Production of MCA will allow for a better integration of the PCC Group production both down and up the supply chain. The plant will consume a significant amount of chlorine produced by the electrolysis plant belonging to PCC Rokita, with the final liquid product to be received and processed by PCC Exol. MCA will also apply to the production of carboxymethyl cellulose (CMC) used in the oil drilling industry (even in drilling shale gas) as well as in food industry or pharmaceutical industry. MCA can be used for the preparation of thioglycolic acid, which is the plasticizer of PVC. The manufacture of synthetic caffeine, lidocaine and epinephrine are used in the pharmaceutical industry is also scope for the use of monochloroacetic acid. In addition, customers for MCA include producers of plant protection products (2,4 D, MCPA).

### PCC Rokita-phosphorous trichloride and oxychloride

Other product areas which are receiving modernisation and expansion include phosphorus trichloride and phosphorus oxychloride, both of which will see capacity raised by 50%. The company is also focused on



### **Polwax paraffins**

Polwax, the largest Polish and one of Europe's leading producers and distributors of refined paraffins, has opened a new installation at Jaslo utilising static crystallisation provided by Sulzer. The new unit of 5,000 tpa will help to increase production and significantly improve the rate of deoiling. It is also a technological leap and another step towards increasing the supply of highly processed foods and specialty products for customers from various industries. The company has two centres of production and logistics at Czechowice and Jaslo. The Polish market for various types of paraffin is estimated at 160,000 tpa to 180,000 tpa. With a turnover of around zl 260 million the company controls about 30% of the market.

investment in Central and East Europe.

increasing the production capacity of the propylene oxide plant. Investment is being carried out based on proprietary technology which will also help to reduce the impact of production on the environment. Thus far capacity has been increased from 25,000 tpa to 36,000 tpa, and be further expanded to 40,000 tpa. PCC Rokita is constructing new power facilities at Brzeg Dolny.

PCC Rokita wants to invest in increasing total production capacity of phosphorus trichloride and phosphorus oxychloride by 150%. The company has already invested in eliminating bottlenecks and built a rail tank loading point. Total completion is scheduled for Q1-2014. Phosphorous trichloride and phosphorus oxychloride are mainly used as raw materials for the synthesis of active pharmaceuticals, pesticides and additives for plastics.

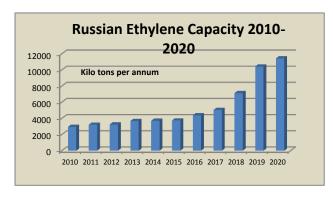
PCC Rokita is the only producer of phosphorus trichloride and phosphorus oxychloride in East Europe and is the region's largest producer of phosphorus3 flame-retardants for polyurethane foams. The complex provides the raw materials naphthalene derivatives of the biggest infrastructure

# **RUSSIA**

### Russian petrochemical projects

#### Russian development plans for the petrochemical industry and shale gas

The Russian strategic plan for petrochemicals, up to 2030, has started to come under closer scrutiny due to the emergence of the shale gas revolution and subsequent petrochemical projects in the US. Major Russian chemical projects have been under review and planning for some time, driven by the precept of significant domestic opportunities coupled with export potential. The Russian government has only lately started to appreciate the core significance of a modern petrochemical industry on the process of modernisation and thus its development represents a priority target. However, the prospect of becoming a major global player has been heavily undermined by the shift towards shale gas.



Ethylene capacity in Russia is currently projected to rise from just under 3.0 million tpa in 2010 to just over 11.0 million tpa in 2020. Consumption of LPGs in the Russian petrochemical industry by 2020 could reach 11.3 million tons, which is 2.7 times more than in 2012.

Of the million ton ethylene crackers in the construction and planning stages, Nizhnekamskneftekhim is the most advanced in terms of progress. SIBUR is moving slightly slower due to some economic internal and external concerns, whilst Rosneft faces the largest challenges in trying to build a grassroots complex in an area with no

previous base for refining and petrochemicals. The holding companies SANORS and United Petrochemical Company are in the early stages of their respective plans for one million ton crackers, whilst Gazprom Neftekhim Salavat is planning to add its new cracker in stages over a decade.

| Labour Productivity Per Ton-Production 2012 |                 |  |
|---|-----------------|--|
| Country                                     | Billion roubles |  |
| US  | 25.3            |  |
| Canada                                      | 16.4            |  |
| Poland                                      | 9.4             |  |
| Russia                                      | 4.7             |  |

The impact of the new paradigm in hydrocarbon production could lead to more emphasis on added value commodities. Current projects that might conform to those principles might include the ethyl acetate and methyl methacrylate plans being constructed by SANORS and the acrylates complex being constructed by Gazprom Neftekhim Salavat.

Whilst exports do not represent the reason for building many plants in Russia they do provide the justification for achieving economies of scale through capacity size. If export possibilities are to be restricted there may need to be more focus on cluster approach and building vertical chains whilst labour productivity in the Russian chemical industry needs to improve in order to compete internationally. Measures are taking place in response in part to shareholder pressure and by 2016, labour productivity in the chemical industry is forecast by 20.2% to 5.56 million roubles per person from 4.7 million roubles in 2012. However, even then it will still be far behind other competitors and in particular the leading developed countries. By 2018-2019, a number of important projects will have been completed in Russia, using economies of scale, which could possibly provide a significant leap in productivity.

| Purovsky-Tobolsk Gas Liquid Pipeline     |          |                 |
|--|----------|-----------------|
| Location                                 | Distance | Completion date |
| Purovsky-Yuzhniy Balyk 689 km Early 2014 |          |                 |
| Yuzhniy-Balyk-Tobolsk 417 km End 2014    |          |                 |

### Purovsky-Tobolsk gas liquids pipeline (ZapSib)

SIBUR aims to introduce the first part of the gas liquid pipeline from the Purovsky gas condensate plant (owned by Novatek) to Tobolsk-Neftekhim in early 2014 and full project completion by the end of the year. The first part of the pipeline connects Purovsky with Yuzhniy Balyk and extends over 600 km. SIBUR will take the

feedstock directly from Purovsky and is investing more than 60 billion roubles in the pipeline. Capacity of the Purovsky plant is also being increased from 5 million tpa to 11 million tpa.

For the pipeline section between Yuzhniy Balyk to Tobolsk gas liquid pipeline the Russian institute NIPIStroyTEK has undertaken an engineering and geodetic survey using airborne laser scanning, thermal imaging survey, etc.

| Russian Chemical Production (unit-kilo tons) |            |            |
|--|------------|------------|
| Product                                      | Jan-Nov 13 | Jan-Nov 12 |
| Caustic Soda                                 | 940        | 985        |
| Soda Ash                                     | 2,261      | 2,619      |
| Ethylene                                     | 2,416      | 2,141      |
| Propylene                                    | 1,331      | 1,126      |
| Benzene                                      | 1,091      | 997        |
| Xylenes                                      | 447        | 446        |
| Styrene                                      | 606        | 503        |
| Phenol                                       | 258        | 255        |
| Ammonia                                      | 13,040     | 13,610     |
| Nitrogen Fertilisers                         | 7,409      | 7,341      |
| Phosphate Fertilisers                        | 2,848      | 2,819      |
| Potash Fertilisers                           | 6,380      | 5,857      |
| Plastics in Bulk                             | 5,518      | 5,057      |
| Polyethylene                                 | 1,671      | 1,453      |
| Polystyrene                                  | 417        | 367        |
| PVC  | 589        | 561        |
| Polypropylene                                | 766        | 653        |
| Polyamide                                    | 125        | 106        |
| Synthetic Rubber                             | 1,365      | 1,311      |
| Synthetic Fibres                             | 126        | 121        |

The Czech company Reamer (a part of CTRP) has completed the delivery of the main equipment, including valves and ball valves, for SIBUR's gas liquid pipeline.

The pipeline is divided into two construction parts, Purovsky Plant-Yuzhniy Balyk pumping station 689 km, via Noyabsrk, and Yuzhniy Balyk-Tobolsk-Neftekhim 417 km. The planned capacity of the new product pipeline will be more than 4 million tpa in the first phase and up to 8 million tpa in the second phase.

The project is aimed at consolidating the light hydrocarbon resources of Yamal-Nenets and Khanty-Mansiisk autonomous district for transportation and processing production at Tobolsk. SIBUR is interested in securing long-term access to abundant gas liquid resources in West Siberia, and particularly its northern parts, where projected growth in wet gas production is expected to support rising supplies.

SIBUR has already concluded contracts for the supply of NGL and LPG at Tobolsk-Neftekhim with Novatek from 2014 to 2033. This covers delivery of up to 36 million tons of gas liquids.

