

# CIREC

## MONTHLY NEWS

Chemical Industry News for Central Europe, South East Europe and Eurasia

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Czech Republic | Slovakia | Hungary | Poland | Bulgaria | Romania | Croatia | Slovenia | Yugoslavia | Baltic States | Russia | Belarus | Ukraine | Transcaucasus | Central Asia | Kazakhstan

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- **PCC EXOL STARTING NEW RANGE OF SURFACTANTS**
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### RUSSIA

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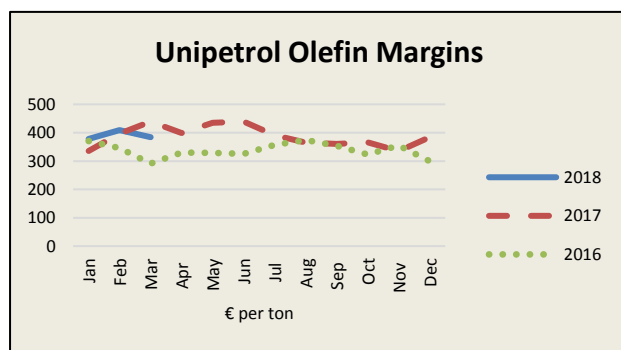
### OTHER COUNTRIES

- **BELARUSSIAN METHANOL CONSUMPTION CONTINUES TO RISE IN 201/8**
- **SOCAR POLYMER TO START NEW POLYPROPYLENE PLANT IN Q2 2018 & POLYETHYLENE IN Q3**
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- **BOREALIS SIGNS AGREEMENT FOR POLYOLEFIN INVESTMENTS IN KAZAKHSTAN**

## CENTRAL & SOUTH-EAST EUROPE

### PKN Orlen-Lotos merger due diligence

PKN Orlen has started a due diligence study for its proposed merger with Grupa Lotos, two months after signing the letter of intent. The Treasury owns 53.19% of the Gdansk concern, and the synergy potential of merging the two main refining groups in Poland is estimated to be hugely significant. In 2017 Grupa Lotos achieved a net profit of zł 1.7 billion, up 65% over 2016 and based on revenues of zł 24 billion. In 2017, the Lotos refinery processed 9.6 million tons of crude oil compared with 10.4 million tons in 2016. The fall was attributable to a scheduled six-week long maintenance shutdown.



ton in Q1 2018 were only 0.3% down against the last and fourth quarter, they were 12.2% against the first quarter in 2017. Refining margins for Unipetrol dropped 40.9% in the first quarter against the fourth quarter last year to \$2.6 per barrel.

For the first time in 2017, the Lotos refinery processed crude oil sourced from Canada and the US and the share of non-traditional feedstock supply sources was close to 22%. In late 2017, Grupa Lotos became the first Polish refiner to sign a forward contract for US crude supplies.

### Central European petrochemical margins, Q1 2018

Unipetrol reported a decline in model margins for the first quarter in 2018. Whilst gross petrochemical margins that amounted to €724 per

ton in Q1 2018 were only 0.3% down against the last and fourth quarter, they were 12.2% against the first quarter in 2017. Refining margins for Unipetrol dropped 40.9% in the first quarter against the fourth quarter last year to \$2.6 per barrel.

The model refining margin of PKN Orlen in March 2018 amounted to \$4.3 per barrel vs \$4.1 in February. The Orlen petrochemical margin increased to €908 per ton in March from €925 in February, resulting in average margin of €902 against €930 in the same period in 2017. The model downstream margin increased to €12.10 per barrel in the first quarter in 2017 from €11.40 in the same period in 2017. Regarding Lotos, where merger possibilities with Orlen are being considered, the model refining margin amounted to \$6.8 per barrel in the first quarter this year against \$7.34 in the same period in 2017.

### Spolana-new heat plant

Spolana has signed a contract with ČEZ Energetické služby and Envir & Power Ostrava for the construction of a new heat and power plant. This will supply the Neratovice plant with steam. Construction is expected to start in the second quarter in 2018 and its scheduled completion has been set for 2019. The cost of the investment is zł 200 million and is in line with the company's medium-term strategy of the complete modernisation of production.

The new, gas-fired boiler will replace the brown coal heating plant and will meet the emission limits in 2019, which will come into force only in 2020. Unipetrol has re-emphasized that its acquisition of Spolana helps to support the group achieving its strategic aims and adding shareholder value. Unipetrol has been criticized by minority shareholders for taking on Spolana.

### Unipetrol repairs at Litvinov & explosion at Kralupy

Unipetrol undertook repair works on 29 March on the partial oxidation unit at the Litvinov refinery. This took about two weeks to complete and affected production marginally. The Litvinov complex includes capacities for ethylene at 545,000 tpa, together with capacities for HDPE at 320,000 tpa and polypropylene at 275,000 tpa.

The explosion suffered at the Kralupy refinery on 22 March, which took six lives, represents the negative event for Unipetrol in the first quarter and for 2018. The group had already planned a scheduled outage at its Kralupy refinery for 27 March, to last until 9 May, but extra maintenance and investment is now required and the outage could last until 15 May.

### LNG terminal Swinoujscie

PGNiG and Grupa Lotos signed a framework agreement on 19 April for the commercial terms for bunkering (refuelling) of liquefied natural gas (LNG) ships from the Gas Terminal at Swinoujscie. Since the launch of the LNG terminal at Swinoujscie, US, Qatar and Norway have become gas suppliers to the Polish market. Imports of Russian gas to Poland are decreasing whilst LNG supplies are increasing.



Currently, the quality of LNG delivered to the nearest installations of Grupa Azoty meets the desired reception parameters. The terminal has a capacity of 5 billion cubic metres per annum. The Polish authorities are considering expansion of the terminal, together with the project of building a Baltic Pipe gas pipeline to Norway with a capacity of up to 10 billion cubic metres per annum. The current contract for Russian gas will finish after 2022, under which Poland now imports about 12 billion cubic metres of gas per annum.

The four main plants of the Group: Kędzierzyn, Police, Puławy and Tarnow consume annually over 2 billion m<sup>3</sup> of natural gas. Although PGiNG remains the largest supplier, which sources gas from Russia, LNG may provide a future alternative for the Azoty group and particularly for the Police plant in the north.

### Czech chemical trade Jan-Feb 2018

Ethylene exports from Unipetrol totalled 19,300 tons in the first two months in 2018 from 6,500 tons in the same period in 2017. Almost all of the ethylene this year was shipped to Bohlen in Germany. Propylene exports were unchanged in the first two months at 3,100 tons, whilst imports of propylene rose from 7,400 tons in January to February 2017 to 9,800 tons in the same period this year. Germany provided 6,328 tons to the Czech Republic in the first two months followed by Slovakia with 1,504 tons and Ukraine 1,262 tons.

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Feb 18	Jan-Feb 17
Ethylene	19.3	6.5
Propylene	3.1	3.1
Butadiene	0.2	0.7
Benzene	3.8	5.0
Toluene	2.5	2.8
Ethylbenzene	22.8	20.9

Benzene imports into the Czech Republic rose to 15,411 tons in the first two months in 2018 from 14,749 tons in the same period last year. Benzene imports are largely sourced from Poland whilst Czech ethylbenzene exports are shipped in the opposite direction, moving mostly from Kralupy to Osweicim. Ethylbenzene exports from the Czech Republic amounted to 22,800 tons in the first two months versus 20,700 tons in the same period in 2017.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Feb 18	Jan-Feb 17
Caustic Soda Liquid	63.7	57.1
Caustic Soda Solid	10.6	13.4
Ethylene	91.7	78.5
Propylene	62.8	55.6
Butadiene	9.7	8.6
Toluene	3.2	3.8
Phenol	8.2	7.1
Caprolactam	28.4	28.2
Acetic Acid	0.6	2.8
Polyethylene	65.7	53.9
Polystyrene	12.0	8.4
EPS	9.9	10.9
PVC	47.4	48.4
Polypropylene	53.4	43.5
Synthetic Rubber	48.2	41.4
Pesticides	8.4	8.4
Nitric Acid	447.0	410.0
Nitrogen Fertilisers	358.0	353.0

Chemical exports from the Czech Republic comprise ethylbenzene, caprolactam, plasticizers, plasticizer alcohols, etc, whilst imports cover products such as benzene, methanol, oxo alcohols, glycols and TDI. Methanol imports, usually supplied mainly from Germany and Russia, totalled 15,437 tons in January and February 2018 against 17,658 tons in the same period in 2017.

Exports of phthalic anhydride from the Czech Republic totalled 2,786 tons in the first two months in 2017 against 2,935 tons in the same period in 2018. Deza at Valasske Mezirici produces coal based aromatics in addition to phthalic anhydride and plasticizers. Although DOP exports made a revival in 2017, rising to 9,600 tons against zero in 2016, DINP is far more important these days rising to 35,900 tons in 2017 against 30,800 tons in 2016. In the first two months in 2018 Czech exports of DINP amounted to 6,741 tons versus 6,265 tons in the same period in 2017.

#### Synthomer-acrylic acid planned outage

Synthomer at Sokolov started a shutdown at its acrylic acid plant in mid-April to last for three to four weeks. The capacity of the plant is 55,000 tpa.

#### Grupa Azoty-chemicals division 2017

In the chemicals segment, Grupa Azoty's EBITDA increased by zł 43 million in 2017 to zł 348 million. Sales increased by zł 350 million to zł 2.79 billion. The growth was mainly due to the margins generated in the pigment business and the oxo segment as well as the active policy of allocating urea to derivative products, with higher sales profitability as AdBlue and NOX. The pigment division recorded a nearly 2.5-fold increase in EBITDA margin, which amounted to 25%.

amounted to zł 1.187 billion, while profit adjusted for one-off events amounted to zł 1.262 billion.

#### Consolidation benefits for Grupa Azoty over 7 years

Over zł 700 million of benefits have been estimated over a seven year period by Grupa Azoty to have derived from the consolidation of companies at Tarnów, Puławy, Police and Kedzierzyn. Advantages include paying lower prices through centralising the purchase process, with the Puławy plant reaping the largest gains from this process. Synergies in production and repairs also allowed for additional financial effects in the amount of zł 170 million. The largest beneficiaries of these activities were plants in Tarnów and Police. Both companies had over 30% share in savings in this area.

