

# 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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### COMPANY & TRADE NEWS FOR RUSSIA & CENTRAL EUROPE

- **NIZHNEKAMSKNEFTEKHIM AND KAZANORGSINTEZ INCREASE PROFITS IN FIRST THREE QUARTERS**
- **SIBUR SELLS ANOTHER 10% TO CHINESE INVESTORS, INCREASING CHINESE OWNERSHIP TO 20%**
- **RUSSIAN METHANOL AND FERTILISER PRODUCERS REPORT LOWER EARNINGS IN THIRD QUARTER**
- **GRUPA AZOTY ENDURES TIGHTER NET PROFITS FOR Q1-Q3 2016 DUE MAINLY TO FERTILISER MARGINS**
- **CZECH ETHYLENE IMPORTS TOTAL 115,300 TONS FOR Q1-Q3 2016; UNIPETROL CRACKER RESTART**
- **ROSNEFT'S TAKEOVER OF BASHNEFT TO GO THROUGH DESPITE ARREST OF ECONOMY MINISTER**
- **SIBUR REPORTS RISE IN PROFITS FOR FIRST THREE QUARTERS, DRIVEN MAINLY BY PETROCHEMICALS**
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- **RUSSIAN PVC IMPORTS RISE 78% IN FIRST 3 QUARTERS, DRIVEN BY SAYANSKKHIMPLAST OUTAGE**
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- **KAZAKHSTAN AIMS TO COMPLETE PP PROJECT BY 2019, SEEKING PARTNER FOR PE PROJECT**
- **SOCAR LOOKING TO CHINESE INVESTMENT FOR OGPC IN AZERBAIJAN**
- **TAJIKISTAN COMMENCES CONSTRUCTION OF SECOND STAGE OF AMMONIA AND UREA PROJECTS**

## CENTRAL & SOUTH EAST EUROPE

### PKN Orlen Q3 2016

PKN Orlen reported an EBITDA of zł 2.2 billion for the first three quarters in 2016, up zł 200 million on the same period in 2015. The retail division performed very well whilst the depreciation of the zloty against foreign currencies was beneficial to the group. Factors weighing down on performance included a decline in downstream margins and maintenance shutdowns, aside the extended outage at Litvinov from August 2015. The repairs to installation at Litvinov has cost the Orlen group in the range zł 350 million.

#### PKN Orlen Group Chemical Production (unit-kilo tons)

Product	Jan-Sep 16	Jan-Sep 15
Monomers	536	633
Polymers	115	300
Aromatics	118	236
Fertilisers	624	596
Plastics	206	270
PTA	341	326

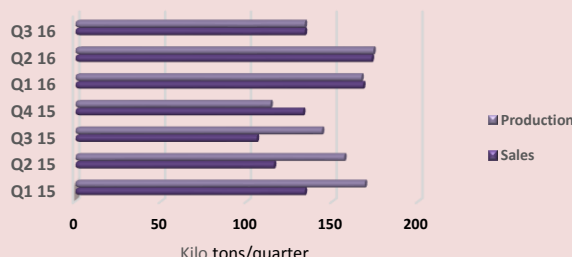
#### Main events for Orlen Group in Q3 2015

- Start of construction of new propylene plant at Plock
- Continued work on new power plants
- Completed repairs on Litvinov cracker

The main events for PKN Orlen in Q3 included the launch of construction of the metathesis unit at Plock for propylene production, and the signing of a contract with PGNiG to secure stable gas supplies over the next five years. In the power generation division, both at Wloclawek and Plock the industrial cogeneration projects are underway.

The downstream divisional EBITDA amounted to zł 1.7 billion, with diesel oil and PTA sales up 3% and 2% respectively. However, the downstream margin was down by \$4.5 per barrel (29%

#### PKN Orlen PTA Production & Sales



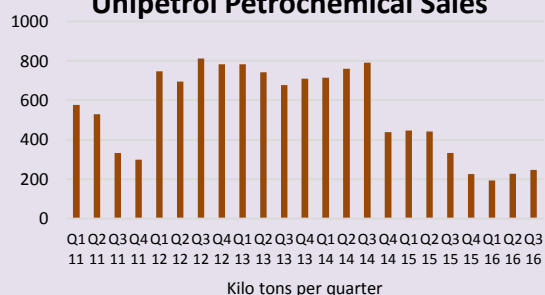
down), caused mainly by lower margins on light and middle distillates and petrochemical products. Another factor was the decline in sales volumes, mainly in high-margin petrochemical and refining products, caused by an industrial failure at Unipetrol.

PTA production and sales for the first three quarters were the same at 475,000 tons, of which around two thirds of the sales were exported.

### Unipetrol Q3 2016

Third quarter financial results for Unipetrol were significantly affected by the limited availability of production capacity at Litvinov and Kralupy, the latter which suffered an accident in May. Revenues thus dropped by 22% against the third quarter in 2015 to Kc 23.110 billion in the same period in 2016. Other factors included lower crude oil prices and lower margins.

#### Unipetrol Petrochemical Sales



and limited production at the refinery at Litvinov. Refined oil for Unipetrol totalled 1.039 million tons in the third quarter, at an overall utilisation rate at 48%. In the third quarter Unipetrol completed the repair of steam cracker which was put back into operation in October. The company also successfully completed repair of FCC unit in Kralupy refinery, and both refineries are being currently operated in full capacity.

Czech Polymer Exports (unit-kilo tons)		
Product	Jan-Sep 16	Jan-Sep 15
Polyethylene	135.3	251.4
Polypropylene	130.6	176.1
Polystyrene	102.6	106.7
PVC	50.8	99.8

Sales of petrochemical products amounted to 247,000 tons, 26% down against the third quarter in 2015. Polyethylene exports have been affected the most significantly from the Litvinov outage, dropping to 135,300 tons in the first three quarters in 2016 from 251,400 tons in the same period last year. Another factor impacting on results in the third quarter was that the petrochemical model margin decreased by 11% but was still above the historical margin of €841/ton.

Czech Petrochemical Imports (unit-kilo tons)		
Product	Jan-Sep 16	Jan-Sep 15
Ethylene	115.3	17.2
Propylene	113.6	21.6
Butadiene	43.0	20.4
Benzene	60.4	64.5
Ethylbenzene	46.1	5.8

Due to the Litvinov outage Imports of ethylene into the Czech Republic totalled 115,300 tons in the first three quarters in 2016 against 17,200 tons in the same period in 2015. Propylene imports totalled 113,600 tons against 21,600 tons.

#### Unipetrol cracker reconstruction

Unipetrol resumed olefin production in October after final pressure testing and gradual process of restarting the individual technologies. The steam cracker restart will allow

the company to fully utilise production capacities at the propylene unit and the two polyethylene units. Steam cracker restoration included the construction of four new heaters which replaced the damaged technology, the repair of the damage chimney, flue, pipe racks, and propylene column protection system, etc. This was part of the ten-month steam cracker reconstruction.

#### Unipetrol cracker reconstruction

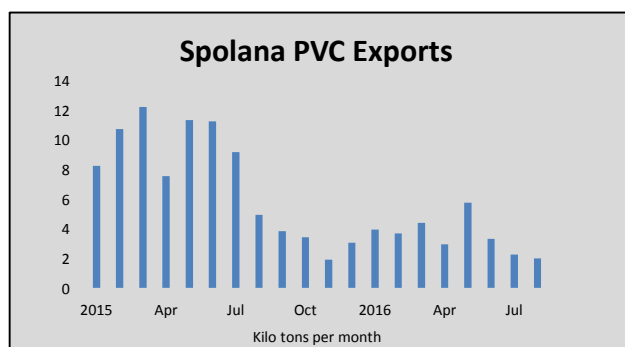
- More than one million hours has been required worked in the steam cracker reconstruction (Unipetrol, Linde and Technip employees)
- Up to 1,000 personnel of external companies participated in the reconstruction
- Total costs for repairing the damaged facility amounted to Kc 4.1 billion (€152 million euros)
- Reconstruction around ten months

Rebuilding the cracker installation at Litvinov lasted a period of over ten months and cost around Kc 4 billion. Linde Engineering undertook the project to reconstruct the damaged cracker at Chempark Záluží, whilst Technip provided some of the major technology components including four new furnaces.

Unipetrol has taken steps to minimize the risk of similar incidents in future. Newly introduced

measures include the installation of new valves in the system of safety valves in the column of propylene and ethylene column. Revision of current emergency procedures was also a part of the measures, including the development of emergency plans related to cases of high risk. The costs of the damages at the cracker were estimated at Kc 597 million.

For the cracker, Unipetrol expects that it should be in a position to recover from insurer costs of repair at the level of Kc 3.9 billion and lost business profit at the level of Kc 9.9 billion. The final amount of compensation will depend on the final agreement with insurers. The impact of the accident on the Czech polyethylene market has been to shift the country's traditional



surplus into deficit for around a year, with imports being sourced mostly from European suppliers. At the same time ethylene supplies have been reduced to PVC producer Spolana, thus impacting on PVC export activity.

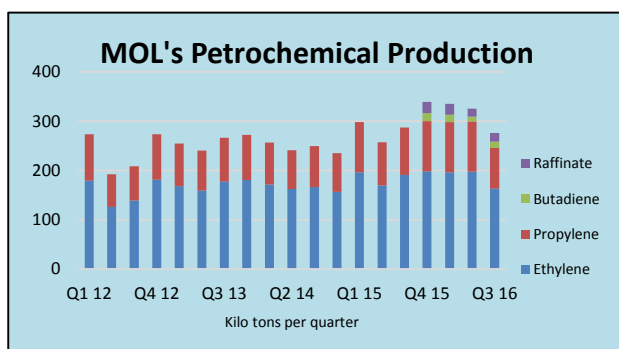
#### Unipetrol-Spolana

Unipetrol concluded an agreement on 10 June 2016 with Anwil for the purchase of Spolana. The transaction supports Unipetrol's reorganisation of activities, and will allow the Group to be more

flexible and resilient in terms of production optimization, production and sales of ethylene as well as facilitate better coordination and extension of the Group's value chain.

Spolana currently produces chlorine using a mercury electrolysis. On 9 September 2013, as a result of administrative proceedings, Spolana received a consent of the Regional Office of Central Bohemian

Region to extend the integrated pollution prevention and control license from the end of 2014 until 30 June 2017. At the same time, the company is obliged to submit an action plan aiming to cease production of chlorine using mercury electrolysis by 31 December 2016.



#### MOL, Jan-Sep 2016

MOL's third-quarter net income fell 24% to Ft 68.8 billion as higher tax payments countered the impact of a wider margin. Production of petrochemicals has increased in the past few quarters due to the introduction of the butadiene unit at Tiszaujvaros in 2015, and in 2017 more increases are expected from Slovnaft's new LDPE plant. Slovnaft has recently announced plans to invest \$500 million by 2020 to upgrade its petrochemical unit to diversify away from fuels, where demand is expected to decline. The

investment is part of MOL's strategy to invest \$4.5 billion in petrochemicals by 2030. Slovnaft stated that it aimed to increase the share of non-fuel production to 50% from the current 10-15%.

#### Rompotrol Rafinare, Jan-Sep 2016

Rompotrol Rafinare reported a consolidated net profit of \$20.8 million (€19.2 million) in the first nine months in 2016, up 41% on 2015. The consolidated operating result (EBITDA) rose by 33% to \$121 million in the period January-September. The company's positive results have been supported by the production processes optimisation programs, and the increase of the share of white products (gasoline, diesel, kerosene) in total finished products, as well as by reducing the operating costs.

Petromidia, one of the company's two refineries in Romania, processed 3.89 million tons of raw material in the first nine months, down by 5.3% compared to the same period of last year. The decrease was due to the controlled shutdown of the production units in August and September for technical maintenance. The refinery operated at reduced capacity after a fire broke out on August 26 in the area of the vacuum distillation plant, killing one worker and injuring another three. The refining capacity of Petromidia was 80.48% in the first nine months, down by 7% compared to the same period of last year.