The group expects that the creation of a single infrastructure for transportation will create a secure foundation for development of the petrochemicals business at Tobolsk. The construction of the pipeline is being coordinated with the expansion of fractionation capacity at Tobolsk. Commissioning for the section between Purovsky and Yuzhniy-Balyk is expected by the end of 2014 with

completion of the entire pipeline set for 2015.

| SIBUR's Main Investment Project Expenditure (billion roubles) |            |            |  |
|---|------------|------------|--|
| Infrastructure  | Jan-Sep 13 | Jan-Sep 12 |  |
| Purovsky-Pit Yakh-Tobolsk pipeline                            | 15.287     | 13.306     |  |
| Ust Luga LPG terminal   | 3.989      | 4.487      |  |
| Tobolsk Gas Fractionating Plant                               | 5.421      | 1.899      |  |
|   |            |            |  |
| Petrochemicals  | Jan-Sep 13 | Jan-Sep 12 |  |
| Tobolsk-Polymer   | 7.866      | 13.682     |  |
| Zapsib-2  | 1.642      | 1.584      |  |
| SIBUR-Kstovo  | 1.489      | 1.226      |  |

### ZapSib-2, ethylene complex

SIBUR is continuing the FEED stage of the ZapSib-2 project, and is conducting further assessment of the project configuration. SIBUR plans to make a final investment decision on the project upon completion of the FEED sometime this year.

ZapSib-2 is a greenfield construction of an integrated light feed cracker/basic polymers production complex in Tobolsk. It is projected to operate a steam cracker with a total capacity of 1.5 million tpa of ethylene (technology provided by

Linde), and four polyethylene production units with a total capacity of 1.5 million tpa (technology provided by INEOS). It also includes a second polypropylene unit for Tobolsk, with a capacity of 500,000 tpa (technology provided by LyondellBasell).

### Irkutsk Oil Company-gas processing project

In East Siberia Irkutsk Oil Company (INK) plans to begin construction of a new gas processing plant before the end of 2014, with a longer term view to produce petrochemicals and polyolefins. The first stage of the project involves the production of propane-butane based on the Ust Kut deposits, and will later be extended to include ethane. Prospects for building a polyethylene plant are in the balance at present and may depend on other projects. However, the EBRD has already advanced loans to the company, based on environmental benefits that may result from investment at Ust-Kut.

In the period 2014-2016 INK plans to build two gas-processing plants, about 500 km product pipelines, gas fractionation plant, station for the shipment of liquefied gases. A pilot plant for gas processing, already under construction, could be opened in 2015. During the period 2016-2019, the gas-chemical plant is planned to be built. INK was founded in 2000, combining mining and service companies. The proven oil reserves of the company comprise more than 160 million tons, and gas 150 billion cubic metres. INK currently operates 19 oil and gas fields and blocks, including the Yarakta field which accounts for over 80% of the company's total

production. Most of the company's assets are located in proximity to the East Siberian Pacific Ocean (ESPO) pipeline.

Having increased oil production in the past decade INK now intends to start the development of gas reserves of the northern oil and gas fields Yarakta, Markovo, and West Ayan. The construction of the first plant for the processing of associated gas and natural gas with the capacity of 1.26 billion cubic metres per annum has already been launched.

The total volume of gas processing after the commissioning of the unit on the Markovo field in 2016 and two more units in Yarakta in 2017 will amount to 7 billion cubic metres per annum. The gas-chemical complex at Ust-Kut is being assessed towards producing 650,000 tpa of polyolefins, with a possible extension of up to 1 million tpa. However, this project may be several years away from construction.

| Duccion Ethydene Dreduction |            |            |
|-----------------------------|------------|------------|
| Russian Ethylene Production |            |            |
| (unit-                      | kilo tons) |            |
| Producer                    | Jan-Nov 13 | Jan-Nov 12 |
| Angarsk Polymer Plant       | 190.7      | 170.6      |
| Kazanorgsintez              | 475.2      | 443.7      |
| Stavrolen                   | 305.8      | 54.2       |
| Nizhnekamskneftekhim        | 550.8      | 551.6      |
| SANORS                      | 74.2       | 69.4       |
| Gazprom N Salavat           | 248.4      | 179.5      |
| SIBUR-Neftekhim             | 216.2      | 209.6      |
| SIBUR-Khimprom              | 42.3       | 44.1       |
| Tomskneftekhim              | 234.5      | 237.4      |
| Ufaorgsintez                | 112.9      | 88.9       |
| Total                       | 2451.0     | 2049.0     |

#### SANORS-Rosneft, ethylene project

SANORS and Rosneft have reached a formula agreement for one year regarding gas liquid prices. Supplies from Rosneft for SANORS are sourced from Rosneft's plants in the Samara region, in addition to the Zaikinsk plant in the Orenburg region which provides butane fractions. This agreement is an extension of the wider plans held by the two groups in the jv to construct ethylene facilities of 1 million tpa and production of polymers.

Other plans include the construction of a primary crude oil processing capacity of 5 million tpa. Current production levels of ethylene at Novokuibyshevsk are modest, only SIBUR-Khimprom in Russia produces less output. The project to build new facilities for the production of ethylene and polyolefins at Novokuibyshevsk is to be implemented in two phases over a period of ten years.

SANORS also sees prospects in the production of polyurethanes, emulsion PVC, ABS plastics, products whereby a significant part of consumption in Russia is provided by imports. The capacity of the entire complex at Novokuibyshevsk could total 2.5 million tpa, if all projects are undertaken. This includes capacities of 480,000 0tpa of LPG and naphtha and 250,000 tpa of organic chemicals. Externally, SANORS has been linked to interest in PTT's refining and petrochemical complex in Vietnam.

### Russian petrochemical producers & markets

#### SIBUR, Jan-Sep 2013

SIBUR's sales revenues amounted to 197.6 billion roubles in the first three quarters in 2013, against 198 billion roubles in 2012. The company has demonstrated strong results in fuel and raw materials due to higher sales volumes, as well as increased revenues from sales of plastics and organic synthesis products. The latter was mainly due to the growth of production of expandable polystyrene at Perm and consolidation in the Biaksplen group and BOPP production. The falls in revenue from sales of synthetic rubber, intermediates and other chemical products tended to offset the above factors.

| SIBUR's Main Financial Indicators (billion roubles) |            |            |
|---|------------|------------|
|   | Jan-Sep 13 | Jan-Sep 12 |
| Total Revenue                                       | 197.598    | 198.897    |
| Energy products                                     | 123.681    | 119.671    |
| Petrochemicals                                      | 97.002     | 99.956     |
| Other   | 9.95       | 16.337     |
| EBITDA  | 56.985     | 60.24      |
| EBITDA margin,%                                     | 28.80%     | 30.30%     |

SIBUR's synthetic rubber business continued under pressure in the third and fourth quarters due to amid weak demand in key markets and the ongoing correction in the bulk rubber sector. The group was affected by the closure of outdated chlorine production at Dzerzhinsk in April 2013. The deconsolidation of Yugragazpererabotka, a jv with RN Holding, resulted in decreased revenues from APG processing.

The EBITDA for SIBUR was 57 billion roubles in January-September 2013, down 5.4% against 2012. The decline was mainly due to narrowing price margins between raw materials and final products in

the petrochemical division, particularly for synthetic rubbers. SIBUR revenues amounted to 130 billion roubles in the first nine months in 2013, 5% down on the same period last year. SIBUR's energy product group performed well on strong volume growth. The net profit for the first nine months in 2013 totalled 34.4 billion roubles, 13.9% down on 2012.

SIBUR shipped the first batch of liquefied butane from the port of Ust-Luga in Hamburg in mid-December. The butane is supplied from Tobolsk. In February-March 2014 is scheduled to begin a similar shipment of propane. SIBUR's complex can annually handle up to 1.5 million tpa of LPG and 2.5 million tpa of light oil.

| SIBUR's Monomer & Intermediate Production (unit-kilo tons) |            |            |
|--|------------|------------|
| Product  | Jan-Sep 13 | Jan-Sep 12 |
| Benzene  | 102.7      | 95.8       |
| Styrene  | 115.2      | 118.6      |
| PTA  | 196.7      | 187.0      |
| Propylene  | 223.6      | 237.3      |
| Ethylene Oxide   | 61.0       | 56.7       |
| Butadiene  | 144.9      | 154.8      |
| Isobutylene  | 26.4       | 24.8       |
| Ethylene   | 394.3      | 391.6      |
| Other Intermediates  | 550.3      | 675.9      |
| Other Chemicals  | 493.4      | 565.2      |
| Total  | 2308.5     | 2507.7     |

### SIBUR-petrochemicals, Jan-Sep 2013

In the third quarter in 2013 SIBUR's revenue from sales of petrochemical products decreased by 2.1% to 29.507 billion roubles from 30.139 billion roubles in 2012.

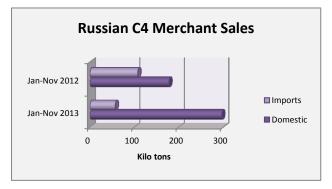
Overall for the first three quarters in 2013, revenue from sales of petrochemical products decreased by 7.5% to 87.491 billion roubles from 94.565 billion roubles in 2012. The decline was primarily attributable to the weak performance of the synthetic rubber product group, which was partially mitigated by healthy performance of plastics and organic synthesis products.

Production volumes were mostly unchanged for petrochemicals in January to September 2013, although intermediates and other chemicals were lower due in part to the decommissioning of the Kaprolactam chlorine plant at Dzerzhinsk.

### Russian C4s, Jan-Nov 2013

Domestic shipments of C4s amounted to 293,700 tons in January to November, 24% up on 2012. Nizhnekamskneftekhim boosted purchases of C4s in January to November due to the resumption of shipments from Stavrolen in October last year.