In other areas of consolidation such as logistics, wagon fleet optimisation, fleet management, or consolidation of siding companies allowed for additional additional zł 69 million at the level of the Capital Group. Almost half of the logistical benefits were yielded by the Tarnow plants.

banks is expected to take place at the end of 2019. Polimery Police is a production complex that consists of installations for the production of propylene and polypropylene, a port with a base of raw material reservoirs and auxiliary and logistic infrastructure. The value of Polimery Police's investment has been estimated at about zł 5 billion.

#### PCC Rokita-Thailand & Malaysia

PCC Rokita has approved the acquisition of more shares in IRPC Polyol Company in Bangkok, a producer of polyurethane systems and polyols. PCC Rokita currently has already 25% of shares and is to raise it shareholding to 50% of shares the company. IRPC is a producer of polyurethane systems and polyols and will give PCC Rokita an extra 5,000 tpa in polyol capacity.

Elpis, a subsidiary of PCC Exol and PCC Rokita, has bought 100% shares of PCC Oxyalkylates Malaysia. The acquisition of shares in PCC Oxyalkylates Malaysia is related to the agreement concluded in 2017 between Elpis and Petronas Chemicals Group Berhad (PCG). Under the agreement, Elpis and Petronas Chemicals Group have partnered to carry out a project related to the start of preparations for the potential oxyalkylated investment at Kertih, Terengganu in Malaysia.

higher by 56% and profit EBITDA increased by 19% compared to the same period in 2016.

In terms of raw materials for PCC Exol, a key feedstock ethylene oxide is supplied by Orlen. Purchases of fatty alcohols in 2017 were carried out on the basis of short-term contracts mainly from South-East Asia and from West Europe. Much of the surfactants produced by PCC Exol are produced on the basis of natural fatty alcohols, which are derivatives of palm kernel oil, palm oil or coconut oil.

#### Grupa Azoty 2017 performance

Grupa Azoty's revenue breakdown in 2017 was led by fertilisers which accounted for 52% of total sales, followed by chemicals with 29% and plastics 15%. Grupa Azoty's net profit in 2017 totalled zł 489 million, and revenues exceeded zł 9.6 billion, 25% up on 2016. The company was forced to make write-offs in connection with the sulphur division Siarkopol and the phosphorous investment in Senegal. The company also reported that EBITDA

#### PDH Polska-capital increase

Regarding the PDH Polska investment the share capital was increased in April from zł 180 million to zł 304 million. The remaining amount of the share capital will be paid by the shareholders of PDH Polska until September 2018. For the investment into Polimery Police, for the construction of the polypropylene plant,

Grupa Azoty estimates that there are around 30 banks and institutions interested in financing. However, the selection of the contractor is a bottleneck as it is the most complicated process, whilst financing the investment remains a secondary concern.

The selection of the general contractor and

#### PCC Exol expansions

PCC Exol's investment plan for 2018-2020 includes projects with a total value of approximately zł 93 million. Currently, the most important investment is the ethoxylate I plant, which will increase production capacity by 15,000 tpa and introduce new technologically advanced products. The completion of the investment is planned for 2020.

PCC Exol reported a consolidated net profit of zł 18.22 million in 2017 against zł 21.47 million profit in 2016. Operating profit amounted to zł 30.18 million in 2017 versus zł 29.25 million in 2016. Consolidated sales revenues reached zł 625.35 million in 2017 against zł 539.79 million a year earlier. The EBIT result was



## RUSSIA

### Russian chemical trade & production 2018

The value of Russian chemical imports increased in the first quarter this year to \$9.328 billion against \$7.838 billion in the same period in 2017. All product categories showed rising cost trends in the first quarter. Isocyanate and epoxy resin import costs rose sharply in the three months due to higher raw material prices, thus limiting physical volumes. A stronger rouble in the first quarter helped drive higher value imports, although for the second quarter purchasing ability may be restricted by the weakened currency.

Russian Chemical Imports by value (\$ million)		
Product Group	Jan-Mar 18	Jan-Mar 17
Organic & inorganic chemicals	1,383.9	1,043.4
Pharmaceuticals	2,505.9	2,295.8
Cosmetics	746.2	654.9
Soap and detergents	328.5	267.8
Polymers and Rubber	2,821.4	2,275.8
Others	1,541.8	1,300.7
Total	9,327.7	7,838.4

In response to new sanctions on Russia, the State Duma has been considering banning the import of pharmaceuticals from the US and Europe. Apart from affecting Russian patients directly this would reduce the Russian trade deficit in chemical products.

Regarding chemical production in the first two months in 2018 most main products saw comparable volumes to the same period in 2017.

The Russian Ministry of Economic Development recorded a 6% growth rate in the chemical industry in February after 4.1% in January. Processing of chemicals rose by an estimated 1.9% in February.

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Feb 18	Jan-Feb 17
Caustic Soda	217.0	197.9
Soda Ash	570.0	541.0
Ethylene	519.0	505.0
Propylene	395.0	302.0
Benzene	259.0	247.0
Xylenes	96.0	97.9
Styrene	120.2	118.5
Phenol	31.8	32.7
Ammonia	3,100.0	2,600.0
Nitrogen Fertilisers	1,913.0	1,629.0
Phosphate Fertilisers	666.0	533.0
Potash Fertilisers	1,367.0	1,384.0
Plastics in Bulk	1,326.0	1,267.0
Polyethylene	362.0	339.0
Polystyrene	89.8	81.1
PVC	171.0	156.9
Polypropylene	261.0	246.0
Polyamide	28.5	24.7
Synthetic Rubber	282.0	292.0
Synthetic Fibres	26.2	24.9

Russian bulk plastics production rose in the first two months from 1.267 million tons in 2017 to 1.367 million tons, whilst ethylene production rose from 505,000 tons to 519,000 tons and propylene rose by more than 20% to 395,000 tons.

In regard to polymer demand, Russian polyethylene consumption was relatively stagnant in 2017 whilst PVC and polypropylene show some signs of minor growth. Domestic demand for synthetic rubber has been helped by higher tyre production. Consumption of organic chemicals has been boosted by rises in production in the paints industry.

### Russian petrochemical producers 2017

Russian petrochemical producers reported lower profits in 2017 than 2016, but for the most part were able to reduce outstanding debts and to maintain sound operational activity. Investments represent a much harder challenge for Russian petrochemical producers, and further international sanctions on Russia only help to complicate project plans.

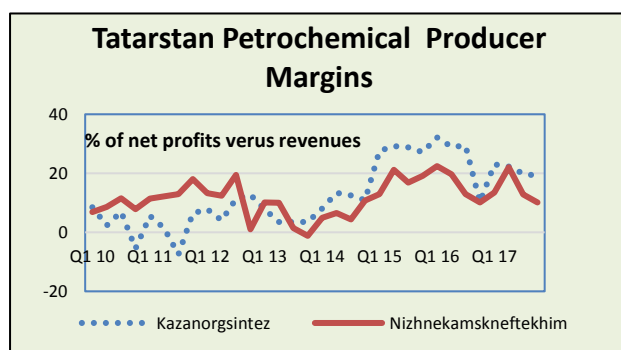
Nizhnekamskneftekhim, Kazanorgsintez, and Ufaorgsintez all showed good results in 2017 but lower profits than in 2016. SIBUR managed to increase its net profit in 2017 due in part to the sale of Uralorgsintez and favourable pricing for LPGs and synthetic rubber. SIBUR is the largest petrochemical producer in Russia, although around half of its revenues are derived from the energy and fuel sector.

### Port shipments during World Cup

According to Russian media reports, the transshipment of dangerous goods to ports of the regions where the World Cup matches will be staged will be stopped for the duration of the championship. Notifications have been sent to the relevant ports stating that from May 25 to July 25 the transshipment of dangerous goods of "all classes" will be suspended.

Rosneft reduced revenues from sales of petrochemical products by 30% in 2017, after the volume of sales fell by 20%. Ufaorgsintez reduced its net profit by 7% in 2017 to 5.4 billion roubles from 5.82 billion, after revenues dropped 5.5%

to 27.63 billion roubles. Domestic sales for Ufaorgsintez dropped 3.7% to 21.62 billion roubles, whilst export revenues fell by 10.5% to 5.77 billion roubles. The cost of sales for 2017 increased from 21.24 to 22.07 billion roubles, and combined with the lower revenues resulted in a 30.5% drop in gross profits to 5.55 billion roubles, down 30.5%. The sales profit amounted to 3.38 billion roubles against 5.79 billion roubles in 2016.



The net profit for Kazanorgsintez amounted to 15.2 billion roubles in 2017, 16% lower or 2.9 billion roubles than in 2016. Kazanorgsintez increased physical production by 1.7% in 2017 although revenue decreased mainly due to lower prices for plastics and dropped by 3.4 billion roubles to 72 billion roubles thus reducing the amount of tax payments.

Production of HDPE at Kazanorgsintez increased by 4% in 2017, whilst the output of polycarbonate decreased due to major repairs. In other product

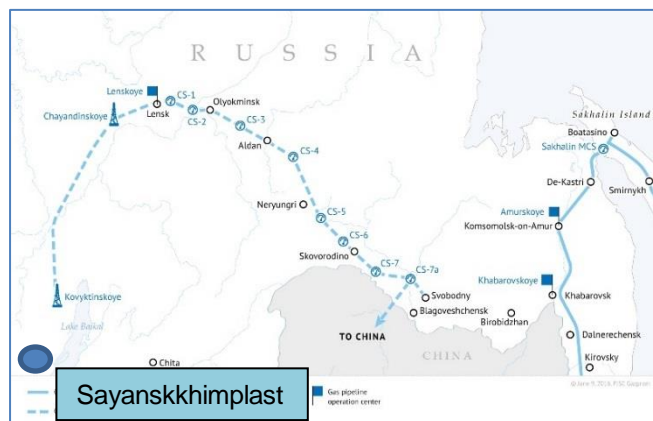
areas Kazanorgsintez increased the production of ethanolamines in 2017 due to increased demand, whilst the production of butyl cellosolve and demulsifiers fell.