MOL's total operating income fell 14% to Ft 969.1 billion in Q3. Total operating costs dropped 16% to Ft 875.4 billion. Operating profit was up 18% over the first three quarters in 2015 at Ft 93.6 billion. A breakdown by business division shows MOL's upstream revenue fell 4% to Ft 97.3 billion, but operating profit was Ft 16.5 billion and Ft 0.4 billion over the same period in 2015. Downstream revenue declined 14% to Ft 905.0 billion, but even so the operating profit of the division rose 11% to Ft 88.5 billion.

#### Grupa Azoty Police-propylene project

Grupa Azoty Police's management passed a resolution on the acquisition of 12 million shares of newly issued Series B shares to support its PDH Poland project. Grupa Azoty Police aims to make payments for shares in PDH Poland in two instalments of zł 68 million to be paid up to 10 December 2016. The remaining amount of zł 52 million will be paid at the end of 2017. PDH Poland is a special purpose vehicle of the Police appointed to construct a plant for the production of propylene

using PDH.

Grupa Azoty Police-PDH Poland Project	
<b>Total Cost</b>	zł 1.675 billion
<b>Expenditure outlaid to date</b>	zł 50.445 million
<b>Expenditure Q3 2016</b>	zł 8.247 million
<b>Capacity</b>	400,000 tpa
<b>Start-up Date</b>	2019

The value of the propylene PDH project is estimated at zł 1.675 billion. The first ton of propylene is to be produced in the second half of 2019 from the plant of 400,000 tpa. At the peak of the investment, the construction site will engage around a thousand employees, and after installation starts

will fall to around two hundred personnel. The first ton of propylene is expected to be produced in the second half of 2019. The other on-purpose propylene project under construction at Police in Poland is one of the key investments for Grupa Azoty, worth at least zł 1.7 million. The capacity of the propylene unit is expected to be approximately 400,000 tpa.

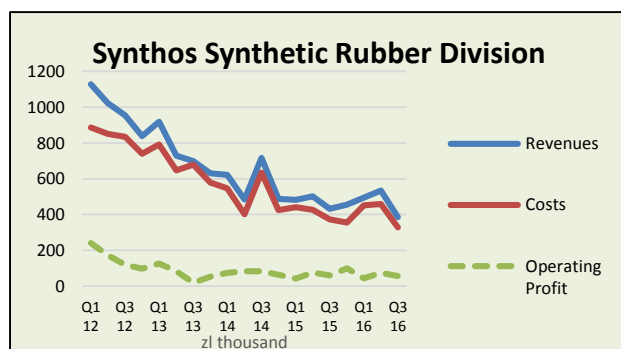
Synthos-Main Product Revenues (zł thousand)		
	Jan-Sep 16	Jan-Sep 15
Revenues	3319.0	3074.0
Costs	2726.0	2532.0
Gross Profit	593.0	604.0

#### Synthos Jan-Jun 2016

For the first three quarters of 2016 the Synthos Group generated revenues of zł 3,319 million and an EBITDA of zł 272 million. The



operating profit fell by zł 70 million to zł 306 million for the first three quarters in 2016, whilst the next profit fell by twice to zł 189 million from zł 382 million. Despite significant price declines in the rubber market over the past few years the group has been able to maintain reasonable profit levels in line with lower feedstock costs.

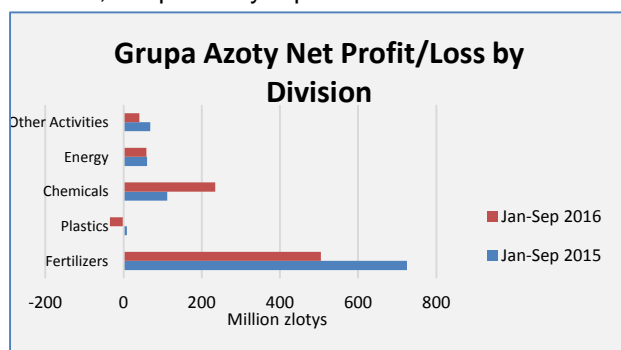


Synthos sources crude C4s from SABIC for its butadiene extraction unit at Kralupy and butadiene for its rubber operations at Oswiecim, whilst purchasing butadiene from MOL.

The group produces four different kinds of synthetic rubber: styrene butadiene rubbers, polybutadiene rubbers, high styrene rubbers and nitrile butadiene rubbers (NBR). Under a recent agreement concluded with Michelin, Synthos is to increase the production capacity of NBR to 132,000 tpa.

### Grupa Azoty, Jan-Sep 2016

In the first three quarters in 2016 Grupa Azoty posted revenues of zł 6.6 billion vs zł 7.5 billion in the same period in 2015. The net profit of zł 346 million measured against zł 540 million in Q1-Q3 2015, and EBITDA of zł 826 million vs zł 1 billion for the corresponding period of 2015. For the third quarter of 2016, Grupa Azoty reported revenues of zł 2 billion versus zł 2.4 billion in Q3 2015, with a net profit of -zł 10 million against zł 82 million in Q3 2015. The EBITDA for Q3 2016 came in at zł 131 million, against zł 223 million in Q3 2015.



For several months now, Grupa Azoty has been seeing major shifts in global fertiliser prices, which reflect broader trends on the agricultural market and the markets of key raw materials for fertiliser production.

The plastics division continued to struggle against very strong price pressure from customers. The sector is gradually taking steps to reduce the supply of caprolactam on the European market in the long term, by which the market shows the direction of changes seeking to optimise existing capacities.

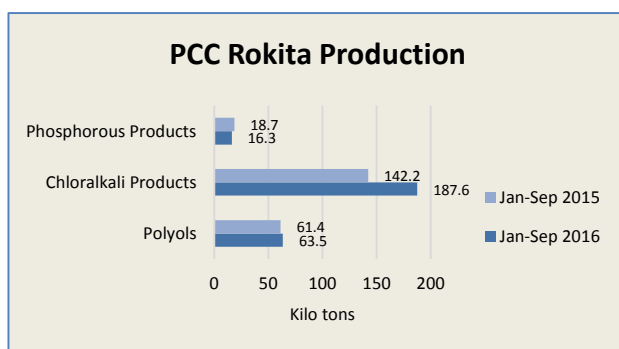
Country	Jan-Sep 16	Jan-Sep 15
Belgium	2.5	2.7
Germany	14.5	12.9
Italy	4.5	6.8
Poland	4.2	4.7
Slovenia	2.2	0.6
China	0.0	1.0
Japan	0.5	2.1
South Korea	0.0	0.6
Taiwan	0.0	0.5
Others	0.8	1.9
Total	29.3	33.8

The chemical division's clear improvement in performance and profitability was driven primarily by continued high-margin sales of melamine (as part of the flexible urea management policy), supported by the performance of oxo and pigments segments.

In Q3 2016, Grupa Azoty Pulawy earned a net profit of zł 16 million (zł 65m in Q3 2015), on revenue of zł 712 million (vs zł 935 million in Q3 2015). Grupa Azoty Police Group's consolidated results included the effect of one-off items concerning its subsidiary AFRIG S.A, which meant that the net profit fell from zł 15 million to zł 9 million, on revenues of zł 549 million (vs zł 600 million in Q3 2015). Grupa Azoty ZAK earned a net profit of -zł 2.7 million in Q3 2016 (Q3 2015: zł 14 million), on revenue of zł 379 million (Q3 2015: zł 435 million).

### PCC Rokita, Jan-Sep 2016

PCC Rokita recorded sales revenues of zł 814.4 million in the first three quarters in 2016, which is 4.6% higher than in the same period in 2015. The net profit rose 12.5% to zł 95.8 million, which was partly down to uninterrupted production in 2016 compared against extended downtime in 2015 associated with the switching system chlorine production to the new membrane technology.



The increase in revenue was due to higher production volumes and increased ability generating installations. The company faced lower prices of basic raw materials and also reduced energy consumption following the installation of the membrane plant for caustic soda production.

The group recorded an increase in margins on products from the chlorine complex which was the result of reducing the consumption of electricity required in the production process. The gross margin on sales in the group increased from 19.6% to 26.1% in 2016. Lower commodity prices have the additional effect of lower market prices polyols (the company is the largest producer in Central and East Europe). PCC Rokita at the beginning of the second quarter, completed construction of a plant for the production of prepolymers.

As a result, the group will produce a new family of products, which are used in industries such as the construction industry and furniture, and also used for sports surfaces.

#### Ciech, Jan-Sep 2016

Ciech recorded strong results for the first three quarters in 2016, in addition an increase in operating profit and net profit. The company's revenues amounted to zł 2.547 billion against zł 2.458 billion in January to September 2015. The operating profit of the company was the first three quarters of this year was zł 498 million against zł 380 million last year, whilst the net profit rose from zł 258 million to zł 419.89 million. One of the factors helping third quarter profits as a result of deferred tax.

In 2015 Ciech completed the expansion of production capacity of the soda plant at Inowrocław, from 600,000 tpa to 800,000 tpa. As a result of the first

stage of investment under the name of SODA +200 project, completed in 2015, the plant's capacity has increased by 60,000 tpa. A further 140,000 tons were delivered in the first quarter of 2016.

<b>Oltchim Product Revenues (bil lei)</b>		
Product	Jan-Sep 16	Jan-Sep 15
Petrochemicals	359.6	387.1
Chlorine division	119.7	104.7
Finished Products	16.1	16.9
Materials for construction	0.0	2.4
Sales to Pitesti	0.1	0.1
Oxo alcohols	53.7	53.3
Other	5.9	8.4
<b>Total</b>	<b>555.1</b>	<b>572.9</b>

#### Oltchim, Jan-Sep 2016

Oltchim registered a net profit of 16.1 million lei in the first nine months of 2016 (€3.6 million), compared with the losses of 15.7 million lei (€3.5 million) in the same period in 2015.

During January-September, the company registered a turnover of 555.1 million lei (€123.7 million), which was a decrease by 2.7%. Although the company increased its finished products quantities compared with the same period of the last year, the turnover is lower after nine months because of the sale price of

the oil-chemical products on the international markets. Oltchim achieved 74% of its turnover from exports in the first three quarters this year.

## RUSSIA

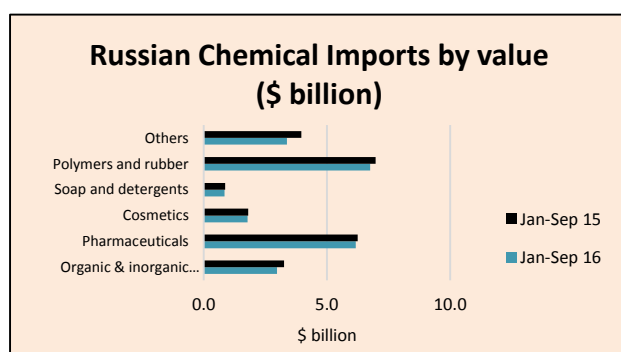


### Russian chemical trade, Jan-Sep 2016

Both import and export values of chemical products into Russia dropped sharply in the first three quarters in 2016, and the deficit was only slightly reduced from 2015. The trade deficit for Russian chemical products totalled \$9.63 billion in the first three quarters in 2016 against \$9.67 billion in the same period last year.

Imports into Russia have declined over the past few years due to the weakening of the domestic economy and the weak rouble, but exports have

also fallen in value. Essentially, the structure of imports and exports of chemical industry products differs substantially. Imports largely comprise higher value goods such as pharmaceuticals and higher grade polymers and rubbers, whilst exports are broadly defined as commodity products such as fertilisers, base polymers, etc.



The largest volume bulk commodity imports into Russia comprise PTA and isocyanates. The major export products include methanol, caprolactam, oxo alcohols, acrylonitrile and xylenes.