C4 imports amounted to 6,500 tons in November, 1.6 times more than in October. Omsk Kaucuk boosted purchases almost four times to 4,300 tons. At the same time, Nizhnekamskneftekhim imported 2,300 tons, 23% less than in October. Russian imports of C4s totalled



57,300 tons in January to November, 1.9 times less than in 2012. The main reason for lower imports this year has been the restart of production by Stavrolen.

#### Russian propylene, Jan-Nov 2013

Russian propylene exports totalled 26,900 tons in January to November 2013, 15% down on 2012. Stavrolen was the only exporter in November. Propylene production rose from 1.126 million tons in January to November 2012 to 1.331 million tons in 2013. The increase was due to the start of production by Polyom at Omsk and

| Russian Propylene Production (unit-kilo tons) |            |            |
|---|------------|------------|
| Producer                                      | Jan-Nov 13 | Jan-Nov 12 |
| Angarsk Polymer Plant                         | 135.4      | 94.8       |
| Kazanorgsintez                                | 53.0       | 37.3       |
| LUKoil-NNOS                                   | 150.6      | 130.5      |
| Stavrolen                                     | 135.7      | 10.4       |
| Nizhnekamskneftekhim                          | 270.3      | 272.6      |
| Omsk Kaucuk                                   | 58.8       | 56.9       |
| Polyom  | 94.9       | 1.5        |
| Gazprom Neftekhim Salavat                     | 123.3      | 78.8       |
| SIBUR Kstovo                                  | 121.3      | 115.3      |
| SIBUR-Khimprom                                | 68.7       | 72.1       |
| Tomskneftekhim                                | 118.5      | 119.8      |
| Ufaorgsintez                                  | 137.2      | 136.1      |
| Total   | 1331.0     | 1126.0     |

renewed production by Stavrolen at Budyennovsk. Gazprom Neftekhim Salavat also recorded a substantial increase, and has started to create a small surplus for sale to either the domestic or export market. The company is preparing a surplus in readiness for the demands of the new acrylic acid complex which has only recently started construction.

A total of 212,500 tons of propylene monomer was sold on the Russian domestic merchant market in January to November 2013, of which Saratovorgsintez was the largest buyer taking 86,338 tons. The second largest buyer was Tobolsk-Polymer, taking 38,518 tons, to build up inventory prior to the full start-up of the new polypropylene plant. Russian companies shipped 16,000 tons of propane-propylene fractions to the domestic market in November, 2% less than in October.

Exports of propane-propylene fractions increased 21% in

November against October to 458 tons. The only supplier was Slavneft-Yanos and all of the production went to

Belarus. In the eleven months January to November 2013 Russian product shipments totalled 40,900 tons, 39% more than in 2012.

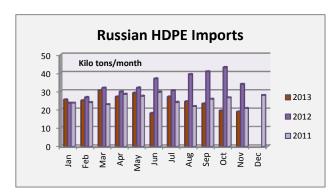
| Russian Styrene Production (unit-kilo tons) |            |            |
|---|------------|------------|
| Producer                                    | Jan-Nov 13 | Jan-Nov 12 |
| Nizhnekamskneftekhim                        | 224.8      | 185.1      |
| Angarsk Polymer Plant                       | 29.3       | 29.9       |
| SIBUR-Khimprom                              | 91.4       | 95.6       |
| Gazprom Neftekhim Salavat                   | 157.0      | 119.3      |
| Plastik, Uzlovaya                           | 53.7       | 60.0       |
| Total                                       | 556.3      | 489.9      |

#### Russian styrene, Jan-Nov 2013

Styrene production amounted to 52,800 tons in November, 7% less than in October. Gazprom Neftekhim Salavat reduced production by 31%, to 11,400 tons due to maintenance work. Angarsk Polymer Plant reduced production by 4% to 3,000. Production for January to November 2013 was 556,300 tons, 16% more than in 2012.

Exports for the period January to November 2013 totalled 108,300 tons which was 4% less than in the same period of 2012. Sales of Russian styrene in the domestic market fell by 38% in November against October to 5,000 tons. Russian merchant shipments of styrene in the period January to November 2013 totalled 83,200 tons, which was 4% up over 2012. Gazprom Neftekhim Salavat has completed modernisation of the ethylbenzene unit, meaning that the company will receive an additional 16,000 tpa of ethylbenzene. The modernisation will significantly reduce energy consumption and stabilize the catalyst.

### **Bulk Polymers**



#### Russian HDPE market, Jan-Nov 2013

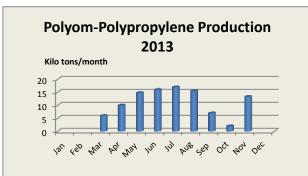
HDPE imports into Russia totalled 267,800 tons in the period January to November 2013, 28% down on 2012. A major factor behind lower imports has been the rise in production, increasing by 42% in the eleven months of 2013 to 918,200 tons.

Stavrolen and Gazprom Neftekhim Salavat showed the largest rise in production in 2013. Pipe imports dropped from 118,100 tons in January to November 2012 to 64,700 tons in 2013.

## Russian polypropylene market, Jan-Nov 2013

Imports of polypropylene into Russia fell by 23% in the first eleven months in 2013 to 196,200 tons. Russia's imports of polypropylene declined due to higher production. Production of polypropylene in Russia increased by 26% in January to November 2013 to 766,400 tons. The launch of new capacity at Omsk and significant growth in production by Neftekhimya at the Moscow refinery and Stavrolen and were the main drivers of the increase. The largest producer in 2013 was Nizhnekamskneftekhim which produced about 190,200 tons of polypropylene in January to November 2013 compared to 194,400 tons in 2012.

Ufaorgsintez reduced 6% its production to 106,200 tons in the first eleven months of the year, due to the tight supply of feedstock (propane-propylene fraction) in May. Tomskneftekhim reduced production from 124,000 tons to 115,700 tons in the first eleven months. This was due to an extended shutdown for maintenance in July and



August. Polyom launched the production of polypropylene on 11 February 2013 and produced about 101,600 tons until the end of November. Polyom exported 15,700 tons of polypropylene from June to November.

### Polyom, sale of 50% stake to Sibgazpolimer

The sale of a 50% stake in Polyom to Sibgazpolimer, owned by Gazprom Neft and SIBUR, was completed before the end of the 2013. The price for the stake was reported to be about 5 billion roubles.

The emergence in Polyom of a financially wealthy co-owner could give impetus to the development of the plant and associated facilities. Production at Polyom started in February 2013 based on LyondellBasell technology,

although the plant construction and commissioning was completed in 2012. Difficulties in supply agreements with Gazprom Neft over propylene were the cause of the delayed start-up.

| SIBUR Polyolefins (unit-kilo tons)     |            |            |
|--|------------|------------|
| Production                             | Jan-Sep 13 | Jan-Sep 12 |
| LDPE                                   | 181.7      | 184.5      |
| Polypropylene                          | 93.4       | 98.9       |
| Purchases from 3 <sup>rd</sup> parties | 136.6      | 86.1       |
| Total                                  | 411.7      | 369.5      |
|  |            |            |
| Sales                                  | Jan-Sep 13 | Jan-Sep 12 |
| LDPE                                   | 179.0      | 198.0      |
| Polypropylene                          | 155.4      | 144.3      |
| Total                                  | 334.4      | 342.2      |

### SIBUR, polyolefins division, Jan-Sep 2013

SIBUR's revenues for polyolefin sales in the third quarter 2013 increased by 10.5% to 6.050 billion roubles from 5,474 million in the third quarter of 2012. The increase was due to higher sales of polypropylene through expanded trading activities, as well as a material decrease in inventories. Overall for January to September 2013 revenues from polymer sales dropped by 3.1% to 16.605 billion roubles from 17.127 billion roubles in 2012. Domestic sales accounted for 66.5% of polymer revenues.

LDPE revenues decreased by 11.8% in the third quarter to 2.892 billion roubles from 3.279 billion roubles in the third

quarter in 2012. This was due to lower sales volumes and relatively flat average selling price. LDPE sales volumes decreased by 11.3% primarily due to a 10.9% drop in production due to a longer maintenance shutdown at Tomskneftekhim. The longer outage in 2013 at Tomsk was in line with the biennial maintenance cycle.

In January to September 2013 SIBUR's revenues from LDPE sales dropped 9.3% to 8.667 billion roubles from 9.557 billion roubles in 2012. This fall was due to 9.9% lower sales volumes, attributable to lower inventory compared to 2012, and flat prices. A 1.5% drop in production also took place due to a longer maintenance shutdown at Tomsk, and lower third-party purchases. Domestic sales accounted for 57.5% of total LDPE revenue.

For polypropylene revenues SIBUR reported a rise of 43.9% in the third quarter last year to 3.158 billion roubles from 2.194 billion roubles in 2012. This was due to higher sales volumes despite a lower average selling price. The growth in sales volumes was primarily attributable to higher third-party purchases as a result of expanded trading activities. Sales prices dropped 11.3% in the third quarter due to continued price correction on the domestic market from the high base of 2012, and the impact of the Polyom plant on the Russian market.