Nizhnekamskneftekhim reduced its net profit 5.4% in 2017, despite the company's revenue increased by 5.65%. The company achieved revenues of 162.1 billion roubles in 2017 versus 153.4 billion roubles in 2016. Domestic sales were unchanged at 80.8 billion roubles, whilst revenues from sales of products to Europe increased by 20% to 51 billion roubles. The revenue from sales in Asia fell from 20.69 billion roubles to 18.96 billion roubles in 2017 to 2016. The cost of sales for Nizhnekamskneftekhim increased by 13.2% in 2017 to 132.5 billion roubles. As a result of higher costs, the company's sales profit decreased 39% to 13.6 billion roubles and net profit fell to 23.7 billion roubles.

## Russian petrochemical projects

### Power of Siberia-Kovytk & Sayanskkhimplast

Gazprom plans to begin shipping gas supplies from the Kovytk gas condensate field to the Power of Siberia gas pipeline at the end of 2022. Gazprom is currently preparing the Kovytk field for the transfer from pilot production to industrial operation.



The significance of the Kovytk field in relation to petrochemicals is the capability to provide feedstocks for a gas-chemical complex at Sayansk in the Irkutsk Oblast. Gazprom and the government of the Irkutsk region, where the Kovytk field is located, are discussing the possibility of organising the supply of raw materials from the Kovytk gas condensate field to a gas chemical cluster at Sayanskkhimplast. A plant with a capacity of

200,000 tpa is being considered

In March 2018 Sayanskkhimplast undertook discussions with Technip in France to examine prospects for a new ethylene plant. An agreement has been concluded for Technip to start designing and justifying investments for the establishment of an ethylene production plant at Sayansk with a capacity of 200,000 tpa.

Gazprom has previously stated that it is uneconomic to construct a gas pipeline from Kovytk to the south of the Irkutsk Oblast, due to a lack of demand, in despite of Putin's instructions that the links should be built. As a result of the lack of clarity over Kovytk Sayanskkhimplast is basing hopes for gas supply on deposits

in the central part of the region Sayansk, Zaslavskoye. Total consumption requirements for Sayanskkhimpast is estimated at about 500 million cubic metres per annum.



### Lukoil-revived concept of new petrochemical complex at Budyennovsk

Lukoil is reviving former plans for a gas chemical complex at Budyennovsk to be followed in the second stage by a polyolefin plant. The capacity of the new complex could amount to 1 billion cubic metres of gas per annum, scaled back from the earlier design capacity of 1.3 billion cubic metres. The plant will process gas from the Caspian deposits of Rakushechnoe and Kuvykina. Investments are estimated at \$2 billion if the project proceeds.

Advantages of the project include the geographical position, the availability of operating infrastructure and its own cheap raw materials. The current Stavrolen complex produces olefins, polyolefins and a number of petrochemical products from pyrolysis raw materials. The Stavrolen plant has started to receive associated gas from the Filanovsky deposits in the Caspian Sea which Lukoil started drilling in 2017.

## Russian petrochemical production & sales

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Angarsk Polymer Plant	38.1	36.4
Kazanorgsintez	106.2	106.0
Stavrolen	53.2	52.1
Nizhnekamskneftekhim	103.9	104.7
Novokuibyshevsk Petrochemical	6.1	7.8
Gazprom n Salavat	61.6	58.5
SIBUR-Kstovo	67.6	67.2
SIBUR-Khimprom	8.2	7.9
Tomskneftekhim	52.2	45.2
Ufaorgsintez	21.2	19.7
Total	518.4	505.6

### Russian ethylene & propylene, Jan-Feb 2018

Ethylene production in Russia amounted to 244,900 tons in February which was 10% down against January. Kazanorgsintez produced 50,500 tons of ethylene in February, 10% down, whilst Stavrolen dropped 12% to 24,800 tons. Nizhnekamskneftekhim and SIBUR-Kstovo produced 49,500 tons and 31,600 tons of ethylene respectively, or 12% and 9% less than in January. In the first two months of 2018, 518,400 tons of ethylene were produced at Russian plants, 2% more than in the same period in 2017.

Propylene production in Russia totalled 187,400 tons in February which is 13% less than in January. Reductions were noted by Nizhnekamskneftekhim,

the Omsk polypropylene plant and Ufaorgsintez, producing 26,000 tons, 19,400 tons and 14,000 tons respectively. SIBUR-Tobolsk produced 36,200 tons of propylene in February, 18% less than in January due to technical reasons. Lukoil-NNOS and SIBUR-Kstovo reduced the production of propylene by 26% and 13%, respectively, to 19,100 tons and 14,100 tons. The reduction in capacity utilisation at Kstovo plants is due to the low demand of foreign consumers for monomer. In the first two months in 2018 Russian propylene production totalled 395600 tons which is 25% more than in the same period of 2017.

SIBUR Tobolsk increased the processing of a wide fraction of hydrocarbons (NGLs) by 9.8% in 2017 to 7.8 million tons against 7.8 million tons. Other production included 156,600 tons of MTBE, 6.3 million tons of LPG and 510,400 tons of polypropylene, which is 10% higher than in 2017.

Russian Propylene Exports (unit-kilo tons)		
Company	Jan-Feb 18	Jan-Feb 17
Lukoil-NNOS	18.65	9.64
SIBUR-Kstovo	1.60	21.10
Omsk Kaucuk	0.00	0.00
Angarsk Polymer Plant	0.00	0.00
Stavrolen	1.70	1.56
Total	21.95	32.30

### Russian propylene sales Jan-Feb 2018

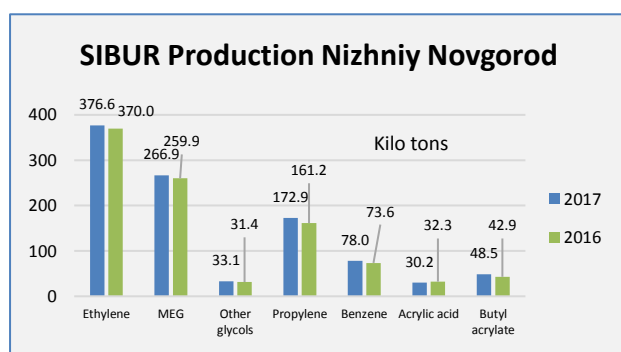
Russian petrochemical plants exported 6,400 tons of propylene in February, half the amount in January. The reduction in exports was due to lower demand.

Lukoil-NNOS reduced exports by three-fold against January to 3,200 tons of propylene. Stavrolen resumed supplies of export propylene, the first time since July 2017, by shipping 1,700 tons of benzene to Belarus but SIBUR-Kstovo reduced exports two-fold to 1,600 tons. For the first two months in 2018 Russian plants exported 21,950 tons of propylene, which is 33% less than in the same period in 2017. Russian plants shipped 13,700 tons of propane-propylene fractions in the first two months. The Ryazan refinery reduced the supply of the fraction in February to foreign markets by 4% to 6,200 tons (90% of total exports), nearly all of which went to Poland.

### SIBUR-Neftekhim 2017

SIBUR's Kstovo and Dzerzhinsk sites produced a total of 2.2 million tons of products in 2017, which is 1.6% more than in 2016. The increase in output was made due to stable operation of the equipment, increased plant productivity, and the implementation of projects to improve the efficiency in the use of raw materials in production.

SIBUR-Kstovo produced 376,600 tons of ethylene in 2017, 172,900 tons of propylene, and 78,000 tons of benzene. The RusVinyl complex at Kstovo produced 284,600 tons of suspension PVC in 2017, 27,300 tons of emulsion PVC and 207,000 tons of caustic soda. At Dzerzhinsk, SIBUR-Neftekhim produced 266,900 tons of MEG, 76,200 tons of merchant ethylene oxide and 78,700 tons of acrylic acid and acrylic esters. In 2016, SIBUR-Neftekhim started production of two-ethyl hexyl acrylate at Dzerzhinsk, whilst ethylene capacity at Kstovo has been increased in stages to 384,000 tpa.



SIBUR has undertaken a project in 2018 to optimize the use of ethylene at Dzerzhinsk. New compressor equipment was installed at the plant, whilst all connections to the existing technological scheme were upgraded during the planned stoppage. As a result of these measures, the specific consumption of raw materials for production was reduced. The capacity of the Dzerzhinsk site of SIBUR includes 130,000 tpa for the production of ethylene oxide and 300,000 tpa for the production of glycols.

### Russian styrene production & exports Jan-Feb 2018

Russian styrene production declined 10% in February against January to 57,000 tons. Due to an unplanned stoppage in February the production of styrene by SIBUR-Khimprom reduced volumes by 26% to 7,900 tons. In addition, Gazprom neftekhim Salavat reduced production of styrene by 11% to 15,900 tons and Nizhnekamskneftekhim reduced production by 5% to 24,600 tons. In the first two months in 2018 Russian styrene production rose 1.4% to 120,210 tons.

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Nizhnekamskneftekhim	50.5	50.9
Angarsk Polymer Plant	6.2	5.8
SIBUR-Khimprom	18.6	18.8
Gazprom n Salavat	33.6	32.2
Plastik, Uzlovaya	11.2	11.0
Total	120.2	118.5

Due to shortages in the Russian styrene market in February producers reduced export shipments by 25% to 9,800 tons. Gazprom neftekhim Salavat exported 8,000 tons of styrene, 25% less than in January. Also shipments of monomer from Angarsk Polymer Plant decreased in February by 10% to 1,600 tons. SIBUR sold only 99 tons of the product on export markets, which is five times less than in January. For the first two months in 2018 Russian producers exported 22,800 tons of styrene, 4% less than in the same period in 2017.

Russian Styrene Market (unit-kilo tons)		
	2017	2016
Production	691.9	682.8
Export	115.1	124.7
Import	0.435	0.067
Consumption	577.2	558.2

577,000 tons which is 3% higher than in 2016. The aggregate supplies shipped to Voronezhskintezkaucuk and Sterlitamak Petrochemical Plant grew by 26% in 2017 to 36,000 tons. The purchase of styrene for the

### Russian styrene market 2017

The Russian styrene market grew by 3% in 2017, mainly attributable by a rise in demand from the producers of butadiene-styrene rubber. The total market was worth about



production of polystyrene and ABS-plastics in Russia increased by only 1%, whilst volumes of styrene processing for dispersion production increased by 8%.