According to the Federal Customs Service of Russia, the share of chemical products in the commodity structure of imports for the first nine months of 19.6% (January September 2015 19.3%). The dollar volume of chemical products imports decreased by 3.7%, while physical volume

increased by 4.5%.

Russian Chemical Producers Operating Profit (Billion roubles)		
Producer	Jan-Sep 16	Jan-Sep 15
Akron	16.7	20.1
Fosagro	51.3	61.6
Kazanorgsintez	22.3	16.0
Kuibyshevazot	6.2	8.3
Metafrax	6.6	4.0
Nizhnekamskneftekhim	29.5	21.1
SIBUR	84.6	72.8
Ufaorgsintez	6.1	3.8
Togliattiazot	18.7	25.6

### Russian chemical producers, Jan-Sep 2016

Petrochemical producers have continued to report strong earnings in the third quarter, with Nizhnekamskneftekhim, Kazanorgsintez, and Ufaorgsintez all showing strong results. At the same time fertiliser producer results were affected by weak margins; Togliattiazot for example recorded the first quarterly net loss since 2009 on substantially reduced revenues. Akron also reported a net loss in the third quarter due to a rise in natural gas prices, as did the main methanol producers. Metafrax reported a drop in net profits by 2.2 times in the first three quarters in 2016 against the same period last year.

## Russian petrochemical producers & projects

### Bashneft-Rosneft takeover

The acquisition of Bashneft by Rosneft has been thrown into some controversy following the arrest of the Russian Economy Minister on 15 November under suspicion of taking bribes allegedly to make sure the deal went through. It tends to indicate the How true the allegations may be may never to come to light, but immediately after the arrest Rosneft made an offer to buy the remaining 37.52% of shares belonging to minority shareholders in Bashneft. The sale of stakes in Bashneft to Rosneft has been determined principally by politics and the need for funds to support the ailing state budget, but at the same time the deal may help to improve the utilisation of refineries in Bashkortostan. Bashneft's refining capacity of 23.2 million tpa

exceeds its oil production volumes and thus the group could benefit from Rosneft's contrasting oil production to refinery ratio.

<b>Bashneft Petrochemical Production (unit-kilo tons)</b>			
	2013	2014	2015
LPGs	84.3	117.2	149.5
Polypropylene	119.4	120.9	130.7
Paraxylene	128.5	112.0	112.05
High-density polyethylene	95.1	85.5	100.1
Phenol	73.4	69.7	76.9
Acetone	45.9	43.6	48.2
Orthoxylene	48.5	51.2	46.42
Bisphenol A	27.2*	39.5	44.5
Ethylene	16.9	27.1	27.9
Others	110.52	137.3	115.0
Total	749.7	804.0	851.3

Bashneft includes three refineries, Ufaneftekhim, Novo-Ufimsky and Ufimsky, in addition to its petrochemical plant at Ufaorgsintez and the gas processing plants Tuymazinskoe and Shkapovskoe. A significant synergy at Ufa is possible through the pipeline supply of raw materials and intermediate products between plants, combined with the integration of energy systems and overall planning.

Bashneft's downstream divisions in aromatics and petrochemicals fits well with Rosneft's search for value added areas. Ufaneftekhim's refinery produces paraxylene which it sells mostly to Polief for PTA production and Bashneft is already embarking on plans to expand paraxylene capacity from 165,000 tpa to 260,000 tpa.

Ufaorgsintez concentrates on petrochemicals based on naphtha for olefins, largely used for polyolefins and organic intermediates such, phenol and acetone. The gas processing enterprises of Bashneft utilise wide fractions of light hydrocarbons and associated gas to produce propane, butane, isobutane technical fraction, iso-pentane, etc.

Bashneft currently buys around half of its oil needs from West Siberia to support domestic oil production. Deliveries from its own oil fields in Bashkortostan amounted to 10.5 million tons in 2015, whilst another 8.3 million tons came from West Siberia.

#### **Possible increase of Chinese stakeholding in SIBUR**

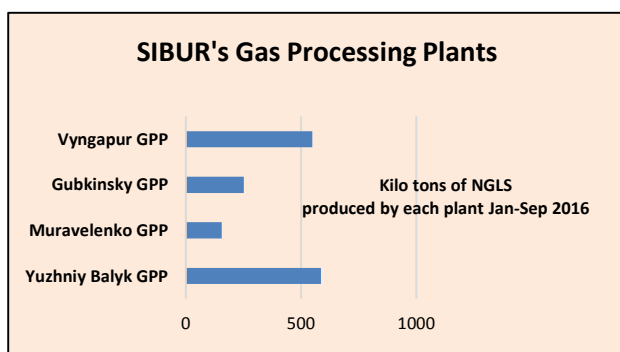
Chinese Silk Road Fund (SRF) and the bank CDB may buy 10% in SIBUR which would increase total Chinese ownership in the group up to 20%. On 7 November, the majority shareholder of SIBUR Leonid Michelson signed a framework agreement with SRF for the transaction which may take place before the end of 2016. Sinopec bought 10% of SIBUR in December 2015

SIBUR has strengthened partnerships with China in 2013 when Sinopec acquired a stake in the 25% + 1 in Krasnoyarsk Synthetic Rubber Plant. In 2014 the corporation signed an agreement with SIBUR on the establishment of a joint venture for the production of synthetic rubber at Shanghai.

#### **Yuzhniy Balyk gas processing plant**

Russian state organisation Glavgosexpertiz has granted a positive opinion on the project documentation and results of engineering studies for the reconstruction of SIBUR's Yuzhniy Balyk gas processing plant in West Siberia. The aim of the renovation is to improve the efficiency in processing associated gas, primarily to provide additional production of more than 100,000 tpa of natural gas liquids. The project plans to modernise the gas separation unit and condensate, to design an adsorption unit gas dehydration capacity of 2 billion cubic metres per annum and a booster compressor station capacity of 1.5 billion cubic metres per annum.



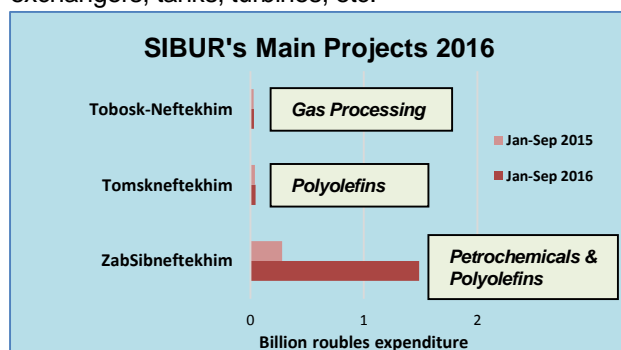


Upgrading the Yuzhniy Balyk gas processing plant has been undertaken over the past decade, the first phase of which included an increase in processing capacity from 0.9 to 1.5 bcm. SIBUR undertook the second phase of reconstruction in 2009 and current capacity of the gas processing plant stands at 2.93 billion cubic metres per annum.

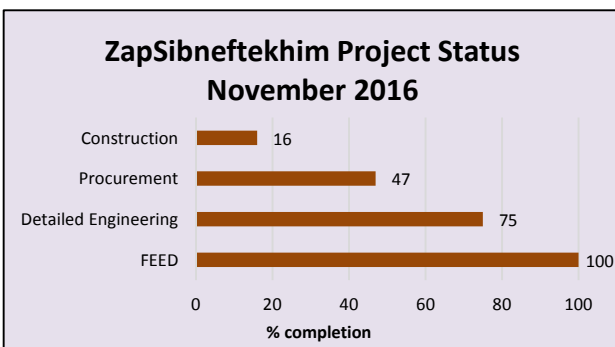
#### ZapSibneftekhim-update November 2016

By the end of October SIBUR had installed 23 units of large equipment for the pyrolysis complex

under construction at ZapSibNeftekhim. By the end of the year another 13 units of large-sized column equipment will be installed at the construction site, including the 4 columns, as well as compressors, heat exchangers, tanks, turbines, etc.

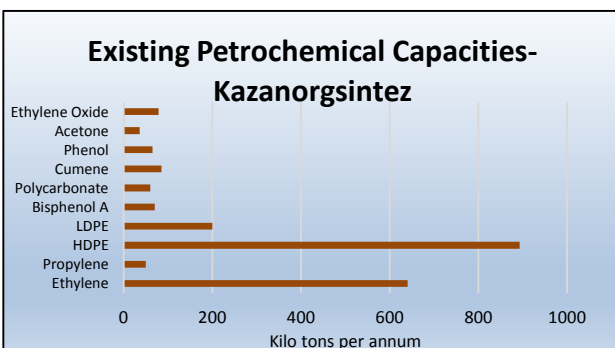


SIBUR estimates that the ZapSib-2 complex, which is part of ZapSibNeftekhim, is being financed 57% from its own funds. The total value of the project is estimated at \$5.4 billion. As the graphic opposite shows, the amount of investment in the new petrochemical complex at Tobolsk has risen dramatically this year, as activity has intensified. The scale of investment heavily outweighs other projects being conducted by SIBUR at Tobolsk-Neftekhim and Tomskneftekhim. SIBUR has attracted for the project \$1.75 billion from the National Welfare Fund, equating to around 25% of the total project. Export credit agencies are to provide the remaining parts of finance.



The configuration of the new ZapSibNeftekhim complex, involves the construction of a pyrolysis plant with capacity of 1.5 million tpa of ethylene (Linde technology) and 500,000 tpa of propylene, as well as 240,000 tpa of high-margin by-products (butadiene, butene-1, MTBE, and pyrobenzene). The project also envisages the construction of the

production of various grades of polyethylene with a total capacity of 1.5 million tpa (INEOS technology), and the installation for the production of polypropylene capacity of 500,000 tpa (LyondellBasell).



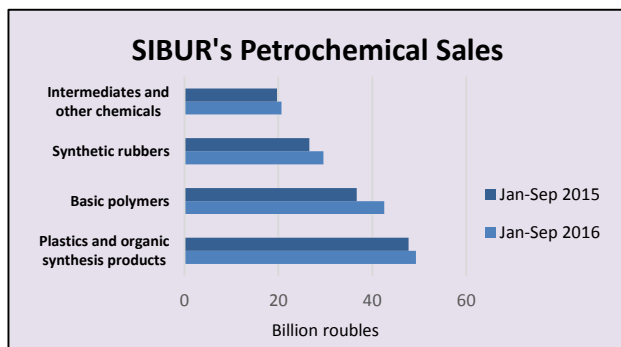
#### Kazanorgsintez-Technip

Kazanorgsintez and Technip signed an EP-contract in November for the reconstruction of the ethylene cracker. Under the contract, Technip will be responsible for engineering and supply of three pyrolysis furnaces operating on licensed SMK™ technology. Furnaces will be installed on the existing ethylene units. Project support will provide Technip office in Zoetermeer (The Netherlands). It will also be responsible for the commissioning of the equipment, which is scheduled for 2018. In 2007 and 2015, Technip supplied double-chamber furnaces for pyrolysis at Kazanorgsintez, which are now successfully operated.

Kazanorgsintez produced 683,100 tons of polyethylene in 2015, which was lower than full capacity due to the lack of gas feedstock for ethylene production. Currently, Kazanorgsintez operates three plants for the

production of HDPE of 220,000 tpa, 195,000 tpa and 75,000 tpa. LDPE capacity stands at 225,000 tpa. Both gas feedstocks combined with the imbalance with ethylene capacity prevent the full utilisation of polyethylene plants.

### Russian Petrochemical Producers Q3 Performance



#### SIBUR, Jan-Sep 2016

SIBUR Holding increased its net profit in the first three quarters in 2016 by 2.6 times against the same period last year, totalling 51.335 billion roubles. Revenues rose by 2.4% to 256.49 billion roubles, while the cost of sales rose by 9% to 172.2 billion roubles. Gross profit decreased by 8.8% and amounted to 84.292 billion roubles.