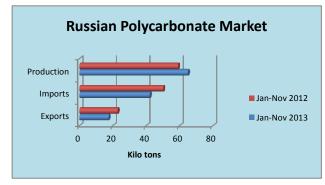
In January to September 2013, revenues from polypropylene sales increased by 4.9% to 7.938 billion roubles from 7.570 billion roubles in 2012. Despite a fall in prices by 2.7% sales by volume rose 7.7%. Domestic sales accounted for 76.3% of total polypropylene revenues for SIBUR.

| SIBUR's PET Production & Sales (unit-kilo tons) |         |         |  |
|---|---------|---------|--|
| Jan-Sep 13 Jan-Sep 12                           |         |         |  |
| Production                                      | 106.914 | 107.677 |  |
| Total Sales                                     | 124.907 | 105.322 |  |

#### **Russian PET imports**

Chinese imports of PET in Russia in January-November were up 34% compared to the same period in 2012 and amounted to 88,000 tons. Imports into Russia totalled 156,500 tons, 7.7% up. Korean exports of PET

decreased by 15,000 tons (25% from 2012) and amounted to 44,000 tons. Russian PET production totalled 377,300 tons in the period January to November 2013 against 405,500 tons in 2012.



### Russian polycarbonate 2013

Imports of polycarbonate into the Russian market amounted to 42,200 tons in January-November 2013, 19% down on 2012. SABIC and Bayer remain the main importers, accounting for 64% and 16% respectively this year. Consumption of polycarbonate in Russia increased by 8% to 90,000 tons in January to November 2013 compared to the same period in 2012.

Exports of polycarbonate from Russia to foreign markets fell over the first eleven months of 2013 by 31% to 17,500 tons. Shipments of injection grades of

polycarbonate to China are still a priority for Russian exports. These grades are used in the production of electrical engineering and accounts for about 80% of the total exports. The Russian market for polycarbonate granulate increased by 6% in January to November 2013 to a total of 90,000 tons. Production totalled 65,000 tons in this period, and this was 10% up on 2012.

### **Aromatics & derivatives**

| Russian Benzene Produc      | ction (unit-kil | o tons)    |
|-----------------------------|-----------------|------------|
| Producer                    | Jan-Nov 13      | Jan-Nov 12 |
| Altay-Koks                  | 9.9             | 26.7       |
| Angarsk Polymer Plant       | 71.0            | 69.9       |
| Chelyabinsk MK              | 13.0            | 16.7       |
| Gazprom Neft                | 104.3           | 83.8       |
| Koks                        | 4.5             | 21.7       |
| LUKoil-Neftekhim            | 44.4            | 0.0        |
| LUKoil-Permnefteorgsintez   | 43.3            | 32.0       |
| Magnitogorsk MK             | 55.5            | 60.1       |
| Nizhnekamskneftekhim        | 171.7           | 164.7      |
| Novolipetsk MK              | 29.6            | 20.6       |
| Gazprom Neftekhim Salavat   | 128.6           | 87.6       |
| Severstal                   | 35.0            | 27.7       |
| SIBUR Kstovo                | 66.8            | 58.5       |
| Slavneft-Yaroslavlorgsintez | 57.0            | 59.6       |
| Surgutneftegaz              | 53.8            | 52.9       |
| TNK-BP                      | 33.8            | 29.9       |
| Ufaneftekhim                | 74.4            | 76.2       |
| Ural Steel                  | 6.9             | 7.1        |
| Uralorgsintez               | 57.9            | 66.4       |
| Zapsib                      | 52.1            | 52.7       |
| Others                      | 10.9            | 18.3       |
| Total                       | 1124.3          | 1032.9     |

Ural Steel.

### Russian benzene production, Jan-Nov 2013

Russian benzene production totalled 110,300 tons in November, 3% more than in October. Uralorgsintez increased production by 25% to 5,700 tons, whilst Stavrolen increased production by 14% to 7,400 tons and Ufaneftekhim increased by 13% to 6,500 tons. The Ryazan refinery, which is owned by Rosneft after being acquired from TNK-BP, reduced production by 17% to 3,200 tons. The coal based producer Severstal increased production by 13% to 3,000 tons whilst Gazprom Neftekhim Salavat increased by 13% to 13,100 tons. Russian benzene production for the period January to November totalled 1.124 million tons, 11% up on 2012.

#### Russian benzene sales, Jan-Nov 2013

Sales of benzene on the Russian market totalled 70,410 tons in November against 66,760 tons in October. Sources from refineries and petrochemical plants dominate supply in the domestic market, whilst the coke producers provide the majority of exports.

Kirishinefteorgsintez exported 1,049 tons in November, but that was the first time in 2013 that exports had originated from either a refinery or petrochemical plant. Russian benzene exports totalled 34,114 tons in the period January to November 2013, of which Magnitogorsk Metallurgical Plant supplied 16,167 tons. This was followed by Altay-Koks and

The two major consumers of benzene in Russia include Kuibyshevazot and SDS Azot at Kemerovo, both of which produce caprolactam. This is followed by Kazanorgsintez, where cumene is produced, and SIBUR-Khimprom for the production of ethylbenzene. Although Nizhnekamskneftekhim produces benzene, it has been forced in recent months to purchase additional supplies on the open market. SIBUR-Kstovo has been the main supplier to Nizhnekamskneftekhim and overall is the second largest player in the Russian merchant market. The largest supplier is Gazprom Neft from the Omsk refinery which supplied 14% of merchant supplies to the Russian market in January to November 2013. Sales of benzene totalled 709,300 tons on the Russian merchant market in the period January to November 2013, 7% up on 2012.

ArselorMittalTemirtau sold 410 tons of benzene on the Russian market in November, 3.4 times more than in October. Kazanorgsintez purchased 290 tons of benzene from ArselorMittalTemirtau and Kuibyshevazot 120 tons. Russian imports of benzene from Kazakhstan totalled 3,300 tons in the period January to November 2013, 1.5 times up on 2012. Imports for January to November 2013 totalled 30,300 tons which was 14% less than in 2012.

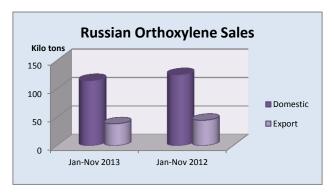


### Russian xylene market, Jan-Nov 2013

Xylene production totalled 447,100 tons in the period January to November 2013, against 446,000 tons in 2012. Exports of combined orthoxylene and paraxylene totalled 142,300 tons in the eleven months in 2013 whilst domestic sales amounted to 304,800 tons.

In the third quarter of 2013, SIBUR's expenses related to purchases of paraxylene increased by 22.0% to 1.314 billion roubles from 1.077 billion roubles in the third quarter in 2012, increasing as a

percentage of total feedstock and materials expenses to 8.6% from 7.5%. The growth in expenses was



attributable to a 36.8% increase in purchasing volumes on higher production of PTA due to a maintenance shutdown of the respective production line at Polief in the third quarter of 2012.

Russian sales of orthoxylene amounted to 10,550 tons in November, 52% more than in October. Total sales to the domestic market comprised 114,700 tons in January to November 2013, 9% down against the same period in 2012. Russian exports of orthoxylene amounted to 1,480 tons in November, 60% less than in October. In November Gazprom Neft at Omsk and

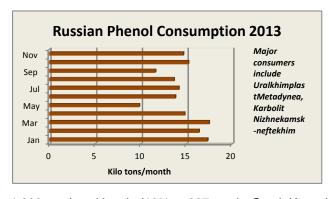
Kirishinefteorgsintez both did not export, and thus Ufaneftekhim was the sole exporter. Exports for the period January to November totalled 38,500 tons, 16% less than in 2012.

| Russian Toluene Production (unit-kilo tons) |            |            |
|---|------------|------------|
| Producer                                    | Jan-Nov 13 | Jan-Nov 12 |
| Kinef                                       | 31.9       | 5.7        |
| Gazprom N Salavat                           | 8.2        | 13.7       |
| Slavneft-Yanos                              | 46.5       | 55.9       |
| LUKoil-Perm                                 | 40.4       | 32.5       |
| Gazprom Neft                                | 84.2       | 73.1       |
| RN Holding (ex-TNK-BP)                      | 39.6       | 39.7       |
| Others                                      | 20.5       | 34.1       |
| Ufaneftekhim                                | 41.4       | 27.6       |
| Total                                       | 312.6      | 282.2      |

#### Russian toluene, Jan-Nov 2013

Russia produced 33,600 tons of toluene in November, 3% less than in October. Production totalled 308,700 tons in the period January to November 2013, 9% up on 2012. Russian toluene shipments by rail to domestic consumers totalled 9,900 tons in November, 2% less than in October.

The largest individual buyer of commodity toluene in Russia in November 2013 was the explosives producer Sverdlov with 920 tons or 9% of deliveries. Motor fuels accounted for 2,020 tons of purchases in November, or 20% of total sales. For January to November 2013 toluene deliveries by rail to the Russian market totalled 122,900 tons, 18% more than in 2012.



The Russian toluene market is fully integrated in that all production is consumed by domestic customers. Most of the toluene is shipped to manufacturers of coatings, fuel and explosives. Around 55% of toluene is consumed captively and the remainder through the merchant market.

#### Russian phenol, Jan-Nov 2013

Borealis exported 477 tons of phenol in November, 25% less than in October. Samaraorgsintez reduced exports of phenol by 25% in November over October to 1,447 tons. Sales were divided between Poland (84% or

1,200 tons) and Latvia (16% or 237 tons). Omsk Kaucuk exported 155 tons in November.