## Bulk Polymers

### Russian polyethylene production, Jan-Feb 2018

In the first two months of 2018, polyethylene production in Russia increased by 4% to 308,600 tons against 295,300 tons in the same period in 2017. In February, the total volume of polyethylene production decreased to 146,700 tons against 161,800 tons in January. HDPE production was unchanged in the first two months in 2018 at 154,700 tons, whilst LDPE rose 1% to 118,500 tons. The sole producer of LLDPE Nizhnekamskneftekhim increased production to 35,400 tons against 23,300 tons in the first two months in 2017. Kazanorgsintez increased production of HDPE for two months by 6% to 86,000 tons, whilst Stavrolen increased production by 2% to 49,300 tons. Gazprom neftekhim Salavat reduced the production of polyethylene at the beginning of the year by 28% to 19,400 tons, but Nizhnekamskneftekhim has yet to produce HDPE in 2018.

Russian HDPE Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Kazanorgsintez	86.0	80.9
Stavrolen	49.3	48.1
Nizhnekamskneftekhim	19.4	10.7
Gazprom neftekhim Salavat	0.0	14.7
Total	154.7	154.4

### Russian polyethylene imports, Jan-Feb 2018

In the first two months of 2018 imports of polyethylene into the Russian market totalled 78,400 tons, 3% higher than in 2017 at 75,800 tons. HDPE imports rose from 24,700 tons in the first two months in 2017 to 34,700 tons in the same period this year. Deliveries from Uzbekistan and Finland increased significantly. LLDPE imports amounted to 18,500 tons in the first two months in 2018 against 27,200 tons in the same period in 2017. An increase in production volumes from Nizhnekamskneftekhim was the main reason for the decrease in dependence on external supplies. LDPE imports rose slightly from 13,000 tons to 14,400 tons, whilst EVA imports rose 32% to 7,200 tons.

Kazanorgsintez launched the production of a three-layer tubular film in February 2018, and plans to produce 2,590 tpa of tubular film. To date the owner of Kazanorgsintez TAIF needs about 10,000 tpa of packaging film. The commissioning of the production line of the three-layer FFS-film will eliminate

Russian LDPE Market (unit-kilo tons)			
	2017	2016	2015
Production	692.4	655.8	652.4
Exports	214.3	128.0	180.0
Imports	81.4	80.6	79.5
Balance	559.5	608.2	551.9

the purchase of imported packaging and packaging, as well as increase the volume of the company's own processing of polyethylene produced by different brands, films and reduce production costs.

### Russian LDPE market 2017

The estimated consumption of LDPE in Russia amounted to 559,500 tons in 2017, or 8% less than in 2016. The reduction in market consumption is due to the increase in exports which increased 1.6 times. Production of LDPE totalled 692,000 tons in 2017 which is 6% more than in 2016. The main reason for the rise in production was the increase at Tomskneftekhim. Following modernisation, the capacity of the Tomsk plant was increased by 12.5% to 270,000 tpa. In addition, the Angarsk Polymer Plant increased production 1.6 times to 51,500 tons. Russian imports of LDPE amounted to 81,300 tons in 2017 against 80,600 tons in 2016. Exports rose sharply in 2017 67% to 214,000 tons.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Ufaorgsintez	22.1	21.1
Stavrolen	19.7	19.6
Neftekhimya	23.0	18.2
Nizhnekamskneftekhim	34.1	35.3
Polyom	35.7	35.4
Tomskneftekhim	23.8	23.2
SIBUR-Tobolsk	86.8	78.0
Total	245.2	230.8

### Russian polypropylene, Jan-Feb 2018

Russian polypropylene production increased by 4% in January-February, over 2017 245,200 tons against 230,800 tons. SIBUR Tobolsk increased production by 7% to 86,700 tons, whilst Nizhnekamskneftekhim increased volumes by 4% to 35,800 tons. Polyom at Omsk increased production by 1% to 35,700 tons whilst Tomskneftekhim rose from 23,100 tons to 23,900 tons. Ufaorgsintez produced 21,800 tons versus 21,500 tons whilst Stavrolen reduced production by 1% to 9,700 tons.

In the first two months of 2018 imports of polypropylene into Russia increased by 33% and amounted to 28,600 tons versus 21,600 tons. Homopolymer imports rose from 8,400 tons in January to February

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Bashkir Soda	43.5	42.8
Kaustik	15.5	14.9
RusVinyl	53.8	50.3
Sayanskkhimplast	52.1	43.6
Total	164.9	151.6

2017 to 9,500 tons in the same period in 2018, whilst block copolymers rose from 6,400 tons to 6,900 tons. Imports of propylene copolymers (PP-Random) amounted to 5,200 tons against 4,400 tons, whilst external supplies of other propylene polymers amounted to 7,000 tons against 4,400 tons.

#### Russian PVC, Jan-Feb 2018

Russian plants increased production of PVC by 9% in January-February 2018 against the same period in 2016 to 165,200 tons. RusVinyl for January-February produced 53,800 tons of PVC, including 5,000 tons of emulsion grade. Sayanskkhimplast produced 52,100 tons of PVC for the first two months, whilst Bashkir Soda Company produced 43,800 tons. Kaustik at Volgograd produced 15,500 tons in the first two months in 2017.

#### Russian polycarbonate, Jan-Feb 2018

The production of polycarbonate by Kazanorgsintez in January-February 2018 totalled 12,100 tons, including 5,620 tons in February. Of the total for the first two months 9,700 tons of extrusion polycarbonate was produced, whilst the output of injection granulate was 2,400 tons. Moulded polycarbonate grades produced in Tatarstan are almost completely shipped for export to China.

Domestic processors increased imports of PVC in January-February by 19%, whilst Russian PVC exports increased by 68%. In the first two months of the year, 3,700 tons of PVC that was imported to Russia of which China supplied 3,200 tons. A significant fall in demand for PVC-S in the domestic market has led to an increase in exports in January to February 2018. In total, for two months, 36,000 tons of suspension were shipped to foreign customers against 21,500 tons in the same period in 2017. Estimated consumption of suspended PVC in Russia increased by 3% in 2017 to 841,700 tons. The rise

was due in part to higher production. Import deliveries decreased significantly in 2017 whilst Russian plants exported 100,100 tons of suspension PVC against 85,000 tons in 2016.

### Aromatics

Russian Paraxylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Gazprom Neft	9.6	11.6
Ufaneftekhimi	21.3	20.1
Total	30.9	31.7

#### Russian paraxylene & PTA, Jan-Feb 2018

Paraxylene sales on the Russian domestic market increased to 183,600 tons in 2017 from 169,000 tons in 2016. Ufaneftekhimi reduced sales from 107,500 tons to 101,700 tons whilst Gazprom Neft from the Omsk refinery increased sales from 61,600 tons to 82,000 tons. Kirishinefteorgsintez has not sold paraxylene on the domestic market in the past couple of years, whilst Polief at Blagoveshchensk is the only current consumer.

Russian Paraxylene Exports (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Gazprom Neft	0.00	11.27
Kirishinefteorgsintez	0.00	15.93
Ufaneftekhimi	5.79	0.00
Total	5.79	27.20

Paraxylene exports fell from 136,200 tons in 2016 to 88,900 tons in 2017, with Gazprom Neft reducing shipments from 71,300 tons to 31,700 tons. Kirishinefteorgsintez increased export shipments from 50,900 tons in 2016 to 57,200 tons in 2017, whilst Ufaneftekhimi did not export in 2017 after shipping 13,900 tons in the previous year.

Russian Xylene Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Gazprom Neft	50.5	43.2
Kirishinefteorgsintez	9.1	19.7
Ufaneftekhimi	36.6	35.0
Total	96.1	97.9

Russian xylene production totalled 96,100 tons in the first two months in 2018 against 97,900 tons in the same period in 2016. Russian PTA imports totalled 16,400 tons in January 2018 against 12,800 tons in the same month in 2017. Belgium reduced volumes from 3,900 tons to 1,600 tons and India reduced from 4,900 tons to 2,500 tons.

China increased export shipments from 4,000 tons to 7,000 tons whilst Thailand supplied 4,000 tons in January 2018 against zero in January 2017.

Russian Benzene Consumers (unit-kilo tons)		
Consumer	Jan-Feb 18	Jan-Feb 17
Kuibyshevazot	45.1	39.9
Azot Kemerovo	26.5	19.7
Shchekinoazot	11.3	8.7
Kazanorgsintez	13.6	7.5
Omsk Kaucuk	6.3	2.4
Nizhnekamskneftekhim	4.2	4.0
Novokuibyshevsk Petrochemical	3.6	5.0
Zapsib	10.5	7.6
SIBUR-Khimprom	14.1	12.4
Promsintez	0.9	1.5
Uralorgsintez	7.0	12.7
Others	7.8	1.5
Exports	11.1	34.9
Total	162.1	157.8

benzene from coke plants amounted to 9,921 tons in the first two months in 2018, down from 13,956 tons in the same period in 2017.

### Russian benzene production, Jan-Feb 2018

Benzene production in Russia dropped 5% in February against January to 115,600 tons. Gazprom neftekhim Salavat produced 17,800 tons of benzene in February, 12% less than in January. In addition, Nizhnekamskneftekhim reduced the production of benzene by 9% to 18,000 tons and Gazprom Neft at Omsk dropped by 11% to 11,200 tons. Ufaneftkhim produced 8,600 tons of benzene in February, which is 15% more than in January whilst Stavrolen increased production almost fivefold to 6,300 tons. In the first two months in 2018 Russian benzene production totalled 237,700 tons which is 5% more than in the same period in 2017. Russia produced 1.292 million tons of benzene in 2017, 6% more than in 2016.

Russian Crude Benzene Exports (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Altay-Koks	0.75	1.222
Koks	0.943	2.449
Magnitogorsk MK	2.311	2.8
Moskoks	1.313	1.299
Nizhniy Tagil	3.5	3.4
Novolipetsk MK	0	1.457
Ural Steel	1.104	1.329
Total	9.921	13.956

Gazprom neftekhim Salavat reduced the rate of consumption of pyro-condensate in the production of benzene through catalyst changes. Implementation has made possible to additionally involve hydrocarbon fractions C8 and C9 from pyro-condensate into the production of benzene. The implementation of all measures allowed to reduce the consumption rate for raw materials and, on average, 4.8% to increase the yield of benzene from one ton of pyro-condensate.