Long-term liabilities of the company as of 30 September, fell to 222.152 billion roubles from 246.609 billion at the end of last year. Short-term decreased to 100.845 billion against 123.307 billion roubles as of 31 December 2015.

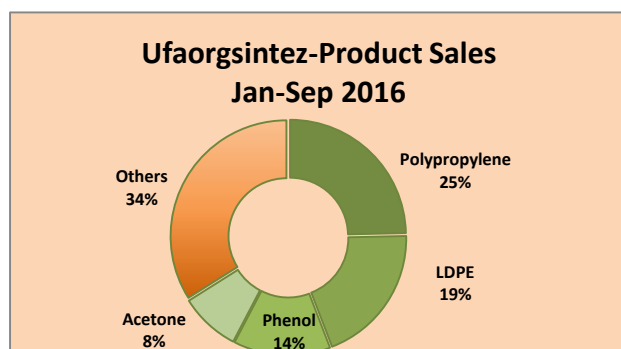
Revenues from sales of petrochemical products increased by 8.7% in the first three quarters, with each petrochemical product group contributing. Revenues from sales of polymers increased due mainly to higher polypropylene sales volumes, whilst higher revenues from synthetic rubber sales resulted from higher capacity utilisation of both commodity rubbers and thermoplastic elastomers. The growth in revenue from sales of plastics and organic synthesis products was primarily driven by higher sales and production of BOPP-films and glycols.

Rosneft Petrochemical Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Angarsk Petrochem-Butanol	1.2	15.0
Angarsk Polymer-Benzene	27.3	51.5
Angarsk Polymer-Styrene	13.5	26.1
Angarsk Polymer-Propylene	59.8	60.6
SANORS-Benzene	20.3	19.4
SANORS-Acetone	33.3	36.0

#### Rosneft, petrochemical sales Jan-Sep 2016

Rosneft reduced the revenue from sales of petrochemical products at 5.9% for the three quarters of 2016, due mainly to the outage at Angarsk. The share of petrochemicals in Rosneft's total revenues increased from 2.1% in January-September 2015 to 2.3% in the same period this year.

Thus petrochemicals remain a fringe product area which Rosneft is keen to develop. Revenues rose 8% in the first three quarters in 2016 to 80 billion roubles, of which export revenues totalled 68 billion roubles against 71 billion roubles in the period January to September 2015. The main share of petrochemicals produced by Rosneft takes place at Angarsk Polymer Plant and Novokuibyshevsk Petrochemical Company (SANORS).



#### Ufaorgsintez, Jan-Sep 2016

Ufaorgsintez recorded a net profit of 5.59 billion roubles in the first three quarters in 2016, 2.1 times higher than in 2015. Revenues for Ufaorgsintez increased in January to September 2016 by 41% to 21.9 billion roubles.

The company notes that in the third quarter that there was declining demand for polymer products in the domestic market, culminating in the need to slightly increase exports of products to the CIS and foreign markets. The share of revenues for

Ufaorgsintez from sales on the domestic market comprised 78% in the first three quarters in 2016.

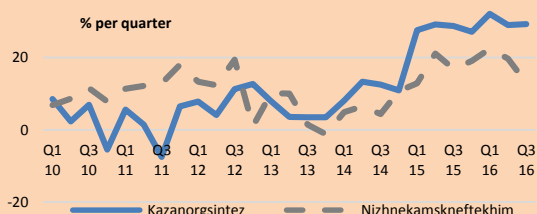
The Federal Antimonopoly Service (FAS) has approved the application of Tatneft to buy 1.8% shares in of Nizhnekamskneftekhim after it bought 25% in March 2016. The FAS had previously expressed concerns that the transaction could lead to restriction of competition on the market of synthetic rubber. Tatneft intends to increase shareholder value in Nizhnekamskneftekhim, which previously was the blocking shareholder, and stresses it will support investment in the new olefin complex.

### Nizhnekamskneftekhim & Kazanorgsintez, Jan-Sep 2016

The net profit for Nizhnekamskneftekhim rose 12.2% in the first three quarters in 2016 to 21.051 billion roubles. Revenues increased by 3.4% and totalled 113.812 billion roubles. At the same time the company's cost of sales increased by 2.42% to 84.29 billion roubles, and gross profit rose by 6.2% to 29.522 billion roubles. The operating profit amounted to 19.299 billion roubles, which is 0.16% more than the same period last year. Long-term liabilities of the company on 30 September 2016 amounted to 7,143 billion roubles, an increase of three times since 31 December 2015.

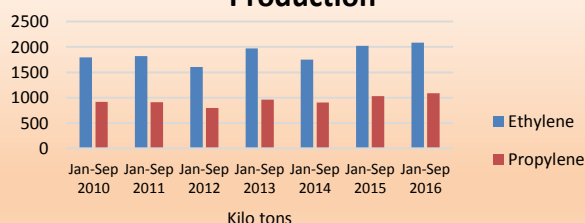
Revenues for Kazanorgsintez grew by 15.1% in the first nine months in 2016 to 58.05 billion roubles, whilst the gross profit rose 1.2 times to 22.260 billion roubles. Net profit of Kazanorgsintez increased by 22.1%, from 14.36 billion roubles for nine months in 2015 to 17.53 billion roubles for nine months of 2016. Kazanorgsintez increased revenues from the sale of polyethylene by 12.5% in the first three quarters of 2016 to 28.350 billion roubles, of which HDPE accounted for 20.145 billion roubles or around 70% of sales. The company stated that the significant increase in sales prices was responsible for higher revenues in 2016 rather than volumes.

### Ratio of Net Profits to Revenues for Tatarstan Petrochemical Producers



### Russian petrochemical markets

### Russian Ethylene-Propylene Production



### Russian ethylene & propylene, Jan-Sep 2016

Russian ethylene production totalled 2.085 million tons in the first three quarters in 2016 against 2.023 million tons in the same period in 2015, whilst propylene production rose from 1.030 million tons to 1.084 million tons. Propylene numbers exclude PDH propylene, such as produced at Tobolsk. Both ethylene and propylene production have achieved record levels this year, mainly due to the restart of the Stavrolen cracker and despite the extended outage at Angarsk. In the ethylene market Sayansk Khimplast and Angarsk Polymer

Plant are currently in court over ethylene prices

In the first three quarters in 2016 Russian propylene exports totalled 138,000 tons which was 3.1 times higher than in 2015. Most of the imported propylene into Russia is taken by Volzhskiy Orgsintez, and the main source of imports is Azerkhiya. In the first nine months imports amounted to 2,400 tons which was

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Nizhnekamskneftekhim	223.8	221.4
Angarsk Polymer Plant	13.5	26.1
SIBUR-Khimprom	111.1	93.7
Gazprom neftekhim Salavat	128.0	114.6
Plastik, Uzlovaya	38.0	33.8
Total	514.3	489.6

47% down on the same period. Exports of propane-propylene fractions from Russia totalled 42,500 tons in the first three quarters in 2016, 7% less than in the same period in 2015.

### Russian styrene, Jan-Sep 2016

Russian styrene production totalled 514,300 tons in the first three quarters in 2016 against 489,600 tons in the same period in 2015. Although Angarsk Polymer Plant was forced to reduce volumes, increases were noted by SIBUR-Khimprom and Gazprom neftekhim Salavat. From January to September Russian styrene exports

totalled 91,600 tons which was 16% up on the same period in 2015.

## Bulk Polymers

### Russian polyethylene production, Jan-Sep 2016

In the first nine months of this year HDPE production rose 17% to 769,300 tons; LDPE production fell from 465,900 tons to 448,500 tons whilst LLDPE production rose from 20,000 tons to 48,800 tons. Of the HDPE producers, Kazanorgsintez produced 373,900 tons which is 3% higher than in the first three quarters in 2015, whilst Stavrolen produced 205,200 tons against 123,000 tons.

Russian HDPE Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Kazanorgsintez	373.9	361.5
Stavrolen	205.2	122.2
Nizhnekamskneftekhim	110.5	105.6
Gazprom neftekhim Salavat	79.7	68.7
Total	769.3	658

Nizhnekamskneftekhim increased production of HDPE by 1% in the first three quarters to 110,500 tons, whilst Gazprom neftekhim Salavat produced 83,100 tons against 67,600 tons.

Stavrolen sold 41,200 tons of HDPE on the domestic market in the first three quarters which was 28% up on last year, whilst export shipment for the period increased doubled and amounted to about 140,000 tons.

The takeover of Ufaorgsintez by Rosneft has already started to result in changes in the way polyolefins are sold. Rosneft announced a tender in November for exports from Ufaorgsintez, including 2,800 tons of LDPE and 1,280 tons of polypropylene.

Russian HDPE Imports (unit-kilo tons)		
Category	Jan-Oct 16	Jan-Oct 15
Extrusion	18.1	38.7
Pipe	19.0	32.3
Film	22.1	14.9
Blow	25.6	20.7
Injection	31.2	38.4
Others	9.8	9.1
Total	125.8	154.1

### Russian HDPE/LLDPE imports, Jan-Oct 2016

In the first ten months of 2016 HDPE imports dropped by 21% against the same period in 2015 to 125,800 tons. Imports dropped from 16,700 tons in September to 12,800 tons in October. The greatest reduction in external supplies recorded in the segment of pipe extrusion, and extrusion coating of steel pipes of large diameter, while import HDPE film and blow moulding, by contrast, rose.

LLDPE imports fell 20% in the period January to October 2016, totalling 147,600 tons. Film grade LLDPE accounted for 130,200 tons in the first ten months against 156,300 tons in same period in 2015. Nizhnekamskneftekhim is the sole producer of LLDPE in Russia, which expects to produce around 70,000 tons in 2016 and rising to 100,000 tons in 2017.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Ufaorgsintez	90.3	94.5
Stavrolen	87.7	82.4
Moscow NPZ	96.9	88.2
Nizhnekamskneftekhim	162.4	162.0
Polyom	149.6	141.8
Tomskneftekhim	93.6	99.8
Tobolsk-Polymer	333.4	258.6
Total	1013.9	917.0

### Russian polypropylene production, Jan-Sep 2016

In the first nine months of 2016 Russian polypropylene increased by 9% and amounted to 1.014 million tons against 927,900 tons in 2015. Tobolsk Polymer produced 333,400 tons whilst Polyom produced 149,600 tons compared to 141,700 tons in January to September 2015.

SIBUR's sales revenues were up 16.0% to 42.567 billion roubles primarily driven by higher polypropylene sales volumes on increased production at Tobolsk. The growth was also attributable to higher average selling prices for polypropylene and LDPE due to the Russian rouble depreciation and favourable domestic market

environment.

Neftekhimya at Moscow increased production by 12% to 96,900 tons, whilst Stavrolen increased production from 82,400 tons to 87,700 tons. Nizhnekamskneftekhim was unchanged at 162,400 tons, whilst Ufaorgsintez reduced volumes from 94,500 tons to 90,300 tons and Tomskneftekhim reduced production by 7% to 93,900 tons.



**Russian Polypropylene Imports (unit-kilo tons)**

	<i>Jan-Oct 16</i>	<i>Jan-Oct 15</i>
Homopolymers	64.5	51.3
Block	26.7	24.7
Random	28.7	29.5
Other	24.3	22.0
<b>Total</b>	<b>144.2</b>	<b>127.5</b>

**Russian polypropylene imports, Jan-Sep 2016**

In the first ten months of the current year the total volume of imports of polypropylene into Russia grew by 13% to 144,200 tons compared to the same period of 2015.