Domestic sales of phenol dropped 8% in November against October to 11,507 tons, the drop attributed to seasonal factors. Omsk Kaucuk was the largest seller, shipping 4,313 tons of which the main buyer was Uralkhimplast accounting for 2,245 tons. The remainder of the domestic sales in November were divided between Samaraorgsintez (3,665 tons), Kazanorgsintez (1,477 tons) and Ufaorgsintez (2,052 tons).

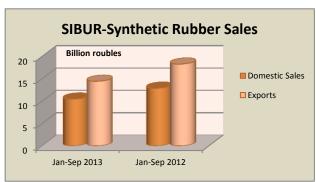
### **Russian PTA projects**

At the end of 2013 United Petrochemical Company and the Mexican company Alpek agreed to form a jv for the production of PTA and PET at Ufa. The new complex under planning includes capacities of 600,000 tpa of PTA and 600,000 tpa of PET. Sberbank has opened a non-revolving credit line for United Petrochemical Company with a limit of 1.43 billion roubles. The funds are being used raised to finance current operations, but further finance could be available for future projects. United Petrochemical Company also plans to implement a cracker project of 1 million tpa, which is the key investment and comprising 90% of \$5 billion planned by the company.

The Ministry of Industry and Trade of the Russian Federation is studying prospects for building PTA facilities to serve the planned PET project in the Ivanovo region. Contracting agreements have been already established with Uhde for a complex to produce up to 200,000 tpa of polyester staple fibre and textile granulate. Investments into

the polyester complex are estimated at 9.7 billion roubles and is scheduled to be concluded by the end of 2016 or start of 2017. From October last year, design and survey work has been undertaken on site, whilst necessary agreements have been concluded with UhdelnventaFisher and Trützschler.

### Synthetic Rubber



growth in revenue from sales of thermoplastic elastomers. This follows the start of the new thermoelastomer plant

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|--|------------------|-------------|
| SIBUR-Synthetic Rubber Production (unit-kilo tons) |                  |             |
|  | Jan-Sep 13       | Jan-Sep 12  |
| Commodity Rubber                                   | 217.3            | 216.8       |
| Speciality Rubber                                  | 61.5             | 64.2        |
| Thermoplastic elastomers                           | 26.2             | 21.0        |
| 3rd part purchases                                 | 7.3              | 22.9        |
| Total  | 312.3            | 325.0       |
|  |                  |             |
| SIBUR-Synthetic Rubbe                              | er Sales (millio | n roubles)  |
|  | Jan-Sep 13       | Jan-Sep 12  |
| Commodity Rubber                                   | 17,160           | 22,513      |
| Speciality Rubber                                  | 5,709            | 6,270       |
| Thermoplastic elastomers                           | 1,965            | 2,397       |
| Total  | 24,834           | 31,180      |
|  |                  |             |
| SIBUR-Synthetic Rubbe                              | er Sales (millio | n roubles)  |
|  | Jan-Sep 13       | Jan-Sep 12  |
| Domestic Sales                                     | 10.5             | 12.9        |
| Exports  | 14.4             | 18.3        |
| Total  | 24.9             | 31.2        |

#### SIBUR's synthetic rubber sales, Jan-Sep 2013

For the period January to September 2013 revenues from synthetic rubber sales decreased by 20.1% against 2012 to 24,908 billion roubles from 31.183 billion roubles. Domestic sales accounted for 42.0% of total synthetic rubber revenues.

SIBUR's revenue from synthetic rubber sales dropped by 9.6% in the third quarter last year to 8.030 billion roubles from 8.880 billion roubles in 2012. Lower revenues were mainly the result of lower sales in commodity and specialty rubbers, which was partially compensated by

at Voronezhsintezkaucuk this year.

### **Commodity rubbers**

Revenues from sales of commodity rubbers fell by 12.4% in the third quarter in 2013 to 5.414 billion roubles from 6.182 billion roubles in the same period in 2012. This follows a substantial decline in the average price despite higher sales volumes by tonnage. Average prices for commodity rubbers declined by 26.9% in the first three quarters last year, following European and Asian market prices for raw materials and end-products. European prices for butadiene, moreover, were down more than 45% in the third quarter in 2013, whilst Asian natural rubber prices were down 14%.

In physical terms, SIBUR's commodity rubber sales increased by 19.9% in the third quarter due primarily to destocking. At the same time due to a weak market environment, SIBUR reduced product purchases under third-party arrangements.

Overall for January to September 2013, SIBUR's revenue from sales of commodity rubbers fell by 23.8% to 17.159 billion roubles from 22,512 billion roubles in the same period in 2012. Isoprene rubber production increased comparatively in 2013, due to an unscheduled maintenance outage at Togliatti in the second quarter in 2012. At the same time production of

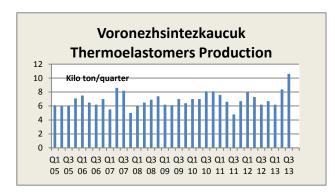
butadiene-based commodity rubbers fell in 2013. Domestic sales accounted for 45.8% of total commodity rubber revenue, while 54.2% was attributable to export sales.

### **Specialty rubbers**

SIBUR's revenue from specialty rubber sales fell 8.0% in the third quarter in 2013 to 1.811 billion roubles from 1.968 billion roubles in Q3 2012. Sales prices dropped 5.5% following the decline in Asian market prices for nitrile-butadiene rubber (NBR), which was down by almost 23%. This fall was partially compensated by stronger prices for butyl rubber (IIR), which were up by 4%. Specialty rubber sales volumes declined by 2.6% due to lower NBR sales, which was largely mitigated by higher IIR sales. The decrease in NBR sales volumes was attributable to lower production as a result of a lengthy maintenance shutdown at the Krasnoyarsk production site.

SIBUR's revenues from sales of specialty rubbers for January-September 2013 dropped by 8.9% to 5.710 billion roubles against 6.269 million in 2012. Sales prices fell 7.6%, whilst sales volumes declined by 1.4%. The average price for specialty rubbers declined, reflecting mixed pricing trends for NBR and IIR on the global

markets. SIBUR exports most of its speciality rubbers, with domestic sales accounting for only 16.7% of revenues based on last year's results.



### **Thermoplastic elastomers**

Revenues from thermoplastic elastomers (SBS) for the third quarter increased for SIBUR by 10.2% to 805 million roubles from 730 million roubles in the same period in 2012. Although prices were down, volumes were up due mainly to the start of the TEP-50 plant at Voronezh. As a result production rose 80% in the third quarter, allowing an increase in sales of 35.6%.

Despite higher physical volumes prices fell 8.7% following butadiene. This trend was partially compensated by stronger styrene prices. Overall for

January to September 2013 SIBUR's revenues from sales of thermoplastic elastomers fell by 15.1% to 2.039 billion roubles from 2.402 billion roubles in 2012. The TEP-50 plant started production in the third quarter and is thus the most important feature of this market in 2013. In the first nine months domestic sales accounted for 81.1% of SIBUR's thermoplastic elastomer revenues.

| Russian Tyre Production (unit-million pieces) |            |            |
|---|------------|------------|
| Sector  | Jan-Nov 13 | Jan-Nov 12 |
| Car Tyres                                     | 30.9       | 29.1       |
| Lorry Tyres                                   | 6.7        | 7.4        |
| Agricultural Tyres                            | 1.3        | 1.3        |

### Russian tyre production, Jan-Nov 2013

Production of tyres in Russia rose 6% in January to November 2013, mainly due to the impact of foreign manufacturers. Nokian increased production by 15% against the same period last year and Pirelli increased by 11%. The largest increase in in production (9%) was seen in passenger and freight OTR-tyres. Truck tyre production decreased by 10% due to the decline in freight combined tyres. Kordiant reduced production of passenger car tyres by 7%, due to the

cessation of production of obsolete products and reorientation of the product portfolio and production capacity for the brand Cordiant.

Along with the imports from Asia, global brands are starting to emerge in Russia through local production. Continental started production at Kaluga with an initial capacity of 4 million tyres per annum, whilst Bridgestone has announced the construction of a factory in Ulyanovsk region, which is scheduled for launch in 2016.

### **Methanol**

| Russian Methanol Production (unit-kilo tons) |            |            |
|--|------------|------------|
| Producer                                     | Jan-Nov 13 | Jan-Nov 12 |
| Shchekinoazot                                | 385.5      | 405.3      |
| Sibmetakhim                                  | 742.9      | 672.9      |
| Metafrax                                     | 924.5      | 938.5      |
| Akron  | 79.8       | 72.1       |
| Azot, Novomoskovsk                           | 275.1      | 274.3      |
| Angarsk Petrochemical                        | 2.7        | 20.5       |
| Azot, Nevinomyssk                            | 113.2      | 103.0      |
| Togliattiazot                                | 650.3      | 522.4      |
| Totals                                       | 3173.9     | 3009.0     |

## Russian methanol exports, Jan-Nov 2013

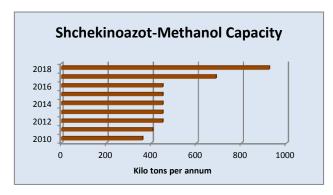
Russian methanol production totalled 3.174 million tons in January to November 2013, against 3.009 million tons in the same period for 2012. Significant increases were noted by Togliattiazot and Sibmetakhim, whilst Metafrax and Shchekinoazot both recorded marginal falls due to extended maintenance. From the total production of methanol in Russia around 20% is consumed captively, whilst exports and domestic market sales account for 40% each of the total volumes.