Russian Phenol Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Ufaorgsintez	9.4	10.0
Kazanorgsintez	12.5	12.4
Novokuibyshevsk PC	10.0	10.3
Total	31.8	32.7

### Russian phenol production, Jan-Feb 2018

Phenol production in Russia dropped 5% in February to 15,500 tons, including 4,700 tons produced by Ufaorgsintez, Novokuibyshevsk Petrochemical 5,000 tons and Kazanorgsintez 5,900 tons. Production for the first two months in 2018 amounted to 31,600 tons against 32,700 tons in the January to February 2017. Domestic sales dropped from 18,000 tons to 17,100 tons, with demand relatively flat. Kuibyshevazot has reduced phenol purchases this year taking benzene in preference. MetaDynea's resin

plants remain the largest outlet for domestic phenol sales.

Overall for 2017 Russian phenol production totalled 207,300 tons against 221,900 tons in 2016. Production at Ufaorgsintez reduced by 12% to 65,200 tons whilst Novokuibyshevsk Petrochemical Company reduced production by 8% to 70,700 tons. Kazanorgsintez produced 71,400 tons against 66,000 tons in 2016.

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Novokuibyshevsk Petrochem	7.7	7.7
Kazanorgsintez	1.4	2.3
Ufaorgsintez	7.2	7.7
Borealis	0.8	0.3
Total	17.1	18.0

the advantages of modernisation is the ecological compatibility of production in that Titan has already managed to reduce the concentration of harmful substances.

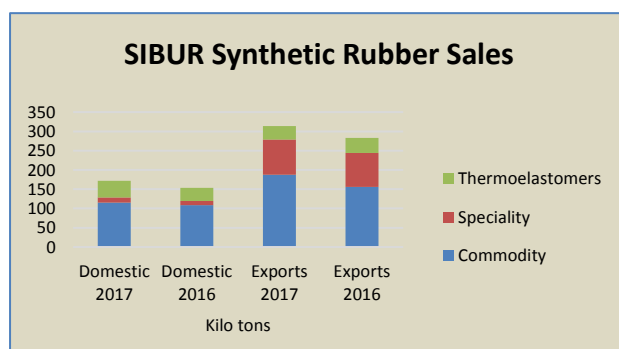
### Omsk Kaucuk, phenol-acetone restart 2018

Omsk Kaucuk aims to restart the modernised and revamped phenol-acetone complex in late 2018. The restart is important not only for phenol and acetone availability, but also other projects being undertaken by Omsk Kaucuk including epoxy resins and isopropanol. Investment projects are expected to be implemented in the Omsk petrochemical cluster in four stages until 2022. The company seeks to combine two clusters including agrobiotechnology and petrochemical. One of

## Synthetic Rubber

### SIBUR rubber plant news, April 2018

SIBUR has started the production of new brands of synthetic rubber at Togliatti, including copolymer rubbers of the brands SKMS-30 ARKM-15 and SKMS-30. Tests of the new product have already been carried out at factories in Russia and abroad. In late 2017 SIBUR Togliatti installed a filling station isoprene in tank containers which will increase the competitiveness of products, transport security and expand the sales market.



The Voronezh site of SIBUR increased its production of synthetic rubber by 14% in 2017 to a total of 186,000 tons. The plant produced 77,800 tons of thermoplastic elastomers in 2017, 6% up on 2016. Krasnoyarsk Synthetic Rubber Plant maintained the same volume of production of

Russian Synthetic Rubber Exports (unit-kilo tons)		
Category	Jan-18	Jan-17
E-SBR	2.6	3.5
Block	1.6	3.0
SSBR	0.7	0.5
SBR	7.9	11.1
Polybutadiene	19.4	19.0
Butyl Rubber	11.8	10.9
HBR	12.9	11.1
NBR	3.1	2.4
Isoprene Rubber	28.3	24.4
Others	3.1	1.6
Total	91.4	87.5

nitrile butadiene rubber in 2017 as in 2016 at 38,500 tons. In 2017 the Krasnoyarsk plant implemented a number of activities aimed at raising the level of HSE, operational efficiency, quality, product development. Also in 2017, a pilot-industrial production of a new product butadiene-nitrile-carboxylate latex was launched intended for the production of technical gloves.

### Russian synthetic rubber exports, Jan-2018

Synthetic rubber exports from Russia rose slightly in January 2018 to 91,400 tons against 87,000 tons in January 2017. Average prices per ton rose to \$1709 per ton from \$1314 in 2016. By product category, isoprene rubber exports saw the largest rise in volume. Export sales of halogenated butyl rubber also increased. Regarding export destinations, China was the largest recipient of Russian rubber exports amounting to 11,916 tons at an average price of \$1481 per ton. Other leading markets included India, Hungary, Poland, and Mexico. Exports to Hungary could be affected later this year after the

start-up of the new plant at Tiszaújváros and the expected reduction in rubber imports.

Russian Chemical Commodity Exports				
Product	Jan-Feb 18 Kilo tons	Jan-Feb 18 USD Mil	Jan-Feb 17 Kilo tons	Jan-Feb 17 USD Mil
Ammonia	622	155	394	73
Methanol	317	100	268	67
Nitrogen Fertilisers	1,749	360	1,557	270
Potash Fertilisers	535	109	744	135
Mixed Fertilisers	1,664	439	1,540	390
Synthetic Rubber	174	275	176	291

Nizhnekamskneftekhim forecasts lower prices for synthetic rubber grades in 2018, although the company expects volumes to remain stable. The continuing high level of natural rubber reserves in the world place pressure on prices. Based on projections of prices



for butadiene, prices for isoprene and butadiene rubber in the international market in 2018 could be lower on average lower than in 2017.

For instance, the prices for halobutyl rubber will continue to be under pressure from the increasing supply on the world market. This is related to the launch of a new plant in the Middle East and the anticipated launch of another plant in Asia. Taking these factors into account a slight drop in prices for conventional butyl rubber is possible. Nizhnekamskneftekhim exports around 90% of its rubber production, its share in the world market of isoprene rubber is about half.

### Methanol & related products

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Feb 17	Jan-Feb 16
Azot Nevinomyssk	1.8	3.6
Azot Novomoskovsk	24.6	16.8
Metafrax	37.9	66.3
Sibmetakhim	60.1	69.9
Tomet	94.5	80.3
Shchekinoazot	8.6	7.2
Ammoni (Mendeleevsk)	30.0	16.9
Others	0.3	1.2
Total	257.8	262.2

#### Russian methanol production, Jan-Feb 2018

Methanol sales on the Russian domestic market amounted to 257,800 tons in the first two months in 2018 against 262,200 tons in the same period in 2017. The largest supplier to the domestic market in the first two months was Tomet, shipping 94,500 tons to domestic consumers against 80,300 tons in the same period in 2016. Sibmetakhim reduced sales by 8% in to 60,100 tons, whilst Metafrax reduced deliveries to 37,900 tons from 66,300 tons. Amongst other producers Ammoni sold 30,000 tons in January to February 2018 against 16,900 tons in the same period in 2016 and Shchekinoazot increased shipments from 7,200 tons to 8,600 tons.

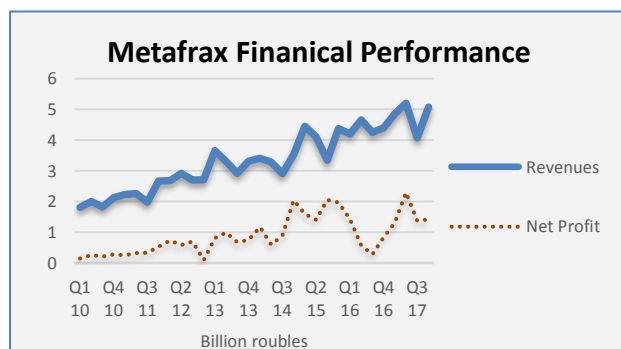
Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Shchekinoazot	74.1	74.9
Sibmetakhim	166.1	165.4
Metafrax	197.0	181.0
Akron	17.4	15.7
Azot, Novomoskovsk	44.8	39.2
Angarsk Petrochemical	0.2	1.1
Azot, Nevinomyssk	18.0	22.8
Tomet	145.8	136.6
Ammoni	36.6	31.9
Totals	699.9	668.5

Nizhnekamskneftekhim is the largest individual buyer of merchant methanol on the Russian market, but reduced purchases from 43,700 tons to 28,500 tons in the first two months in 2018. SIBUR Togliatti increased purchases from 19,900 tons to 25,900 tons.

Russian methanol production amounted to 335,700 tons in February which was 8% less than in January. Azot at Nevinomyssk produced 9,000 tons, 3% more than in January whilst Azot at Novomoskovsk reduced production by 25% to 19,000 tons. Less significant reductions were recorded by Akron (13%), Metafrax (11%), Ammonium (9%), Sibmetakhim (6%), Shchekinoazot (3%) and Tomet (2%). Akron produced 8,100 tons, Metafrax 93,000 tons, Ammoni 17,400 tons, Sibmetakhim 80,300 tons, Shchekinoazot 36,500 tons, and Tomet 72,200 tons.

#### Metafrax 2017

Metafrax increased its net profit by more than twice 2017. The company's revenue increased by 10% to 19.51 billion roubles. The cost of sales of the company was 9.28 billion roubles versus 8.95 billion roubles. The volume of methanol produced exceeded historical highs, amounting to 1.1 million tons.



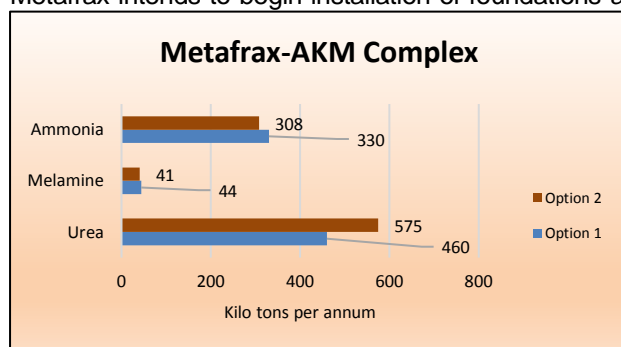
The gross profit of the company amounted to 10.24 billion roubles, which is 17% higher than in 2016. The profit from sales increased to 7.63 billion roubles, whilst net profit up to 6.39 billion roubles. Metafrax significantly reduced other expenses down to 2.33 billion roubles against 5.11 billion roubles.

The main assets include Metafrax (Gubakha), the production of MetaDynea resins

(Orehovo-Zuyevo, Moscow region), as well as the production of formaldehyde located in Austria and synthetic resins Metadynea Austria GmbH (Krems).