**Russian PVC production, Jan-Sep 2016**

In the first ten months of this year production of PVC decreased by 2% compared to the same period of 2015 and totalled 627,000 tons. In October, production dropped to 62,000 tons against 65,700

tons in September due to maintenance at RusVinyl. For the first ten months in 2016 RusVinyl produced 245,600 tons against 184,600 tons in 2015. Bashkir Soda Company produced 204,400 tons which was 3% higher, whilst Kaustik at Volgograd reduced production by 8% to 72,800 tons.

**Russian PVC Production (unit-kilo tons)**

<i>Producer</i>	<i>Jan-Oct 16</i>	<i>Jan-Oct 15</i>
Bashkir Soda	204.4	176.4
Kaustik	72.8	71.6
RusVinyl	245.6	169.2
Sayanskkhimplast	104.3	161.2
<b>Total</b>	<b>627.1</b>	<b>578.4</b>

Sayanskkhimplast produced 104,300 tons in January to October 2016 against 179,600 tons in the same period in 2015, the reduction due to the extended outage between February and June.

Imports of PVC into the Russian market increased by 60% over the first ten months of 2016 to 124,100 tons against 77,600 tons. China accounted for 96,600 tons in the first ten months in 2016 against 51,100 tons in 2015, whilst imports from the US rose 12% to 18,900 tons.

**Russian PVC Imports (unit-kilo tons)**

<i>Source</i>	<i>Jan-Oct 16</i>	<i>Jan-Oct 15</i>
US	18.9	13.2
China	96.6	51.2
Europe	8.4	9.4
Others	0.2	3.3
<b>Total</b>	<b>124.1</b>	<b>77.1</b>

**Russian polystyrene imports, Jan-Oct 2016**

Import of polystyrene and styrene plastics in Russia grew by 10% in January-October 2016 to 96,800 tons, including a 5% increase in ABS to 25,400 tons. South Korea supplied 15,200 tons of ABS resins to the Russian market in this period. The Russian market is estimated at around 40,500 tpa. Nizhnekamskneftekhim increased the production of ABS

plastics by 84% in 2015 to 5,360 tons.

The highest growth was recorded for general purpose polystyrene, almost doubling to 22,800 tons the period January to October 2016. Russian converters purchased raw materials from South Korea, Italy, Belgium and China. Imports of HIPS amounted to 16,950 tons in the first ten months in 2016 against 16,800 tons in the same period in 2015. EPS imports dropped 18% to 18,600 tons, due to higher production by SIBUR-Khimprom.

**Russian PTA-PET**

**Russian Paraxylene Domestic Sales (unit-kilo tons)**

<i>Producer</i>	<i>Jan-Sep 16</i>	<i>Jan-Sep 15</i>
Gazprom Neft	49.2	64.3
Ufaneftekhimi	84.4	79.1
Kirishinefteorgsintez	0.2	0.2
<b>Total</b>	<b>133.8</b>	<b>143.6</b>

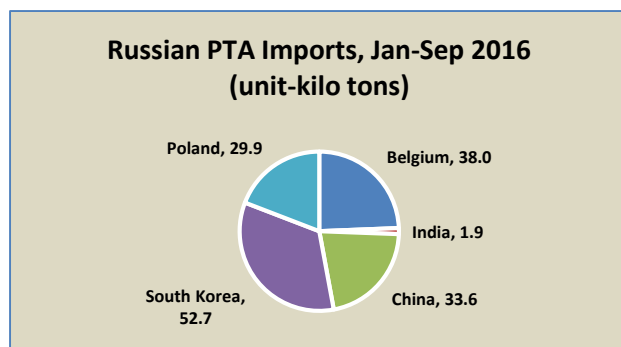
**Russian paraxylene, Jan-Sep 2016**

Domestic sales of paraxylene on the Russian market dropped from 143,600 tons in January to September 2015 to 133,800 tons in 2016. Gazprom Neft at Omsk reduced sales in the first three quarters this year due to extended maintenance. Ufaneftekhimi shipped 84,400 tons of paraxylene to Polief in this period against 79,100 tons in 2015.

Ufaneftekhimi is part of Bashneft which has been taken over by Rosneft, which is yet to confirm investment plans. In August 2016 Bashneft and SIBUR signed a new long-term contract (until 2036) for the supply of paraxylene for the production of PTA. The contract is a continuation of Ufaneftekhimi's long-term partnership in the supply of paraxylene to Polief and means that Ufaneftekhimi needs to supply at least 120,000 tpa. Current consumption of paraxylene at Polief is estimated about 180,000 tpa.

### Etana PTA/PET project

The government of the Kabardino-Balkaria government and the company Etana signed a general agreement on 8 November for construction of the PTA/PET complex with two subsidiaries of China National Petroleum Corporation China National Petroleum Company (CNPC). The planned capacity of includes 1.5 million tpa of PET and 1 million tpa of PTA.



At the beginning of 2016 the Kabardino-Balkaria government signed an EPC-contract for the construction of the first sector of the complex, including design, and infrastructure development. Possible tax deductions on operating the Etana PET complex could amount to 20 billion roubles. The number of jobs created in the construction

period could amount to around 2,500.

The project had been stalled in 2015 due to financial issues, but was revived following after Chinese investors showed interest not only in supporting the project financially but also in regard to higher capacity. The PET plant is now intended to be developed in several phases. The first line of 500,000 tpa is scheduled for start-up in 2018 rising to 1.5 million tpa by 2020. A large amount of the production is intended to be sent to China. The PTA project seems less certain and further news is awaited.

Russian PET Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Senezh	59.1	71.5
SIBUR-PETF	64.0	59.5
Alko-Naphtha	121.3	91.2
Polief	156.3	168.8
Total	400.7	391

### Russian PET market, Jan-Nov 2016

Production of PET granulate in Russia in the first three quarters increased by 6% compared to January-September 2015 and amounted to 400,000 tons. Volumes are growing due to higher production by Alko-Naphtha which increased production by 10% to 121,300 tons of PET in the first nine months in 2016. Last year Alko Naphtha ran at only 52% of capacity. The largest producer in Russia is Polief which produced 156,800 tons in the first nine months in 2016.

### Russian MEG trade, Jan-Sep 2016

In the first nine months of 2016 Russian MEG exports totalled 95,300 tons which was 42% up on the same period last year. MEG imports in January to September amounted to 21,900 tons, which was 3.5 times higher than in 2015.

Alko-Nafta stopped PET production in November for maintenance. In the past two months Alko Naphtha has operated at levels of about 530 tons per day from its 220,000 tpa plant. Alko-Naphtha is based on the territory of the free economic zone of Kaliningrad region. The granulate is produced under the trademark EkōRet and used for the production of food packaging and PET bottles. Products from the plant are supplied to the Russian market and for export to CIS countries, the Baltic States, South America.

## Aromatics

### Russian benzene market, Jan-Jul 2016

Russian benzene production totalled 901,700 tons in the first three quarters in 2016 against 886,900 tons in the same period in 2015. The largest rise was recorded by Gazprom neftekhim Salavat, increasing to

Russian Aromatics Production 2016 (unit-kilo tons)									
Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Benzene	115.2	95.1	105.1	91.1	97.1	97.1	92.0	103.6	101.4
Toluene	26.3	25.7	32.4	28.9	36.2	36.2	34.1	35.5	25.2
Xylenes	50.4	47.7	47.4	47.8	48.8	48.8	46.1	47.9	36.0
Styrene	62.4	56.4	60.4	53.1	59.5	59.5	44.8	62.6	57.7
Ethylbenzene	69.9	61.2	67.3	57.4	69.1	69.1	48.1	67.9	66.5

122,000 tons against 92,800 tons in the first three quarters in 2015, whilst the largest fall was recorded by Angarsk Polymer Plant which fell from 51,500 tons to 27,300 tons. For the first three quarters in 2016 benzene imports totalled 8,800 tons which was 2.4 times more than in 2015. Aside Ukrainian imports such as

Zaporozhkoks, benzene has also started to arrive from the Atyrau refinery in Kazakhstan (1,200 tons in September).

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Angarsk Polymer Plant	27.3	51.5
Chelyabinsk MK	0.0	0.0
Gazprom Neft	75.4	73.6
Stavrolen	11.9	17.8
Lukoil-Permnefteorgsintez	30.5	37.9
Magnitogorsk MK	46.8	48.5
Nizhnekamskneftekhim	155.6	143.9
Novolipetsk MK	11.0	22.0
Gazprom neftekhim Salavat	122.0	92.8
Severstal	26.0	29.2
SIBUR-Kstovo	52.8	52.0
Slavneft-Yaroslavlorgsintez	50.6	48.5
Kirishinefteorgsintez	50.5	39.7
Ryazan Refinery	26.1	18.5
Ufaneftkhim	67.2	72.5
Ural Steel	8.0	7.3
Uralorgsintez	64.2	61.9
Zapsib	55.3	49.9
SANORS	20.3	19.4
Total	901.7	886.9
Source: Chem-Courier		

Regarding benzene producers, Gazprom Neft has completed scheduled maintenance on at the Omsk refinery for the production of aromatic hydrocarbons. Repairs were conducted in September and October, where a total of 1600 pieces of equipment were repaired including 17 furnaces, heat exchanger 81, 300 measuring and control devices.

The most difficult operation involved the replacement of two heat exchangers, the height of which is 18 metres in diameter and 60 tons in weight. For mounting at a height of over 40 metres and strapping technology infrastructure used crane of 500 tons.

Nizhnekamskneftekhim is undertaking plans to modernise the production of benzene after signing a license agreement with GTC Technology (USA). The GT-BTX® technology will be applied to the olefins plant EP-600 at Nizhnekamsk, which will process C6-C8 hydrocarbons.

The modernisation will allow Nizhnekamskneftekhim to reduce the cost of production of benzene, and also to provide savings of up to 40,000 tpa of hydrocarbons. The agreement with GTC includes the development of the basic design, technical services, the supply of catalyst, solvent and

equipment. The start the upgraded production is scheduled for 2017.

Kuibyshevazot Product Revenues (Billion roubles)		
Product	Jan-Sep 16	Jan-Sep 15
Polyamide-6	8.7	8.8
Caprolactam	3.2	2.7
Urea	3.1	4.2
Ammonium Nitrate	4.3	4.4
Others	8.3	7.9
Total	27.6	27.9

#### Kuibyshevazot Jan-Sep 2016

Kuibyshevazot reduced sales by 1% in the first nine months of 2016, although sales of mineral fertilisers grew by 5.7%. At the end of three quarters, sales totalled of 27.6 billion roubles, and net profit amounted to 3.3 billion roubles. Polyamide-6 sales remained the largest source of revenues.

Energy-efficient production of cyclohexanone, using Dutch DSM technology, was launched by Kuibyshevazot in 2016. This project was key to expanding caprolactam production capacity from 190,000 tpa to 210,000 tpa, yet to be completed, and to 260,000 tpa in future. It is also an opportunity to increase the production of processed products, including polyamide-6, technical and textile yarns. Other developments for Kuibyshevazot include the completed commissioning of a joint venture with Praxair for the production of air separation products, whilst another jv with Linde is currently in the preparation stage for ammonia production.

Russian Orthoxylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Oct 16	Jan-Oct 15
Gazprom Neft	39.1	49.0
Ufaneftkhim	42.7	32.3
Kirishinefteorgsintez	26.8	29.1
Total	108.6	110.4
Source: Chem-Courier		

#### Russian orthoxylene sales, Jan-Oct 2016

Orthoxylene sales on the domestic market amounted to 12,490 tons in October, including 7,140 tons from Ufaneftkhim, Gazprom Neft 3,570 tons and Kirishinefteorgsintez. 1,770 tons. Kamteks-Khimprom increased its purchases in October by 21% to 5,560 tons, whilst Gazprom neftekhim Salavat increased by twice to 940 tons. Dmitrievsky Chemical Plant increased its

purchases of production in October by 33%, to 1,200 tons. Domestic sales totalled 108,520 tons in the first ten months which was 2% less than the same period in 2015.