Russian methanol exports amounted to 117,000 tons in November, 16% up on October. Sibmetakhim, Metafrax and Shchekinoazot accounted for 74% of exports, with Finland taking 51% of shipments. Russian methanol producers exported

16,400 tons through the Odessa terminal in December, 52% more than in November. Deliveries were divided between Slovenia and Romania. Resumed production by Tomet at Togliattikaucuk allowed an increase through Odessa.

### Shchekinoazot-new methanol project

Shchekinoazot has selected Orgkhim at Severodonetsk in eastern Ukraine as the general designer of the combined methanol and ammonia project which was announced recently. Orgkhim is a specialist engineering



company with strong roots from the Soviet era and was previously involved in the construction of nearly all methanol plants in existence in Russia today.

Preliminary work has started on the new plants whilst options are also being explored for a new power plant, etc. From April this year work will begin preparing the site for construction. The total investment in the project is expected to total €270 million. Plant capacity will be 1.35 tons/day of methanol and 415 tons/day of ammonia. A completion date of mid-2017 has been scheduled.

#### **SDS Azot-melamine project**

SDS Azot at Kemerovo is planning to establish two production lines for porous ammonium nitrate and melamine. SDS plans to build a plant for producing 400,000 tpa of porous ammonium nitrate to be completed in 2015, but the melamine time scale has yet to be confirmed. The company is looking to construct a 25,000 tpa plant at an investment cost of around \$70 million.

The unit is to be located next to the urea plant, which is one of the necessary raw materials in the production of melamine. SDS acquired 100% of SIBUR-Fertilisers for \$1 billion at the end of 2011 and renamed Azot Kemerovo as SDS Azot. Gazprom Neftekhim Salavat has recently been considering the sale of its Meluez fertiliser assets in Bashkortostan to SDS Azot.

#### **Uralkhim-Stamicarbon**

Uralkhim has signed an agreement with the joint development of Stamicarbon for urea synthesis technology at Perm. The new technology will produce urea with higher quality with lower capital costs. Perm Fertilisers produce two main products: a liquid synthetic ammonia and urea prilled. Other assets belonging to Uralkhim include Azot at Berezniki, Voskresensk Fertilisers (Moscow region), and KCCW (Kirov region). The capacity of Uralkhim accounts for more than 2.5 million tpa of ammonium nitrate, 2.8 million tpa of ammonia, 0.8 million tons of MAP and DAP, 0.8 million tons of compound fertilisers and 1.2 million tons of urea.

Russian butanol exports totalled 125,200 tons in January to November 2013, 14% down on 2012. Normal butanols

accounted for 52% of export shipments. Butanol exports amounted to 5,700 tons in November, 58% less than in October. Isobutanol was the main export commodity in November, accounting for 83% of shipments.

## Russian plasticizer alcohols, Jan-Nov 2013

DOP production totalled 66,200 tons in January to November 2013, 4% down on 2012. Ural Plant of Plasticizers increased production of DOTF in November 4.7 times over October to 530 tons. Russian producers increased their export shipments of DOP by 20% in October over September to 131 tons. Roshalsky Plant of Plasticizers exported 88 tons, all directed to Ukraine, whilst the remaining 43 tons was

### **Organic Chemicals**

### Russian butanols, Jan-Nov 2013

Butanol production was down in 2013 against 2012, based on data from the first eleven months, with only Angarsk Petrochemical increasing volumes. Gazprom Neftekhim Salavat recorded the largest fall, largely due to the accident that took place at the end of May.

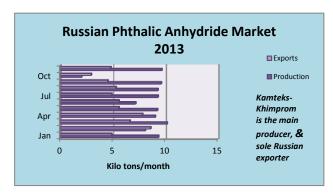
Russian companies produced 18,770 tons of butanols in November, 8% more than in October. Production totalled 192,900 tons in January to November 2013, 17% less than in 2012. Normal butanol accounted for 61% of total production. Reduced production in 2013 was due largely to the accident at Salavat in May, leaving one line inoperative. The second line should be working by the second quarter in 2014.

The largest consumer of butanols in November was Akrilat, which uses n-butanol as a raw material in the production of butyl acrylate and bought 1,940 tons (40% of Russia's total consumption). Dmitrievsky Chemical Plant produces butyl acetate through butanols but also supplies volumes for export on behalf of Gazprom Neftekhim Salavat. In November the company purchased 1,460 tons or 30% of total

domestic sales. Other consumers included Sredneuralsky smelter (300 tons, or 6% of total purchases), Volzhskiy Orgsintez (120 tons, or 2%), Kamenskvolokno (230 tons, or 5%) and plant Roshalsky Plant of Plasticizers (120

| Russian Butanol Prod      | uction (unit-l | (ilo tons) |  |
|---------------------------|----------------|------------|--|
| N-Butanol                 |                |            |  |
| Producer                  | Jan-Nov 13     | Jan-Nov 12 |  |
| Angarsk Petrochemical Co  | 23.5           | 21.1       |  |
| Evrokhim                  | 13.0           | 15.5       |  |
| Gazprom Neftekhim Salavat | 54.8           | 73.9       |  |
| SIBUR-Holding             | 23.2           | 23.4       |  |
| Total                     | 114.5          | 133.9      |  |
| Isobutanol                |                |            |  |
| Producer                  | Jan-Nov 13     | Jan-Nov 12 |  |
| Angarsk Petrochemical Co  | 12.6           | 11.1       |  |
| Gazprom Neftekhim Salavat | 26.1           | 30.9       |  |
| SIBUR-Holding             | 37.3           | 38.4       |  |
| Total                     | 76.0           | 80.3       |  |

exported by Kamteks-Khimprom to Uzbekistan. Roshalsky Plant of Plasticizers has launched a waste incinerator in order to eliminate waste emissions during the production of plasticizers. The company plans to expand production which would increase the amount of waste generated. The Roshalsky Plant of Plasticizers increased DOP production by 22% in January to September this year, to 20,500 tons. Throughout December, the Russian market for DOP remained stable. Prices for the Volga Federal District ranged 68,000-69,000 per ton including VAT. Product from Roshalsky Plant of Plasticizers was offered at 70,500-71,000 per ton including VAT.



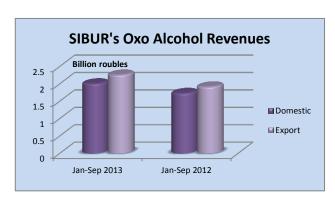
### Russian phthalic anhydride, Jan-Nov 2013

Exports of phthalic anhydride from Russia amounted to 4,800 tons in November, 63% more than in October. Kamteks-Khimprom undertook a shutdown in October accounting for the fall. Total exports of phthalic anhydride amounted to 61,500 tons in the period January to November 2013, 27% up on 2012. Production amounted to 92,600 tons in January-November 2013 against 86,000 tons in 2012.

#### SIBUR-oxo alcohols, Jan-Sep 2013

SIBUR's revenue from sales of oxo alcohols fell by

27.1% in the third quarter in 2013 to 1.060 billion roubles from 1.453 billion roubles in 2012. Sales volumes fell by 32.0% whilst production fell 37.6% due mostly to a maintenance shutdown at SIBUR-Khimprom at Perm in the third quarter. By contrast there were no shutdowns in the third quarter of 2012.



Overall for January to September 2013 revenue from sales of oxo alcohols declined by 3.1% to 4.257 billion roubles from 4.395 billion roubles in 2012. Sales volumes fell 7.8%, whilst domestic sales accounted for 47.2% of oxo alcohols revenues.

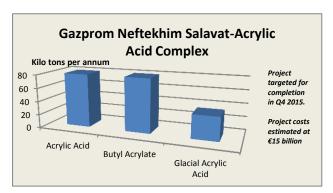
### SIBUR-acrylates, Jan-Sep 2013

SIBUR's revenue from sales of acrylates increased by 16.8% in July to September last year to 811 million roubles from 694 million roubles in the third quarter in 2012. Lower sales volumes were offset by higher average sales prices which rose 22%. Acrylate sales

volumes fell by 4.2% against a 2.7% drop in production, which was attributable to changes in the product mix in addition to inventory accumulation. SIBUR increased sales on the domestic market to 50.8% of total sales against 29% in the same period in 2012.

| SIBUR's Organic Chemical Production & Sales (unit-kilo tons) |            |            |
|--|------------|------------|
| Product  | Jan-Sep 13 | Jan-Sep 12 |
| Acrylates  | 32.4       | 32.0       |
| Oxo Alcohols   | 34.1       | 29.0       |

Over the period January to September 2013 revenue from acrylate sales decreased by 5.4% to 2.173 billion roubles from 2.297 billion roubles in 2012. This was on a 13.7% fall in sales volumes, which was partially mitigated by a 9.6% increase in the average price. Domestic sales accounted for 39.1% of total acrylate revenues in the first three quarters in 2013.



### Gazprom Neftekhim Salavat- acrylate project

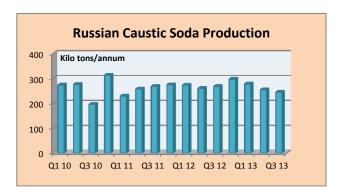
Gazprom Neftekhim Salavat started the foundations for the new complex for acrylic acid and acrylates in December, and is investing around 15 billion roubles in the production of acrylic acid and acrylates. The capacities of the new complex comprise 80,000 tpa of acrylic acid, 80,000 tpa of butyl acrylate (acrylic acid ester and butanol) and 35,000 tpa of glacial acrylic acid.