### Metafrax-AKM complex & MetaDynea investment

Metafrax intends to begin installation of foundations and metal structures for the construction of the AKM



complex (ammonia-urea-melamine) at Gubakha in mid-2018. Contracts have recently been signed with Uralkhimash for three spherical ball tanks for the project. Preparation of the site for construction was carried out throughout 2017, covering an area of more than 20 hectares. Currently, work is under way on laying underground communications.

The total investment in the construction of the complex is estimated at €950 million. Metafrax plans to sign loan agreements to attract €280

million and 27 billion roubles in the near future and plans to start the AKM complex in 2021. The design capacity of the plants includes 562,000 tpa of urea, 298,000 tpa of ammonia and 40,000 tpa of melamine.

At the main subsidiary of Metafrax, Metadynea is planning to invest 1.1 billion roubles into a new formaldehyde plant at Orehovo-Zuevo. The capacity of the plant should be 90,000 tpa and should be ready by 2019. In the period 2018-2020, Metadynea wants to invest €10.5 million at the production site in Krems (Austria) to increase the production of aldehyde and carboxylic acids to 7,500 tpa.

### Ammoni Mendeleevsk, new melamine project

Italian companies are considering an increase in the capacity of the Ammoni complex at Mendeleevsk by 20% by building a melamine plant. Saipem and Codest want to take on the design and construction, with SACE helping with the financing of the project in Tatarstan. The project provides for the modification of the urea plant, increasing its capacity by 20%. This will make it possible to jointly produce 2,050 tons of urea per day and 120 tons of melamine per day. This is equivalent to a total carbamide production of 2,436 tons per day.



At the same time Saipem is may increase the production of methanol up to 802 tons per day, ammonia up to 2460 tons, carbamide up to 2846 tons per day, including raw materials needed for the production of melamine. Saipem can design the production of melamine based on the Euromel process, or Snamprogetti Urea Technology. If the Italian banks can provide the finance it is expected that Vnesheconombank (VEB) will act as guarantor.

### Shchekinoazot start-up of methanol and ammonia plants

Shchekinoazot aims to bring online four new units in 2018, the largest of which is the complex for methanol and ammonia production and namely the M-450/A-135 project. By the end of April, according to the schedule, all tests will have been completed and primary surveys of equipment operating under pressure. The company hopes to start the loading of catalysts in May.

#### Nakhodka fertiliser & methanol project, new territory for advanced development

A new territory for advanced development (TOR) will be created in the Far Eastern Federal District for the Nakhodka plant of mineral fertilisers. The amount of investment in the project will be about \$2 billion. Nakhodka Fertiliser Plant is undertaking an investment project for the construction of a complex for the production of mineral fertilisers in the village of Kozmino at Nakhodka in the Primorsky Kray. The company will produce methanol and nitrogen fertilisers which could be commissioned in 2022. The capacity of the plant for ammonia and methanol will amount in total to 1.8 million tpa.

One of the projects to be completed in 2018 is the production of sulphuric acid with a capacity of 200,000 tpa. The Chinese licensing company is both the developer of the project, and the equipment supplier, and is currently installing on the construction site. In addition to the M-450/A-

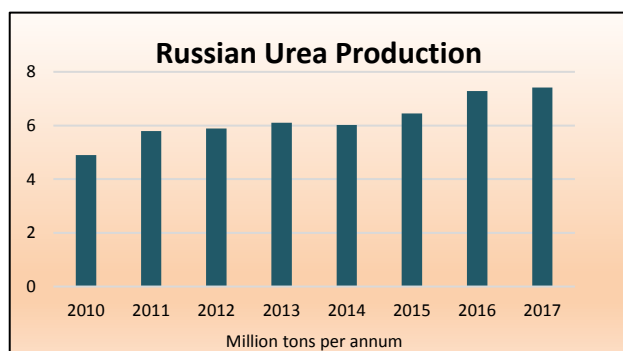
135 project, Shchekinoazot is planning to finish the construction of a dimethyl ether installation this year under a joint venture with Petro Carbo Chem. The production of dimethyl ether of high perfumery quality is not produced in Russia.

### Skovorodino methanol project-priority status

Construction of the Skovorodino methanol project in the Amur Oblast could start in 2019. The total investment in constructing a methanol plant with a capacity of 1 to 1.2 million tpa of methanol will amount to 37.5 billion roubles and would require around 1 billion cubic metres of gas per annum from the Power of Siberia pipeline. The Skovorodino project has been given priority status so that when the plant is operational set limits will be placed on how much tax needs to be paid. The company Tehnolizing owns the oil terminal at Skovorodino, but due to falling oil transshipment volumes after the launch of the ESPO oil pipeline the group decided to restructure the business and to start producing methanol. The facility also plans the production of MTBE. The project capacity of the new methanol is expected to be around 1.2 million tpa which

### Russian urea projects

Togliattiazot signed a loan agreement in March 2018 worth €180 million for the construction of a third urea unit at Togliatti. The loan agreement was concluded with a syndicate of banks Commerzbank AG (Switzerland) and Landesbank Baden-Wuerttemberg (Germany) for a period of nine years. According to its terms, interest is paid after a two-year grace period, at a rate of 2% per annum.



The loan will be used to build a urea unit with a capacity of 2,200 tons per day. Currently the company operates two units with a total capacity of 480,000 tpa. The project for the new unit was developed in cooperation with Casale and commissioning of the unit is scheduled for 2020.

Akron aims to launch the sixth urea production unit at Veliky Novgorod in August 2018. The capacity of the new unit will be 600 tons per day or 210,000 tpa. With its commissioning, Akron will increase its urea production to more than 3,500 tons per day.

Investments in the project are estimated at 2 billion roubles. Akron can increase the capacities of the urea shop at the Novgorod site due to the availability of additional volumes of raw materials from the Ammonia-4 unit launched in 2016.

Russian N-Butanol Production (unit-kilo tons)		
	Jan-Feb 18	Jan-Feb 17
Angarsk Petrochemical	6.0	5.8
Azot, Nevinnomyssk	2.1	3.0
Gazprom n Salavat	11.6	12.4
SIBUR-Khimprom, Perm	8.0	6.2
Total	27.7	27.4
Russian Isobutanols Production (unit-kilo tons)		
	Jan-Feb 18	Jan-Feb 17
Angarsk Petrochemical	3.4	3.0
Gazprom n Salavat	6.0	6.1
SIBUR-Khimprom, Perm	8.7	8.6
Total	18.0	17.7

Kuibyshevazot together with Maire Tecnimont S.p.A plans to launch production of granulated urea in the Samara region, the share of participation in the jv of the Russian company is 68% and the Italian company 32%. The contribution of Maire Tecnimont taking into account the attracted and equity capital may amount to €11 million. The capacity will comprise 525,000 tpa based on licensed technology from Stamicarbon.

### Organic chemicals

#### Russian butanol production, Jan-Feb 2018

Russian butanol production rose 2% in the first two months in 2018, rising for n-butanol from 27,400 tons in January to February 2017 to 27,700 tons whilst isobutanols rose 17,700 tons to 18,000 tons. Butanols production in Russia declined 13% in February versus

January to 21,320 tons. Gazprom neftekhim Salavat reduced production by 12% in February to 8,190 tons, SIBUR-Khimprom by 15% to 7,870 tons and Angarsk Petrochemical by 16% to 4,290 tons. At the same time, Azot Nevinnomyssk increased production by 28% to 1,180 tons.

#### Acryl Salavat-planned outage

Acryl Salavat is preparing for a shutdown at its acrylic acid and acrylate plant in May. Capacities include 35,000 tpa of acrylic acid and 80,000 tpa of acrylates.

Khimprom shipped 3,100 tons of butanols (81% of all-Russian exports) to Gazprom's foreign markets, and 530 tons (14%) to Gazprom neftekhim Salavat. The largest volumes of products from Russia were shipped to Poland (27% of gross exports), Turkey (22%), Netherlands (16%), Ukraine (16%), Czech Republic (15%) and Canada (2%).

In January 2018, exports of butanols from Russia amounted to 3,840 tons. This is 21% less than in December 2017, but 2.6 times higher than in January last year. The share of n-butanol in the total Russian exports in January 2018 was 57%, and isobutanol 43%. SIBUR-

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Gazprom n Salavat	2.3	0.2
SIBUR-Khimprom	5.4	4.8
Angarsk Petrochemical	4.9	0.2
Azot Nevinnomyssk	0.0	0.5
Totals	12.6	5.7

Domestic sales of butanols rose from 5,700 tons in the first two months in 2017 to 12,600 tons in the same period this year. In addition to Gazprom neftekhim Salavat making more availability for merchant sales, Angarsk Petrochemical increased shipments to 4,900 tons from only 200 tons in the first two months in 2017.

In April demand for butanols in Russia is high, whilst deliveries from Gazprom neftekhim Salavat to the domestic market are minimal. Alcohols from SIBUR-Khimprom and

Angarsk Petrochemical Company take most of the market.

Gazprom neftekhim Salavat did not ship butanols in March, and subsequently total sales on the domestic market dropping 29% to 5,200 tons. The share of n-butanol in gross sales in March 2018 was 90%, and isobutanol 10%. SIBUR-Khimprom reduced deliveries by 6% in March to 3,000 tons whilst Angarsk Petrochemical reduced by 1% to 2,080 tons. Akriat increased purchases of butanols in March by 3% to 1,800 tons whilst the Dmitrievsky Chemical Plant reduced purchased raw materials 2.8 times to 1,110 tons. Volzhsky Orgsintez reduced the purchase of alcohols in March by 34% to 450 tons. In the first quarter butanol sales on the domestic market totalled 20,050 tons which was 20% up on the same period in 2017.

#### Russian phthalic anhydride, Jan-Feb 2018

Phthalic production in Russia amounted to 7,740 tons in February, 5% down on January. In February 2018,

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	Jan-Feb 18	Jan-Feb 17
Gazprom neftekhim Salavat	2.1	1.4
Kamteks	15.3	15.9
Total	17.3	17.4

Kamteks-Khimprom reduced production of phthalic anhydride by 20% to 6,760 tons. In the first two months of 2018, Russia produced 17,340 tons of phthalic anhydride which is unchanged from 2017.