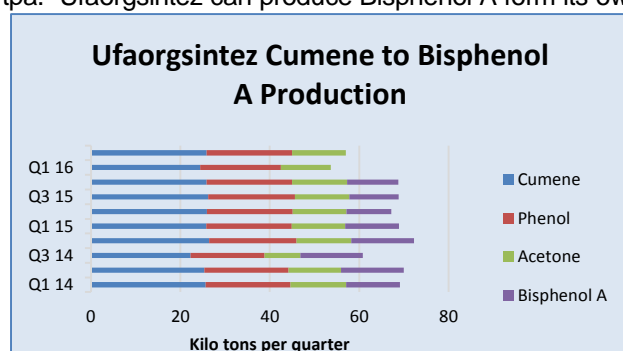
Russian Phenol Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Ufaorgsintez	55.1	57.8
Kazanorgsintez	48.1	53.3
Novokuibyshevsk Petrochemical	59.1	55.6
Omsk Kaucuk	0.0	0.0
Total	162.3	166.6
<b>Source: Chem-Courier</b>		

ownership of Rosneft with the aim to optimise production processes, including replacement of the aluminium chloride catalyst.

#### Phenol revamp at Ufaorgsintez

Bashneft is seeking preferential treatment in terms of taxation by the regional government for the reconstruction of the cumene plant for Ufaorgsintez, which could cost in excess of 1 billion roubles (\$160 million). The intention to carry out the reconstruction of the production of cumene at Ufaorgsintez started in 2014 under the previous owners the United Petrochemical Company, which identified Badger Licensing LLC as the licensor and project developer. The same licensor is expected to be kept under new ownership of Rosneft with the aim to optimise production processes, including replacement of the aluminium chloride catalyst.

The capacity of the cumene plant at Ufaorgsintez is 120,000 tpa although production rarely exceeds 100,000 tpa. Ufaorgsintez can produce Bisphenol A from its own production of phenol and acetone. However, the Bisphenol A plant has been idle since the end of 2015 and Bashneft has no plans to resume production in the near future. Production was stopped for repairs in late 2015, and has been since conserved in a non-active state.



Production capacity for Bisphenol A is 60,000 tpa, but the technology is considered obsolete having been constructed in the 1980s. The goal to build a new plant may be dependent on financial support from Rosneft, the new owner of Bashneft and 100% owner for Ufaorgsintez.

#### Omsk Kaucuk, phenol-acetone reconstruction

Omsk Kaucuk (included in GC Titan) has completed the foundation stages for the new plant for phenol-acetone production and will the installation of equipment will begin in the near future. The recovery of the production of phenol-acetone involves the modernisation of other plants belonging to the production chain, in accordance with modern requirements in the field of industrial safety. Reconstruction at Omsk is scheduled to be completed in 2018, involving a doubling of capacity based on the latest benzene alkylation technology. Similarly, to Ufaorgsintez Omsk Kaucuk intends to change the aluminium chloride catalyst to a new catalyst. Production of phenol and acetone was decommissioned by Omsk Kaucuk in March 2014 due to a major accident.

### Synthetic Rubber

Russian Synthetic Rubber Exports (unit-kilo tons)		
Category	Jan-Sep 16	Jan-Sep 15
E-SBR	20.2	24.0
Block	30.5	25.9
SSBR	7.1	5.8
SBR	41.8	56.6
Polybutadiene	177.9	168.3
Butyl Rubber	97.9	100.7
HBR	89.0	88.7
NBR	22.1	22.6
Isoprene Rubber	208.4	195.5
Others	34.1	23.7
Total	729.0	711.8

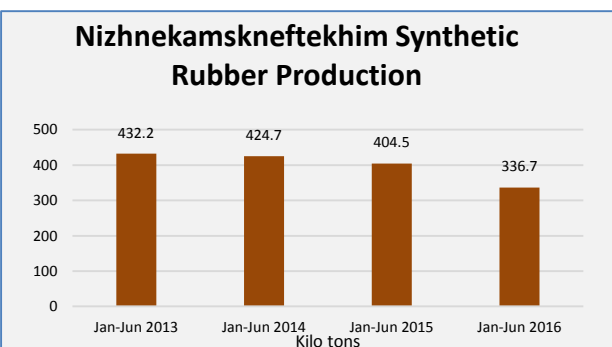
#### Russian synthetic rubber exports, Jan-Sep 2016

Synthetic rubber exports from Russia totalled 729,000 tons in the first nine months in 2016, against 711,800 tons in the same period in 2015. The largest category of exports, isoprene rubber, increased from 195,500 tons to 208,400 tons whilst polybutadiene exports rose from 168,300 tons in January to September 2015 to 177,900 tons in the same period this year. Other volume rubber exports included halogenated butyl rubber and butyl rubber. In terms of destinations, Poland, India and China were the three main markets for Russian synthetic rubber exports, whilst East Europe provides the largest region for Russian exports. Imports into Russia of natural and synthetic rubber totalled 144,200 tons in the first nine months in 2016, against 132,800 tons in the same period last year.



### Nizhnekamskneftekhim isobutylene, butyl & isoprene rubber

Nizhnekamskneftekhim intends to put start a new installation for the production of isobutylene by the end of the year, as part of providing the feedstock base for isoprene monomer production. Isobutylene is considered by Nizhnekamskneftekhim to be more economical in the production of isoprene monomer than isopentane, which it has traditionally used in the production process. The new isobutylene unit is expected to be completed before the end of 2016, with a capacity of 160,000 tpa, and will combine with a 100,000 tpa unit for formaldehyde.



The new isobutylene unit is also helpful in the production of MTBE and particularly butyl rubber where capacity at Nizhnekamsk is scheduled to rise to 220,000 tpa by February 2017. Butyl rubber capacity is being expanded to fulfill contracts with global tyre suppliers such as Pirelli, Michelin and Bridgestone. Last year Nizhnekamskneftekhim produced 198,000 tons of butyl rubber, of which

126,900 tons was halogenated.

As part of the reconstruction process, isoprene rubber capacity at Nizhnekamskneftekhim is being increased from 280,000 tpa to 380,000 tpa. At the end of 2014 Nizhnekamskneftekhim held a 42% share in the world market for polyisoprene rubber and 16% in butyl rubber. In the first half of 2016 Nizhnekamskneftekhim produced 336,700 tons of synthetic rubber which is lower than in 2015, 2014 and 2013 due to weaker markets.

Nizhnekamskneftekhim produced its 10 millionth ton of isoprene rubber in October since the plant was started on 8 October 1970. Last year, the plant produced 265,000 tons of SKI-3 which is expected to be higher in 2016. Ongoing modernisation and upgrading is part of the company strategy to reach 330,000 tpa of capacity by 2019. In the near future it is planning to start commercial production of the new generation of rubber SBR, also intended for the tyre industry.

Russian C4 Supplies (unit-kilo tons)		
Supplier	Jan-Oct 16	Jan-Oct 15
Angarsk Polymer	16.8	57.4
Kazanorgsintez	30.9	24.1
Stavrolen	61.8	48.1
SIBUR-Kstovo	68.4	58.1
Tomskneftekhim	49.7	53.9
Ufaorgsintez	21.3	21.8
Naftan (Belarus)	37.0	44.1
Azerkhiymya	16.0	21.0
Others	1.4	9.2
Total	303.3	337.7

Source; Chem-Courier

### SIBUR synthetic rubber division, Jan-Sep 2016

Synthetic rubber sales revenues for SIBUR were up 11.4% in the first three quarters in 2016 to 29.596 billion roubles, as the group increased production of commodity rubber due to shorter maintenance shutdowns compared to 2015. The average selling price for commodity rubbers was supported by the Russian rouble depreciation, and the local shortage, due to a third-party production shutdown. Prices for thermoplastic elastomers from Voronezhskintezkaucuk were boosted by cancelled discounts which had been applied for premarketing

sales in 2015.

SIBUR has completed the planned repairs on the synthetic rubber and butadiene plants at Togliatti. Aside improving equipment operations, the maintenance shutdown was aimed at improving safety and environmental performance of production. Repairs carried out included a complete dismantling of the equipment, updating and cleaning columns, replacement of power cables, etc.

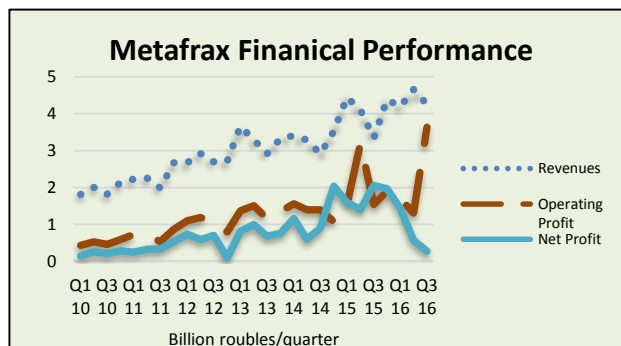
Russian Tyre Production (unit-mil pieces)		
Product	Jan-Oct 16	Jan-Oct 15
Car Tyres	34.2	31.3
Lorry tyres	5.9	5.5
Agricultural tyres	1.3	1.1
Total	41.4	37.9

### Russian tyre plants

Omskshina (part of the Kordiant holding company) plans to invest in the modernisation of plant preparation of rubber compounds to 3 billion roubles. The key objective of the project consists of the production of value added rubber compounds with high silica content for passenger and light truck tyres. The inclusion of this product in the tyres allow the manufacturer to improve the quality characteristics of

finished goods: to increase the coefficient of adhesion of tyres on wet and snow-covered road, and a decrease of carbon consumption in the manufacturing process. An overriding objective is to seek an impact on environmental performance.

## Methanol



### Metafrax, Jan-Sep 2016

The net profit of Metafrax decreased by 2.2 times in the first three quarters in 2016 and amounted to 2.2 billion roubles. The decline is due mainly to the rise in production costs, rising from 5.628 billion roubles to 6.652 billion roubles. Revenues increased from 11.895 billion roubles to 13.112 billion roubles in January to September 2016.

### Russian methanol and ammonia projects

Metafrax signed a memorandum of understanding for its investment plans on 10 November for ammonia, urea and melamine, estimated at €500 million. Plant facilities will be designed to produce 500,000 tpa of urea, 300,000 tpa of ammonia and 40,000 tpa of melamine. Construction is expected to start in 2017 and last at least until 2020.

UralMetanolGroup is scheduled to start construction of the methanol plant at Chempark Tagil, in Nizhny Tagil, in the near future. The licensor is Danish company Haldor Topsoe and the capacity of the plant is being designed to produce 600,000 tpa. The company expects to attract residents to for processing of raw materials.

Russian Chemical Commodity Exports				
	Jan-Sep 16	Jan-Sep 16	Jan-Sep 15	Jan-Sep 15
Product	Kilo tons	USD Mil	Kilo tons	USD Mil
Ammonia	2,834	693	2,425	948
Methanol	1,158	189	926	257
Nitrogen Fertilisers	9,443	1,651	8,188	1,947
Potash	7,378	1,501	9,378	2,503
Mixed Fertilisers	6,936	2,026	6,920	2,564
Synthetic Rubber	729	931	712	1,064

After many years of delays, the project is reported to have passed all necessary examinations, including the permission for the construction from Glavgosekspertiz.

Shchekinoazot continues to implement its project for new facilities for methanol and ammonia M-450 / A-135. Mitsubishi has already installed a compressor, supplied from China via St Petersburg, whilst other equipment has arrived from Italy, the Czech Republic and Luxembourg. Reactor construction should be completed by the end 2016. The general designer of the new complex is Orgkhim at Severodonetsk in Ukraine. The number of personnel of the general contractor and its subcontractors at the construction site more than 780 people, and the work is progressing to schedule.