The new complex is planned to start in the fourth quarter in 2015. The rationale for the project

investment is to develop the vertical chain of production from oxo alcohols and propylene, and to reduce the

dependency on export activity. Whilst propylene production at Salavat is mostly utilised in oxo alcohol production and the surplus is quite small at present, ongoing cracker modernisation means that propylene availability should have increased sufficiently to cover the needs of the new acrylic acid plant. Gazprom Neftekhim Salavat has set up a new company Acryl Investments to manage the acrylates division. Acryl Investments will be registered in Cyprus, of which 100% is owned by Gazprom Neftekhim Salavat.

### **Chlorine**



RusVinyl to impact caustic market in 2014

Production of caustic soda in Russia in January-November decreased by 6% to 940,000 tons. At the same time, export shipments increased 1% up to 118,000 tons whilst imports rose 34% to 37,000 tons. The Russian Union of Chemists (PCX) considers it necessary to apply financial measures of state exporters for caustic soda. Russian caustic soda imports comprise around 100,000 tpa.

Sayanskkhimplast recently completed an expansion of its caustic soda capacity and to date is the sole Russian

producer to use membrane method. The addition of the RusVinyl plant this year is expected to have a major effect on the Russian market.

#### **KZSK-Silicon**

KZSK Silicon has started the construction of the first plant in Tatarstan in Russia and the CIS chemical plant for the production of organo-silicon materials. The project will cost more than 7 billion roubles. The company has received all necessary licenses and purchased equipment, investing in the project to date 1.65 billion roubles. Negotiations are underway with Vnesheconombank and Sberbank for another Should construction go to 5.7 billion roubles. schedule the plant will be operational in late 2015.

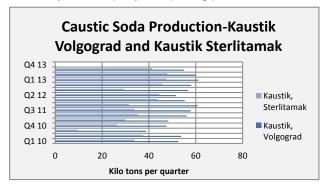
Methylchlorosilane is used as a chemical component in a large number of industries. Russia currently imports all of its requirements, rated at around 50,000 tpa at present. KZSK Silicon has reached a preliminary agreement with Russian and foreign consumers regarding sales of methylchlorosilane for the production of tyres, electrical cables, silicone insulators, and pharmaceutical plants. company has stated that the price of the products will not be higher than Chinese competitors and the quality similar to European producers.

Production fell slightly in 2013 due to the closure of SIBUR-Neftekhim's Dzerzhinsk plant. The decision to close the plant, as from 5 April 2013, was taken due to obsolete and outdated equipment on the one hand and the pending completion of the RusVinyl project at Kstovo on the other hand. RusVinyl expects to start production of caustic soda at Kstovo, from its new plant with a capacity of 235,000 tpa of caustic soda. The company has already signed a long term agreement with Russolo and Belaruskali for the supply of salt. Russian caustic soda production has changed little in the past decade with no new capacity aside some minor modernisation.

#### Kaustik Sterlitamak, limestone supply

Kaustik at Sterlitamak could be facing supply side problems relating to limestone and brine unless measures are taken. Until now the company's chlorine production has been based on the resource base of the Shahtau Mountain near Sterlitamak in Bashkortostan. Reserves of limestone at this traditional base may only last a few more years.

The Tratau Mountain near Sterlitamak, for example, is protected from exploitation under endemism even though it contains the resources to keep Kaustik alive. Other resources are being examined, but nothing to date has been discovered and Kaustik is pressing the republican and federal governments to remove restrictions from Tratau. Kaustik has even gone as far to suggest that closure could be a distinct possibility if new resources are not found. Currently the company is exploring potential reserves 80-100 km from the plant.



### Kaustik Volgograd buys stake in energy company

Kaustik at Volgograd (part of Nikokhim) bought a 29.5% stake in local energy company Volgogradenergosbyt in December. The stake became available through LUKoil and Kaustik decided to take the opportunity to create a blocking stake for the energy company. Kaustik started a project to upgrade the chlorine plant at Volgograd which is based on mercury.

The medium-term development plans for Kaustik

| Belarussian Chemical Output (unit-kilo tons) |            |            |
|--|------------|------------|
| Fertilisers                                  | Jan-Nov 13 | Jan-Nov 12 |
| Potassium Fertilisers                        | 3917.7     | 4562.5     |
| Nitrogen Fertilisers                         | 755.8      | 739.5      |
| Phosphate Fertilisers                        | 279.7      | 277.0      |
| Ammonia                                      | 931.1      | 917.9      |
| Sulphuric Acid                               | 832.2      | 632.0      |
| Petrochemicals                               | Jan-Nov 13 | Jan-Nov 12 |
| Ethylene                                     | 209.0      | 215.4      |
| Benzene                                      | 119.4      | 119.0      |
| Caprolactam                                  | 109.6      | 109.3      |
| Phthalic Anhydride                           | 0.0        | 11.0       |
| Polyethylene                                 | 124.5      | 128.5      |
| PET  | 160.7      | 177.4      |

provides for further implementation of energy efficiency programmes, and efforts to reduce energy consumption. The long-term programme of development provides for the establishment of industrial site at Kaustik for a multi-chemical industrial park. The concept of industrial park involves various new industries whereby synergistic effects will be yielded from the existing infrastructure, thus reducing the cost of its maintenance for each participant in the industrial park.

### **Belarus**

#### Belarussian polymer imports

Belarussian imports of polypropylene decreased by 5.1% in the first ten months of 2013 to 67,200 tons from 70,900 tons. Total imports of homopolymer to Belarus in the ten months decreased

to 50,000 tons, from 52,800 tons in 2012. Russian homopolymer polypropylene imports amounted to 26,700 tons in January to October last year. The second and third largest importers were from Poland and Germany with 5,600 tons and 4,600 tons respectively. Imports of propylene copolymers to Belarus increased to 18,300 tons in the first ten months of 2013, compared with 18,000 tons in 2012. The main import source of propylene copolymers to Belarus was Germany with 12,600 tons in the first ten months of the year.

Imports of PVC into the Belarusian market grew by 15.8% over the first ten months of 2013. PVC imports totalled 38,000 tons from January to October, against 32,900 tons in the same period in 2012. This significant increase in demand for PVC was helped by strong demand from major producers of window profiles and window sills. Ineos

| Azot Grodno Production (unit-kilo tons) |            |            |
|---|------------|------------|
| Product                                 | Jan-Nov 13 | Jan-Nov 12 |
| Methanol                                | 64.7       | 69.1       |
| Caprolactam                             | 116.5      | 109.3      |
| Polyamide primary                       | 67.9       | 47.6       |
| Polyamide filled                        | 9.5        | 9.6        |
| Ammonia                                 | 931.0      | 919.4      |
| Urea                                    | 871.7      | 859.2      |
| Fertilisers                             | 688.2      | 676.8      |

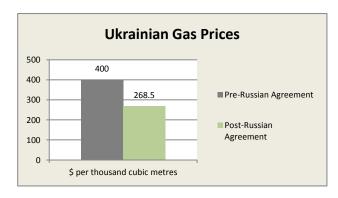
is the main PVC supplier to Belarus with a share of about 50% in the total imports. The second largest importer is the Polish producer Anwil with a share of around 30%.

#### Azot Grodno, possible takeover by Evrokhim

Azot at Grodno increased caprolactam and polyamide-6 production in 2013 following modernisation in 2012. According to Belarussian reports Evrokhim is now closer in negotiations on the purchase of shares in Azot Grodno than Gazprom. Azot wants to start a new production line for ammonia, methanol, hydrogen and urea based on Russian raw materials, mainly gas. The plant consumes

approximately 2 billion cubic metres of gas per annum.

#### Ukraine



#### Ukrainian gas prices

Following the recent agreements between Ukraine and Russia the price of gas to Ukrainian chemical companies was reduced by around a third allowing the restart of the idle fertiliser plants. Gazprom and Naftogaz signed a contract addendum from 2009, which reduces the price of Russian gas for Ukraine from \$400 to \$268.5 per thousand cubic metres.

The major fertiliser producers in Ukraine suspended production in September due to poor economics. The agreement with Russia could save Ukraine around \$7

billion in one calendar year. Azot at Cherkassy resumed the production of urea and ammonia in December after a long stoppage. During the downtime the company increased capacity for urea from 1,110 tons to 1,130 tons per day. Azot at Severodonetsk is also in the process of restarting ammonia facilities.

Due to the economic difficulties facing fertiliser producers in the autumn ammonia production dropped in November 2013 by 55.4% against November 2012 to 202,000 tons. Production totalled 4.015 million tons for the period January to November, 11.2% down on 2012.

#### Ukrainian benzene market

Ukrainian benzene exports amounted to 9,000 tons in November, 1.9 times more than in October. Shipments increased partly due to the opening of new markets, such as Singapore and Gibraltar. The Kremenchug refinery exported 7,000 tons, 2.9 times more than in October. Zaporozhkoks exported 1,900 tons in November, 30% more than in October. Ukrainian exports of benzene in the period January to November 2013 totalled 52,300 tons which is 6% up on 2013.