In January 2018, the export of phthalic anhydride from Russia amounted to 1,790 tons which is 3.5 times less than in December 2017. Pakistan took 25% of the

gross supplies from the Russian Federation), Poland (18%), the United Arab Emirates (12%), Turkey (11%), Canada (10%), the USA (10%), India (7%) and Uzbekistan (4%).

#### Russian DOP trade, Jan-Feb 2018

In January 2018, 105 tons of DOP were exported from Russia against 47 tons in December and 64 tons in January last year. All products were delivered to Uzbekistan in January 2018, all from the only exporter was the Ural Plasticizers Plant.

In February 2018, 130 tons of DOP were exported from Russia against 88 tons in February 2017. As with January, all products in February 2018 were delivered to Uzbekistan. The Ural Plasticizer Plant exported 83 tons of DOP and Kamteks-Khimprom 47 tons. In the first two months in 2018, Russian exports of DOP amounted to 235 tons, 55% more than in the same period last year.

DOP imports into Russia amounted to 950 tons in January against 309 tons in December. In January 2018, the maximum volumes of DOP imported into Russia came from Korean company Aekyung Petrochemical (713 tons, or 75% of gross imports). In addition, Polish producer Boryszew supplied 176 tons, or 19%.



## Other products

MDI/TDI Imports for Eurasian Customs Region (unit-kilo tons)		
	Jan-18	Jan-17
MDI	6.1	8.8
TDI	2.8	3.6

### Russian TDI Imports, Jan-18

TDI prices have continued to rise in 2018, helping to reduce import volumes to 2,740 tons in January from 3,619 tons in January 2017. Average prices per ton amounted to \$3,926 per ton in January this year against \$2,718 per ton in the same month in 2017. MDI imports followed a similar trend dropping to 6,113 tons from 8,848 tons in January last year, whilst the average price per ton rose to \$2,789 against \$1,622.

Some reports have been made that isocyanate imports will not be possible during the course of the World Cup in June and July. Regarding isocyanate projects in Russia a number of ideas remain under consideration.

### Small Russian polyol plant to be constructed in Sverdlovsk region

In the Sverdlovsk region, a polyol plant could be constructed with a capacity of 1,000 tpa. Russian company SpetsMetKomplekt plans to undertake the project at Aramil. The small plant will be based on Russian technology. The company intends to organise the production of the formulated polyol (component A), which is used for the production of polyurethane foam. Currently, the share of imported insulation based on polyurethanes in Russia is about 90%.

Russian Organic Chemical Exports		
Product	Jan-18	Jan-17
N-Butanol	2.5	0.7
Iso-butanol	1.7	0.7
2-EH	1.9	3.0
Pentaerythritol	0.9	0.9
Phenol	0.2	0.5
Ethylene Oxide	1.4	1.4
Formaldehyde	1.1	2.0
Acetone	2.0	1.4
Acetic Acid	3.2	1.5
VAM	1.0	6.8
Butyl Acetate	5.4	3.9
Butyl Acrylate	1.0	4.8
Phthalic Anhydride	2.0	2.1

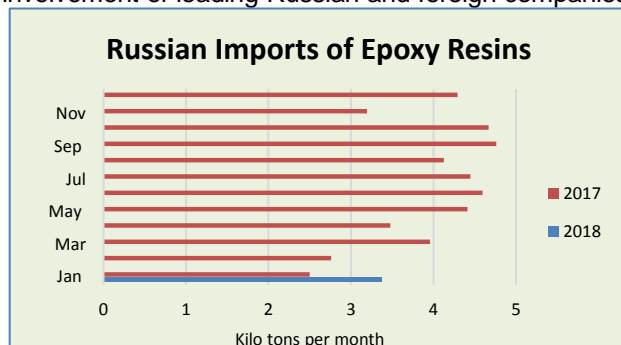
Investments in the project will exceed 42.6 million roubles. Around 15 million roubles of the 42.6 million roubles will be provided by the Industrial Development Fund (FRP) in the form of a soft loan. The Industrial Development Fund was founded in late 2014 on the initiative of the Ministry of Industry and Trade of the Russian Federation through the transformation of the Russian Fund for Technological Development. For projects selected on a competitive basis, the FRP provides targeted loans under 5% for a period of up to 7 years in the amount of 50 to 700 million roubles.

### Russian propylene oxide 2017

Propylene oxide is produced in Russia by Nizhnekamskneftekhim at 70,000 tpa, produced 77,000 tons in 2017, and Khimprom at Kemerovo at 4,000 tpa.

### Titan-epoxy resin project & other investments

Titan at Omsk plans to execute a project to create a complex for epoxy resin production with a capacity of 115,000 tpa. The project is being developed by the specialists of the Titan group, whilst all its stages were prepared with the involvement of leading Russian and foreign companies. The production complex will be created at Omsk



Kaucuk in four stages, the first stage of which comprises the completed modernisation and expansion of the phenol-acetone plant. The construction and installation work for the project is 80% complete, and work is underway to commission part of the equipment. It is planned that phenol-acetone production will be launched in the third quarter of 2018.

The second stage involves is the conversion of acetone to isopropanol. The project envisages the construction of an isopropanol plant with a

capacity of 30,000 tpa. The plant is being located at Omsk Kaucuk at an estimated investment cost of 1 billion roubles.

The third stage of the project is the construction of a bisphenol production capacity of 118,000 tpa. The final stage will be the construction of a new production plant for epichlorohydrin. In this production unit, it is

planned to use a renewable resource waste glycerine for further processing into epichlorohydrin. Russia currently produces bisphenol A at Kazanorgsintez and Ufaorgsintez.

The combination of all these processes will make it possible to create the production of liquid and solid epoxy resins with a capacity of 115,000 tpa and compositions based on them with a capacity of 20,000 tpa. The head of the group noted that for the third and fourth stage the company has already received technical and economic proposals from potential partners. The approximate period for completion is 2022.



#### Omsk isopropanol project

The Russian Industrial Development Fund (FRP) approved a soft loan on 19 March for a project for the production of isopropanol. A loan worth 500 million roubles was received by Omsk Kaucuk to construct the new plant with a capacity of 30,000 tpa. The existing isopropanol plants in Russia consist of Sintez at Dzerzhinsk and the Plant of Synthetic Alcohol at Orsk in the southern Urals.

Omsk Kaucuk has estimated the cost of the project to total around one billion roubles, and the plant will operate under the title Omsk Plant of Isopropanol.

#### Percarbonate 2017

Percarbonate (part of the Orgsintez group) in 2017 increased the production of bleach (sodium percarbonate) by 13% compared to 2016 up to 44,400 tons, while export deliveries doubled to 9,600 tons. The share of exports in the total output in 2017 was 21.7% compared to 12.1% in 2016. This result was

Russian Caustic Soda Production (unit-kilo tons)		
Producer	2017	2016
RusVinyl	207.7	199.4
Sayanskkhimplast	163.4	112.4
Kaustik	226	235.6
Bashkir Soda	198.6	203.8
Norilsk Nickel	0	7.4
Khimprom Novocheboksarsk	97.7	96.6
Ilimkhiprom	92.5	71.2
Novomoskovsk Chlor	76	70.4
Kirov-Chipetsk Chemical Combine	108.3	98.8
Khimprom Kemerovo	35.9	35.5
Total	1206.1	1131.1

achieved mainly due to an increase in the volume of purchases of sodium percarbonate by foreign buyers, as well as by increasing the number of counterparties themselves. Thus, in 2017, Germany, Spain, Portugal added a list of buyers of Russian ecologically clean bleach. Percarbonate is the only manufacturer in Russia of sodium percarbonate and is 100% owned by Group Orgsintez.

#### Khimprom 2017

Khimprom at Novocheboksarsk increased its net profit in 2017 by 5.5% to 705.7 million roubles. The company's revenue for the year increased by 13.3% to 9.580 billion roubles, helped by increases of sales of caustic soda, rubber chemicals and hydrogen peroxide. The cost of sales increased from 5.530 billion roubles to 6.5 billion roubles, whilst the gross profit amounted to 3.07 billion roubles.

#### Bashkir Soda 2017

Bashkir Soda has scheduled to invest more than 1 billion roubles in the modernisation of sodium bicarbonate production which is to be completed by the end of 2018. The Bashkir Soda Company (BSC) produced 1.7 million tons of soda ash in 2017, which is 5% higher than in 2016 whilst the production of baking soda rose by 9% to 149,000 tons. The output of solid caustic soda increased by 6% and amounted to 49,000 tons. Also last year, hydrochloric acid production increased by 23%, which is due to increased demand for this product among consumers.

#### Russian caustic soda trade 2017

Russian producers increased exports of caustic soda in 2017 by 19% to 206,700 tons against 172,900 tons in 2016. At the same time imports dropped by 36%. Amongst the Russian producers Kaustik at Volgograd produced 228,000 tons, followed by RusVinyl with 207,700 tons.

Other producers included Bashir Soda with 199,000 tons and Sayanskkhimplast 163,000 tons. Russian caustic soda production totalled 1.239 million tons in 2017 against 1.134 million tons in 2016. Imports of caustic soda into Russia decreased from 23,300 tons

in 2016 to 14,800 tons in 2017.

**Kurskhhimvolokno-yarn JV**

Kurskhhimvolokno launched a joint production with CorexNederland BV for the winding of yarns. Initially, the production capacity will be 2,200 tpa, and by 2023 it is planned to increase production twice up to 4,400 tpa. The volume of investments Kurskhhimvolokno in this project amounted to €1.6 million. The new production is a joint project of the plant and the Dutch company CorexNederland BV. The implementation of the project will enable Kuibyshevazot to reduce imports of products, reduce costs and increase production efficiency.

In 2017 Kurskhhimvolokno increased production of chemical fibres, yarns and fabrics by 9.5% over the previous year. The company produced 22,000 tons of chemical filaments and fabrics due to the launch in 2017 of three new production lines. Modernisation has increased the competitiveness in both export and domestic markets.

**Nizhnekamskneftekhim seeking to add value to glycol production**

Nizhnekamskneftekhim will soon start installation of new facilities for the production of high molecular weight solid polyethylene glycols (TPEG) and methoxy polyethylene glycols (MPEG). At the Nizhnekamsk plant of oligomers and glycols, an investment project is being implemented to expand the range of oxyethylated products. TPEGs are used to produce various detergents and cleaning agents as a stabilizer for the viscosity regulator, antistatic agent, softener. MPEGs serve as raw materials for the same purposes, and are also necessary in the production of plasticizers for concrete mixtures. These products will be produced from their MEG and ethylene oxide produced by Nizhnekamskneftekhim.