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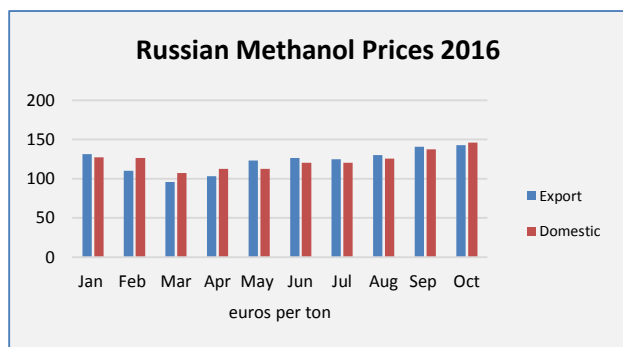
### Shchekinoazot-Haldor Topsoe

Shchekinoazot and Haldor Topsoe signed a contract on 10 November for engineering services for the new construction unit for methanol capacity of 500,000 tpa. This will add to the current M-450 plant, producing 450,000 tpa, which started in 2011. The main objective of the new project for the next two years will be the preparation of the construction site, engineering surveys, basic engineering and design documentation, passing through state examination of the project and obtaining a building permit.

Russian Phenol & Urea Resin Production 2016 (unit-kilo tons)									
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Urea resins	68.4	71.4	87.2	80.5	75.9	75.9	93.1	96.3	100.0
Urea-formaldehyde resins	30.9	32.0	49.2	43.9	41.3	41.3	50.4	50.1	54.5
Amino aldehyde resins	30.9	27.1	30.7	30.4	26.7	26.7	30.3	28.8	28.2
Phenol-formaldehyde resins	2.0	1.8	2.1	2.1	1.4	1.4	2.2	2.5	2.5
Phenolic resins	20.1	15.0	16.5	16.7	14.8	14.8	15.8	13.6	14.2

The company's management believes that, despite the complexity of the methanol market in Russia and in Europe, this project will have a reasonable payback period. Importantly the rising costs of gas mean that

Shchekinoazot requires the most effective technology that it would allow it to compete successfully on the domestic and international markets.



#### Russian methanol, Jan-Sep 2016

Domestic methanol prices have been rising in the past two months, rising by around 10% over the first half of the year to a range of 14,000-26,000 roubles per ton (including VAT). Tomet continues to sell the methanol at the lowest price whilst the upper limit is offered by Metafrax and Shchekinoazot. The cost of methanol in the Volga Federal District trading companies varies in the range of 16,500-20,500 roubles per ton including VAT.

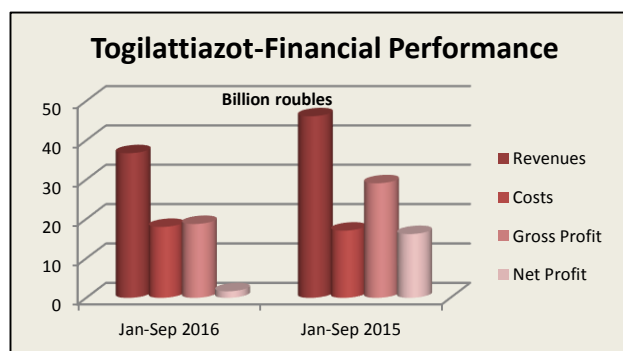
#### Russian fertiliser producers, Jan-Sep 2016

Akron reduced its net profit in the first three quarters to 9.619 billion roubles against 13.652 billion roubles in 2015. Profits were affected by a higher rise in revenues in relation to costs, although Akron increased the production of mineral fertilisers by 18.9% in the first three quarters in 2016. Production of ammonia increased by 26.9%, and nitrogen fertilisers by 24.3%. In the first nine months the group produced 3.83 million tons of fertilisers, including 2.7 million tons of nitrogen fertilisers. Volumes of production of ammonium nitrate increased by 16.3% to 1.29 million tons, whilst urea rose by 30.2% to 581,000 tons.

Akron Production (unit-kilo tons)		
Product	Jan-Sep 16	Jan-Sep 15
Ammonia	1568	1236
Urea	581	446
Methanol	55	68
Formaldehyde	105	127
Urea-formaldehyde resins	120	141
Calcium Carbonate	320	278

This year Akron has made the sale of Chinese factory Hongri Akron, so its production figures since the middle of the year are not included. The new unit Ammonia-4, which was launched in Veliky Novgorod in the summer, produced 176,000 tons the third

quarter. Also on the site in Novgorod it was produced 38 tons of rare earth metals, of which 24 tons were shipped to customers.



Togliattiazot increased ammonia production by 8.9% in the first three quarters in 2016 to 2.24 million tons, whilst urea rose 6.9% to 434,000 tons. Despite the rise in production volumes, Togliattiazot recorded a net loss of 1.06 billion roubles in the third quarter this year, the first time the company has not made a profit since 2009. Revenues dropped in the first three quarters to 36.739 billion roubles from 46.132 billion roubles in the same period in 2015. Togliattiazot attributed the lower revenues and profits on the complications of shipping ammonia through the pipeline in Ukraine to the Odessa port

and transit costs have risen as a result.

Fosagro increased its net profit in the first three quarters to 48.520 billion roubles, whilst revenues rose by 4% to 147.6 billion roubles. The EBITDA for the nine months decreased by 6% to 58.9 billion roubles, whilst the EBITDA margin for the period decreased by 4% to 40%. Operating profit for Fosagro decreased by 9% and amounted to 51.3 billion roubles.

## Organic chemicals

#### Russian butanol exports, Jan-Sep 2016

In September, exports of butanols from Russia amounted to 9,230 tons which was 25% up on August. The proportion of normal butanol in the total Russian exports accounted for 73%. Gazprom neftekhim Salavat shipped 6,880 tons to foreign markets, SIBUR-Khimprom 2,170 tons, and Azot at Nevinnomyssk 180 tons. Finland accounted for 39% of Russian exports, China (17%), Latvia (11%), Poland (11%), Ukraine (10%)



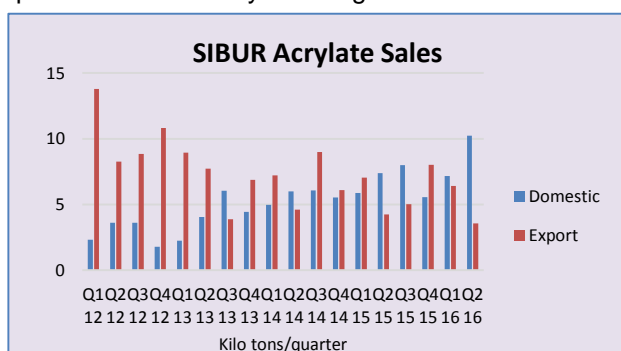
and Turkey (9%). Butanol exports from Russia for the period January-September 2016 amounted to 74,340 tons which is 21% down on the same period in 2015.

Butanol production in Russia dropped 30% in September against August to 14,740 tons. Gazprom neftekhim Salavat reduced production by 48% to 5,660 tons due to limited propylene availability. As a result, the company stopped one of the two lines. SIBUR-Khimprom produced 7,570 tons of butanols in September, and Azot

Nevinnomyssk 1,510 tons (10%). For the first nine months of 2016 butanol production in Russia amounted to 172,490 tons which is 7% less than in the same period in 2015.

### SIBUR-2 EHA

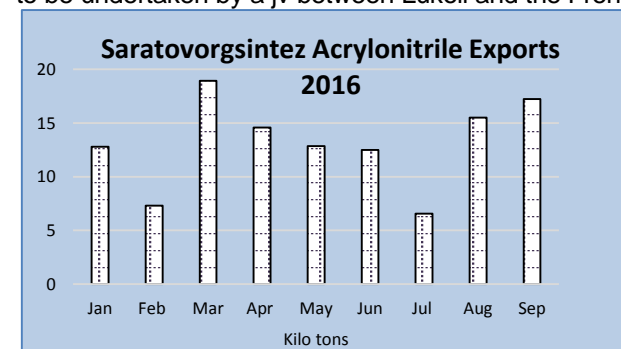
SIBUR launched a new unit for 2-ethylhexyl acrylate (2-EHA) at Dzerzhinsk in late October at the Akrlat division. The company has upgraded the existing plant for the development of butyl acrylate used in the preparation of acrylic emulsions and adhesives. SIBUR has created the technology transition from one product to another by installing a new column into the existing scheme, in addition to pumping equipment, parallel piping, etc. SIBUR-Khimprom and the Research Centre NIOST located at Tomsk participated in the technological innovation. 2-ethylhexyl acrylate is used in the production of paints and varnishes and has not been produced in Russia previously.



Production of acrylic acid and esters was put into operation in 2004 by Akrlat which was then taken over by SIBUR in 2011. The feedstocks for acrylic acid production, propylene, are supplied by SIBUR-Kstovo and butanol is provided by SIBUR-Khimprom. Design production capacity the Akrlat division includes 31,000 tpa of acrylic acid and ether polymer grades, 40,200 tpa of butyl acrylate and 10,000 tpa of light acrylic esters (methyl and ethyl acrylate).

### Polyacrylamide plant-Saratov

The first phase of construction of the production of acrylamide and polyacrylamide plant at Saratovorgsintez, to be undertaken by a joint venture between Lukoil and the French company SNF, and is scheduled for completion in the first quarter of 2019. The project has been under consideration for several years and design work on the new production facilities is scheduled for completion in the fourth quarter. In the spring of 2016 the Ministry of Economic Development of the Saratov region reported that Lukoil and SNF were maintaining plans for a joint project for the production of acrylamide and polyacrylamide based at Saratovorgsintez. Polyacrylamide capacity of 20,000 tpa is the first target, with a possible expansion to 40,000 tpa in the second phase. Investments in the first production will



amount to 2.5 billion roubles.

Lukoil and SNF first considered a joint project in 2012, and construction of the plant was due to begin in 2014. Delays have been incurred due to economic factors, which has meant that progress on the design stage only started in 2016. The plant area allocated at Saratovorgsintez comprises around twenty hectares, and the area of manufacturing, warehouse and technical premises more than 20,000 square metres. The plant will be located two workshops for the production of acrylamide, and four for the production of powdered polyacrylamide.

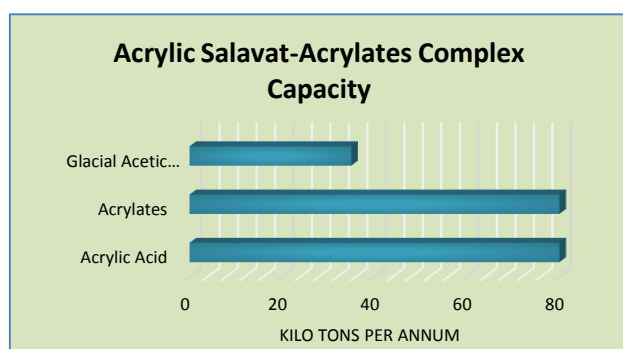


Russian Organic Chemical Production 2016 (unit-kilo tons)									
Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Isopropanol	3.1	3.3	3.4	3.3	0.1	0.1	1.3	2.3	2.4
N-Butanol	12.3	14.0	11.9	10.2	12.0	12.0	12.1	13.5	8.2
Isobutanol	8.0	7.8	7.4	7.0	7.2	7.2	6.4	7.4	6.5
MEG	42.9	41.2	43.6	44.3	44.7	44.7	36.3	43.2	31.3
Propylene glycol	0.1	0.1	0.1	0.1	19.6	19.6	0.1	0.0	0.1
Phenol	19.7	20.8	20.4	19.9	1.7	1.7	14.1	15.3	13.7
Acetic Acid	15.3	15.7	17.0	5.5	3.6	3.6	17.6	17.1	17.8
Butyl Acetate	4.1	3.6	3.0	2.0	0.0	7.6	4.0	3.6	4.9
Phthalic Anhydride	13.1	9.9	9.1	9.8	9.2	8.7	8.6	11.2	7.1
Methionine	2.5	2.3	2.5	2.4	2.4	14.6	2.5	2.5	2.4

### Acrylic Salavat

Acrylic Salavat, a subsidiary of Gazprom neftekhim Salavat, is following a comprehensive testing of all systems for the new acrylate complex. A pump has been installed supplying the normal butanol from Gazprom neftekhim Salavat, as the new plant could require up to a maximum of 53,546 tpa. During commissioning works

on the production of the acrylates pump will operate continuously.