Domestic benzene purchases for synthesis and nitration rose 1.9 times in November to 13,400 tons. In addition to the increase by Ukrtatnafta at Kremenchug Yasinovsky Coke Plant increased benzene production by 1.8 times to 2,800 tons, and Zarya at Rubezhnoye increased by 29% to 2,200 tons. Ukrainian benzene production totalled 91,900 tons in January to November 2013, 20% up on 2012.

### Ukrainian plasticizer alcohols

Ukrainian imports of phthalic anhydride totalled 8,230 tons in the period January to November 2013, 8% up on 2012. Kamteks-Khimprom was the main importer from Russia, followed by Lakokraska in Belarus and Orgachim in Bulgaria. The largest buyers of imported phthalic include trading company Impress, producers of plasticizers Lizinvest and Polikem as well as manufacturers of paints and varnishes Impulse and Color SIM.

The introduction of the import duty on European DOP supplies affected the market detrimentally, with consumption down 7% in 2013 against 2012. At the same time the consumption of DINP has risen 9% to 5,400 tons, based on the first eleven months in 2013. DINP is imported duty free and the difference in the prices of DOP and DINP reduced to the degree that some processors have found DINP more profitable.

#### **Ukrainian Chemical Production (unit-kilo tons)** Product Jan-Nov 13 Jan-Nov 12 Acetic Acid 89.1 132.6 Adipic Acid 0.0 13.0 Ammonia 4015.0 4476.0 Caprolactam 22.8 25.2 Carbon Black 48.1 44.4 Caustic Soda 46.0 124.2 Ethylene 10.0 128.2 Methanol 128.2 164.9 Polyethylene 0.0 54.7 Polypropylene 25.5 0.0 Polystyrene 12.5 17.2 PVC 5.0 115.1 Propylene 55.2 6.1 Soda Ash 488.8 598.5 Titanium Dioxide 136.293 136.1 Urea 2293.8 2598.1 Total 4765.8 6511.5

### **Ukrainian base chemistry**

The Cabinet of Ministers of Ukraine has approved conditions of sale of state shares of Sumyhimprom, which are now expected to be transferred to the DF Group. Sumyhimprom specialises in the production of titanium dioxide, sulphuric acid, yellow and red iron oxide pigments.

SoyuzEnergo has delivered equipment to Crimean Soda, which is owned by the DF Group, for improving power regeneration. The gas turbine Siemens SGT-400 possesses a capacity of 14.4 MW. Crimean Soda is located in the north of the Crimean peninsula of Krasnoperekopsk. The plant started in 1973 and possesses a design capacity of 698,000 tpa, comprising around 2.5% of the world market.

Kremenchug Carbon Black Plant (KZTU) produced 48,067 tons of carbon black in the period January to November 2013, 13.2% down on 2012. Full year production for 2012 was 60,023 tons, 2.3% over 2011.

#### **Ukrainian polymer imports, Jan-Nov 2013**

Imports of PVC into Ukraine increased by 50% in January-November 2013 to 87,000 tons. US producers remained the main suppliers of PVC to Ukraine. PVC supplies from Europe totalled slightly over 60,000 tons in the eleven months of the year, while in the same period of 2012 this figure was 53,300 tons. The key suppliers of resin are producers from Hungary and Poland, namely BorsodChem and Anwil. Karpatneftekhim resumed its PVC production on 7 November after a long outage which will erode some of the import activity. The plant at Kalush produced 7,200 tons in November.

Last year Russian producers accounted for 26.4% of Ukrainian purchases of HDPE in the first three quarters in 2013. Kazanorgsintez shipped 21,800 tons in January to September 2013 which was 8.3% against the same period last year. SABIC is the largest importer into Ukraine, followed by TVK.

Imports of polycarbonate into Ukraine rose in January-November 2013 by 17% to 4,000 tons. The structure of polycarbonate imports consists of three main groups, including injection moulding grades (79%), blow moulding grades (15%) and extrusion grades (6%). Imports of polycarbonate for injection moulding totalled 3,100 tons in January to November 2013, 15% up on 2012.

Imports of expandable polystyrene (EPS) into Ukraine fell by 8.5% in January-November 2013 and totalled 23,000 tons. SIBUR-Khimprom is still the largest EPS supplier to the Ukrainian domestic market. The overall Russian EPS imports to Ukraine totalled 20,500 tons over the eleven months of the year. EPS imports from Russia grew by 7,000 tons, thereby substantially displacing the Chinese and European suppliers.

Imports of polypropylene into Ukraine rose 20% in January to November 2013 to 121,800 tons from 104,400 tons in 2012. Producers from Saudi Arabia, India and Russia accounted for the main increase in imports. Homopolymer polypropylene imports rose from 70,200 tons in January to November 2012 to 92,500 tons in the

same period in 2013. Imports from Russia increased to 13,300 tons from 1,500 tons in 2012, while imports from India and Saudi Arabia grew to 6,000 tons and 28,000 tons respectively from 3,000 tons and 18,700 tons in 2012.

Imports of PET into Ukraine totalled 149,000 tons in the period January to November 2013, almost the same as in 2012. China provided around one third of all imports shipments. The most popular grade in the PET chips market has remained CR-8816 grade produced by the Chinese manufacturer China Resources Chemicals. The overall imports of this grade into Ukraine amounted to 29,000 tons over the eleven months of the year.

#### Caucasus-Central Asia

#### Rosneft-Pirelli, styrene butadiene project

Rosneft and Pirelli have signed several agreements on expanding cooperation, including a memorandum on establishing a joint venture for the production of styrene-butadiene rubber in Armenia. Rosneft and Pirelli have examined Nairit thoroughly; the plant was stopped in 2010 due to falling profitability. In the 1980s Nairit held 10-12% of the world market of chloroprene rubber, but has been on the verge of bankruptcy. Its debt of around \$120-130 million was accrued following the rise in gas prices from \$54 to \$180 per 1,000 cubic metres several years ago.

The prospects for Nairit appear more promising after Russia and Armenia signed an intergovernmental agreement on the abolition of export duties on oil supplied to Armenia, oil and gas. Russia has now agreed to supply natural gas to Armenia at \$189 per thousand cubic metres.

#### Azerbaijan chemical production rises in 2013

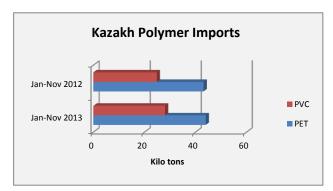
By revenue the chemical sector in Azerbaijan rose 19.9% in the period January to November 2013 over 2012. Azerkhimya increased production of propylene in November over October by 40% to 4,300 tons. Azerkhimya used 1,400 tons captively. Production for the period January to November 2013 totalled 35,600 tons, and 22,800 tons of C4s.

hydrochloric acid and 6,600 tpa of sodium hypochlorite. 90,000 tpa.

#### Kazatomprom acquires 40% of Kaustik

Kazakhstan National Atomic Company Kazatomprom has completed the acquisition of 40% of Kaustik at Pavlodar. The other owners of the caustic soda producer are TOO Tsentrstroyenergo (50%) and CAFEC (10%). The acquisition of shares in Kaustik was carried out within the framework of formation of the chemical cluster in the free economic zone of Pavlodar. Kazatomprom wants to secure supply of caustic soda and hydrogen peroxide used in the mining and processing of uranium and chlorine for the production of rare metals and chemicals.

Participation of Kazatomprom in Kaustik will not only enhance the economic efficiency of enterprises and Kazatomprom expand the product line. Kaustik was founded in 2002 on the basis of the Pavlodar Chemical Plant. In 2011 thanks to funding from the Pavlodar Development Bank of Kazakhstan and Eximbank Kazakhstan a plant was launched produce caustic soda using the membrane method. Currently the capacity is small at 30,000 tpa of caustic soda, 26,000 tpa of liquid chlorine, 45,000 tpa of Kaustik's aim is to increase caustic soda capacity to



### Kazakh polymer imports, Jan-Nov 2013

Imports of PET to Kazakhstan increased by 2% in January to November 2013, compared to 2012. Total imports of PET to Kazakhstan comprised 44,900 tons. Kazakh importers increased purchases of Chinese PET, having reduced purchases from South Korea. Total imports of Chinese PET chips to Kazakhstan increased by 6,100 tons to 31,500 tons in January-September 2013. Imports of Korean PET chips decreased by 3,900 tons to 10,300 tons in January-September 2013.

Imports of PVC into Kazakhstan increased by 13% over tops in January to November 2013 against 24 800 tops in

the first eleven months of 2013. Imports totalled 28,000 tons in January to November 2013 against 24,800 tons in 2012. Domestic producers of pipes and window profiles ensured stronger demand for PVC in 2013. Chinese producers are the key PVC suppliers with the overall share in the total imports of over 95%.

### Relevant Currencies

Czech crown. Kc. \$1=20.753. €1=25.833: Hungarian Forint. Ft. \$1=229.448. €1=288.154: Polish zloty. zl. \$1=3.414. €1=4.280: Bulgarian leva: \$1=1.5956. €1=1.557: Romanian Lei. \$1=3.555. €1=4.463: Croatian Kuna HRK. \$1=5.998. €1=7.530: Ukrainian hryvnia. \$1=8.07. €1=10.140: Rus rouble. \$1=33.192. €1=41.867

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