The company plans to ship liquid MPEGs to consumers in 200-litre barrels, and TPEGs in 25-kilogram bags and in 1000-kilogram big bags. Equipment for the production of new types of oxyethylated products has already been purchased, and preparations for installation are underway. Nizhnekamskneftekhim merged its factories for the production of oligomers and ethylene oxide in February 2018.

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**Ukraine**

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<b>Ukrainian Polymer Imports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Feb 18</b>	<b>Jan-Feb 17</b>
PVC	13.7	14.2
LDPE	13.0	11.8
LLDPE	11.6	10.6
HDPE	14.4	15.0
Ethylene Vinyl Acetate	2.2	2.1
PP	18.0	18.1

**Ukrainian PVC imports, Jan-Feb 2018**

Imports of PVC into Ukraine totalled 13,700 tons in the first two months in 2018, 3% down against the same period in 2017. The resumption of Karpatneftekhim was the main factor behind the lower imports. For the full year of 2017, North American resin imports amounted to 49,800 tons against 57,700 tons in 2016. Imports of European PVC fell to 32,400 tons against 42,000 tons, whilst Russian sources amounted to 13,800 tons against 10,200 tons.

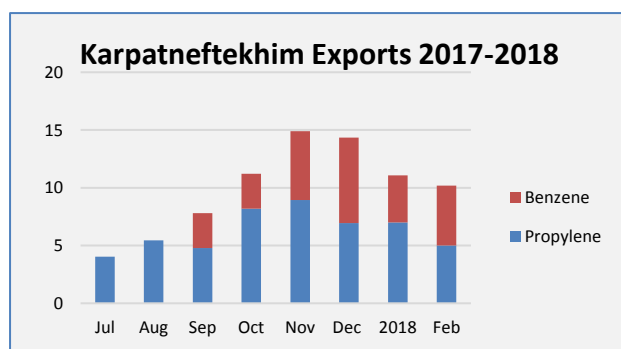
In the first two months in 2018 imports of PVC from the US totalled 8,700 tons against 2,700 tons in the same period in 2017. Imports from Europe dropped to 3,800 tons from 8,600 tons in the first two months last year, whilst volumes from Russia fell from 2,800 tons to 1,100 tons.

Polyethylene imports into Ukraine totalled 41,200 tons in the first two months in 2018, 4% up on the same period in 2017 when it totalled 39,700 tons. HDPE imports dropped from 15,000 tons to 14,400 tons, LDPE rose 10% to 13,000 tons whilst LLDPE rose from 10,700 tons to 11,600 tons. Import of other types of polyethylene, including ethylene vinyl acetate, over the first two months amounted to 2,200 tons against 2,100 tons a year earlier.

**Ukrainian benzene market, Jan-Feb 2018**

Ukrainian enterprises exported 5,900 tons of benzene in February which is 36% less than in January. Reduction of shipments to foreign markets is due to the lack of exports from the Kremenchug refinery (in January it exported 5,200 tons).

At the same time, Karpatneftekhim increased the supply of benzene to Latvia to 5,200 tons, which is 22% more than in January. In February another 691 tons of benzene was shipped from Zaporizhkoks to



Kuibyshevazot. For the first two months of 2018, Ukrainian companies exported 15,200 tons of benzene, 2.5 times more than in the same period of 2017. The increase in the volume of export supplies from Ukraine was due to the resumption of production of benzene at Karpatneftekhim.

#### Ukrainian imports of phthalic anhydride/DOP- Jan-Feb 2018

In February 2018, imports of phthalic anhydride to Ukraine amounted to 271 tons against 220 tons in January. Lakokraska supplied 184 tons in February, 44 tons came from an Austrian company, 22 tons from Deza in the Czech Republic and 21 tons from Rousse Chemicals in Bulgaria. Phthalic anhydride imports were purchased by the manufacturer of phthalate plasticizers Polikem (150 tons) and TD LK-Ukraine (100 tons). In the first two months of 2018, Ukraine imported 491 tons of phthalic anhydride which is 40% more than in the same period last year.

Ukrainian PA/DOP Imports (unit-kilo tons)		
Product	Jan-Feb 18	Jan-Feb 17
Phthalic Anhydride	0.7	0.5
DOP	0.5	0.4

DOP imports into Ukraine amounted to 419 tons in February, against 265 tons in January. In February 2018, the Polish DOP supplies came from Boryszew (51% of all-Ukrainian import), whilst Deza supplied another 44%, and the products of the Korean company Aekyung (5%) were imported to Ukraine. In the first two months in 2018, 684 tons of dioctyl phthalate were imported to Ukraine which is 34% up on the same period in 2016.

#### Ukrainian imports of methanol, Jan-Feb 2018

Ukrainian methanol imports rose 5% in February, of which 3,400 tons was supplied from Russia and 860 tons from Belarus. The main buyers included the Ukrainian gas producers, taking 3,000 tons in February whilst resin producer KarpatSmol purchased 1,100 tons. Traders only purchased 195 tons in February which was five times down on January. The average cost of the product imported into the country was about \$424 per ton DAF border of Ukraine (or 11,458 hryvnia per ton on the same delivery basis), against the fixed by the month earlier \$328 per ton.

### Belarus

#### Belarussian chemical production, Jan-Mar 2018

In the first three months of 2018 Polymir produced 16,600 tons of LDPE which is 5% more than in 2017. Polymir plans a scheduled stoppage on 5 May for around 15 days. Naftan reduced benzene production by 17% in February against January to 11,200 tons and followed in March with the same volume. Grodno Azot reduced output of caprolactam in March by 11% to 10,000 tons whilst Polymir increased propylene production by 41% to 4,600 tons and ethylene by 10% to 7,000 tons. In the first three months in 2018 Belarussian propylene production totalled 11,500 tons, ethylene amounted to 19,200 tons and benzene 36,000 tons.

Belarussian Organic Chemical Exports (unit-kilo tons)		
Product	Jan-18	Jan-17
Acrylonitrile	3.6	5.1
Caprolactam	1.5	0.0
Phthalic anhydride	4.3	1.9
Methanol	1.8	1.7

#### Belarussian organic chemical trade, Jan 2018

Belarussian acrylonitrile exports amounted to 3,600 tons in January against 5,100 tons in January 2017. The largest destination for Belarussian exports was Turkey which took 2,507 tons. Caprolactam exports were revived in January, supplying 1,530 tons which went mostly to Taiwan.

In other areas of chemical trade, methanol shipments amounted to 1,780 tons in January of which 1,000 tons was shipped to Poland. Phthalic anhydride shipments rose 1,912 tons in January 2017 to 4,276 tons in January 2018. The largest recipient of Belarussian phthalic exports in January this year was Russia taking 1,344 tons followed by Colombia with 900 tons. Regarding PTA imports, volumes amounted to 5,895 tons in January against 5,670 tons in January 2017. Imports in January this year came largely from Poland with 2,617 tons followed by South Korea with 2,024 tons.



## Central Asia/Caucasus

**SOCAR OGPC could be financed by Chinese investors**

Technip and CNPC are finishing preparation of the preliminary project (FEED) of the project of construction of the OGPC gas processing plant in Azerbaijan. The future gas-chemical project is planned to be launched in the next five years. Construction of a gas processing plant with a capacity of 10 billion cubic metres and production of medium density polyethylene from the C2 + fraction (ethane and fats), is contained in the composition of gas produced in Azerbaijan's fields.



The plant's design configuration includes allocate 600,000 tpa of ethylene, 120,000 tpa of propylene and at the end of the production chain produce 610,000 tpa of medium density polyethylene.

Gazprombank acts as a consultant to SOCAR on attracting financing. SOCAR has suggested that Chinese investors could provide around 50% of the OGPC project. In June 2017, SOCAR signed a memorandum of intent for the implementation of the project with the China National Petroleum Corporation (CNPC). Co-operation was supported by the Russian Gazprombank, export credit agency EXIAR and Italian export credit agency SACE.

**Borealis-Atyrau polyolefins**

The Kazakh Ministry of Energy, the National Welfare Fund, Samruk-Kazyna and Borealis recently signed two agreements on cooperation for projects for the production of polyolefins in the Atyrau region. The first agreement includes the basic conditions for cooperation on a polyethylene production project with a capacity of 1.25 million tpa. The contract fixes a package of state support measures and causes the transition to the design stage (development of a feasibility study). The feasibility study plans will be developed during 2018.

The second document is a memorandum of understanding on cooperation for the polypropylene production project at Atyrau. Under the memorandum, Borealis will conduct a feasibility study and legal expertise of the project. The polypropylene project is being implemented by the Samruk-Kazyna National Welfare Fund at a cost of around \$2.6 billion. The plant's capacity is 500,000 tpa of polypropylene; the EPC contractor has been identified, borrowed financing has been raised, and construction work has begun. The construction completion date is set for 2021.

full installation readiness.

**SOCAR Polymer to launch polyolefin plants in Q2 and Q3 2018**

SOCAR Polymer will launch the production of low-density polyethylene in the third quarter, and polypropylene production in the second quarter of 2018. As of April, the construction of the polyethylene plant had achieved 91.1% of its schedule, whilst polypropylene had achieved 96.7% of construction. SOCAR Polymer was established by SOCAR with an authorized capital of \$100 million. In 2018, the plant plans to produce about 70,000 tons of polypropylene and to reach 180,000 tons in 2019. The polyethylene capacity will comprise 120,000 tpa.

Cryogenmash (part of OMZ) has developed and manufactured a new nitrogen cryogenic air separation unit and a liquid nitrogen storage system for the SOCAR Polymer project. The capacity of the cryogenic air separation nitrogen plant is 3.5 thousand cubic metres of nitrogen per hour. The plant will meet the requirements of a new production of polyolefins in high-purity nitrogen gas. The equipment is designed, manufactured and delivered in a block-modular form in

**Relevant Currencies**

Czech crown. Kč. \$1=20.4. €1 = 25.4; Hungarian Forint. Ft. \$1 = 250.2. €1 = 311.2; Polish zloty. zł. \$1=3.35. €1 = 4.16 Ukrainian hryvnia. \$1 = 27.14 €1 = 33.7; Rus rouble. \$1 = 76.3 €1 = 79.9

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