The acrylates complex is one of the ten key projects for Gazprom neftekhim Salavat, planned for completion in the next few years. In December 2012 the company signed an EPC-contract with Mitsubishi Heavy Industries, Ltd. (Japan), the trading house Sojitz Corporation (Japan) and Renaissance Construction (Turkey) for the construction of the complex.

Construction began in December 2014 and has proceeded mostly to schedule, although it is not entirely clear when production will start. The

complex will operate the acrylic acid plant with a production capacity of 80,000 tpa, butyl acrylate with a capacity of 80,000 tpa and glacial acrylic acid capacity of 35,000 tpa. Investments into the project are estimated at 38.9 billion roubles.

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	Jan-Sep 16	Jan-Sep 15
Gazprom neftekhim Salavat	6.4	4.2
Kamteks-Khimprom,	55.8	51.6
Total	62.2	50.8

### Russian phthalic anhydride, Jan-Sep 2016

Phthalic anhydride exports from Russia amounted to 1,840 tons in September which was 23% down on August. India accounted for 31% of exports shipments in September, followed by Poland (30%), Finland (15%), Uzbekistan (10%) and Mexico (8%). Kamteks-Khimprom exported 28,200 tons in the first three quarters in 2016 which is 17% lower than in 2015.

Phthalic anhydride production in Russia amounted to 6,270 tons in July, 26% more than in June. Kamteks-Khimprom increased production by 52% to 5,900 tons and Gazprom neftekhim Salavat decreased by 66% to 370 tons. According to Chem-Courier, from January to July 2016, Russia produced 48,569 tons of phthalic anhydride 13% less in 2015.

## Belarus

Azot Grodno Production (unit-kilo tons)		
Product	Jan-Oct 16	Jan-Oct 15
Methanol	56.3	71.1
Caprolactam	92.6	105.9
Polyamide primary	85.6	77.9
Polyamide filled	9.5	7.6
Ammonia	884.0	928.5
Urea	845.1	885.6
Fertilisers	636.9	666.6
Fibres	30.2	24.6

### Belarusian petrochemical production

Azot at Grodno increased the production of marketable products in value terms by 3.9% in the first ten months of 2016. The company managed to obtain a significant increase in tonnage for tyre cord fabrics, fibres and yarns. Regarding gas prices for Azot, the price of Russian gas for Belarus was retained in October at \$132 per thousand cubic metres.

For the first ten months, the company increased its in tonnage figures for the polyamide by 4.1% to 85,600 tons. Cord fabric

production increased by 35.7%, amounting to 30,104 thousand running metres, fibres and filaments 21.8% to 30,225 tons.

At the same time the production of ammonium sulphate at Grodno fell by 13.9% to 274.380 tons. Methanol production at Grodno decreased by 20.7% to 56,300 tons and caprolactam decreased by 12.5% to 92,682 tons. Methanol production is expected to rise in the remaining part of the year.

<b>Belarussian Organic Chemical Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Sep 16</b>	<b>Jan-Sep 15</b>
Acrylonitrile	27.0	29.2
Caprolactam	6.5	23.1
Phthalic anhydride	17.0	19.1
Methanol	24.4	54.4

Benzene production in Belarus for the first eight months totalled 82,100 tons against 89,900 tons in the same period in 2015. Reduced production of benzene at the Novopolotsk refinery has been due to lack of raw materials and the reduction in imports of Russian oil.

#### **Belarussian chemical trade, Jan-Aug 2016**

Methanol exports from Belarus in the first nine months in 2016 totalled 24,147 tons against 54,337 tons in the same period in 2015. Exports to Poland fell from 13,576 tons in the nine months of 2015 to 11,504 tons in 2016, whilst volumes to Ukraine fell from 21,638 tons to 10,812 tons.

<b>Mogilevkhimvolokno PTA Imports (unit-kilo tons)</b>		
<b>Country</b>	<b>Jan-Sep 16</b>	<b>Jan-Sep 15</b>
Poland	19.9	30.0
Russia	2.2	2.4
South Korea	18.0	5.0
Portugal	1.0	0.0
Thailand	1.1	3.2
Total	42.2	40.6

Caprolactam exports from Belarus declined from 23,100 tons in the period January to September 2015 to 6,451 tons in 2016, with Azot not exporting over the past few months. For acrylonitrile exports, the largest destination for Belarussian product in the first nine months in 2016 was Turkey accounting for 16,096 tons, followed by the Netherlands with 3,972 tons. Phthalic anhydride exports from Belarus dropped to 17,024 tons in the first nine months to 2016 from 19,099 tons. Polyethylene exports rose from 88,667 tons to 89,698 tons.

Regarding imports, paraxylene shipments from Russia increased from 8,247 tons in the first nine months in 2015 to 15,766 tons in the same period in 2016. PTA imports rose slightly to 42,216 tons from 40,550 tons in the first nine months in 2015. Poland is the dominant supplier of PTA accounting 19,948 tons in the first nine months of 2016 followed by South Korea with 18,031 tons. For MEG, Belarus imported 48,124 tons in the first nine months in 2016 against 45,127 tons in the same period in 2014. Russia accounted for almost all imports in both years.

#### **Belarussian polymer imports, Jan-Aug 2016**

In the first nine months of this year the total volume of imports of polypropylene into Belarus increased by 12.9% and amounted to 70,900 tons. The largest increase was seen in the supply of propylene copolymers which rose from 15,400 tons in January to September 2015 to 19,400 tons in 2016. PVC imports decreased by 21% and amounted to 18,900 tons against 22,200 tons. The main reason for the decline is falling export sales of finished products, in particular, profile-moulded products.

<b>Belarussian Polymer Imports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Sep 16</b>	<b>Jan-Sep 15</b>
PVC	18.9	22.2
Polypropylene	70.9	61.4
LDPE	61.0	40.4
HDPE	33.8	30.5
Polystyrene	50.3	46.2

Polyethylene imports rose 31.2% in the first nine months in 2016, totalling 100,733 tons against 76,800 tons in 2015. HDPE imports rose 10% to 33,800 tons, whilst LDPE and LLDPE imports rose from 40,400 tons to 61,000 tons.

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### **Ukraine**

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#### **Ukrainian PVC imports, Jan-Sep 2016**

In the first nine months of 2016, imports of PVC to Ukraine increased by one third compared to the same period in 2015 and amounted to 81,300 tons against 61,200 tons. Imports from the US totalled 47,600 tons in the first three quarters in 2016 against 25,000 tons in the same period last year. European PVC imports to Ukraine amounted to about 28,600 tons against 29,000 tons in 2015, whilst imports from Russia fell to 4,400 tons in January to September 2016 from 6,200 tons.

**Ukrainian Polymer Imports (unit-kilo tons)**

Product	Jan-Sep 16	Jan-Sep 15
PVC	81.3	61.2
LDPE	50.0	65.6
LLDPE	38.9	45.3
HDPE	91.0	63.8
PP	88.0	66.9

In the first nine months of 2016 polypropylene imports grew by 31% to 88,000 tons. Homopolymer imports totalled 67,600 tons against 51,300 tons, block copolymers rose from 7,100 tons to 8,500 tons and random copolymers rose from 7,000 tons to 10,000 tons.

Polyethylene imports rose 25% in the first three quarters to 194,200 tons from 155,400 tons in the same period in 2015. HDPE imports increased from 68,100 tons to 91,000 tons, LDPE imports rose 7% to 50,000 tons and LLDPE imports

rose from 33,200 tons to 42,900 tons. Import other types of polyethylene, including EVA amounted to just about 10,300 tons against 7,300 tons in the same period in 2015.

Regarding styrene polymers, Stirol at Gorlovka last produced polystyrene in March 2014. It is not clear when the plant might restart, if at all. In the first nine months in 2016 Ukraine imported 11,300 tons of polystyrene which was 28% more than in the same period in 2015. EPS imports totalled 5,940 tons in the first three quarters of which 1,770 tons came from Iran.

**Other Ukrainian chemical news**

Sumykhimprom, one of Ukraine's largest chemical enterprises, reduced net profit by 37% in January-September 2016 against 2015 to 32.6 million hryvnia (\$51.7 million). The production of titanium dioxide decreased by 6.5% to 30,714 tons, whilst fertilisers fell by 1.8 times to 104.647 tons. In addition, the production of ferrous sulphate amounted to 33,608 tons.

More than two thousand employees of Karpatneftekhim in the Ivano-Frankivsk region have petitioned the Ukrainian President with a request to restore the trade with Russia. The employees of Karpatneftekhim have apparently demanded the restoration of economic ties with Russia and other CIS countries, as the plant is more integrated into these regions than the EU at present.

**Central Asia**

**Kazakhstan-polyolefin projects Atyrau**

Kazakhstan has set the target of launching the production of polypropylene at Atyrau by 2019, and production of polyethylene by 2020. The polypropylene project consists of a capacity of 500,000 tpa, whilst the second phase includes 800,000 tpa of polyethylene in addition to butadiene.

The first phase of the project is being managed by Kazakhstan Petrochemical Industries Inc. (KPI), controlled by United Chemical Company (51%) and Almex Plus (49%). At the beginning of 2016 China Development Bank (CDB) has approved a loan for the construction of the polypropylene unit worth \$2 billion. In December 2015 an EPC-contract was signed December 2015 with the Chinese company CNCEC in worth \$1.795 billion (excluding VAT). The rest of the financing will be provided at the expense of the organisers of the project.

The second stage of the gas chemical complex is less certain as Kazakhstan seeks partners for the project. In early 2016 LG Chem decided to withdraw from the project, and thus United Chemical Company continues to search for a strategic partner. LG Chem possibly may come to the project if it can reach agreement with the Kazakh side.

**Kazakh Polymer Imports (unit-kilo tons)**

Product	Jan-Sep 16	Jan-Sep 15
HDPE	53.9	53.8
LDPE	12.8	16.3
LLDPE	3.8	3.1
PVC	28.4	38.4
Polypropylene	17.3	15.6

**Kazakh polymer imports, Jan-Sep 2016**

In the first nine months of 2016, imports of polypropylene into Kazakhstan increased by 11% over 2015 and totalled 17,300 tons. Due to higher domestic demand, Kazakh export sales of polypropylene, by contrast, decreased by 28% to 13,800 tons against 19,200 tons. In the first nine months of 2016 imports

of polyethylene into Kazakhstan decreased by 12% and amounted to 70,300 tons. The reduction of demand was seen for HDPE and LDPE whilst LLDPE rose.

**Azerbaijan Chemical Production (unit-kilo tons)**

<b>Product</b>	<b>Jan-Sep 16</b>	<b>Jan-Sep 15</b>
Ethylene	71.1	68.5
Polyethylene	66.9	62.6
Propylene	36.6	40.3
Isopropanol	7.4	7.7
Barium Sulphate	46.3	44.6
C4s	9.1	22.0
Methanol	117.9	95.8

**Azerbaijan Jan-Sep 2016**

Methanol production in Azerbaijan rose 23.1% in the first three quarters to 117,900 tons whilst the production of polyethylene increased by 6.8% to 66,900 tons. Ethylene production at Sumgait rose 3.8% to 71,100 tons, and isopropanol by 3.9% to 7,532 tons. In other areas, the production of barium sulphate rose by 3.9% to 46,000 tons and paints and varnishes rose by 33% to 5,146 tons. A decline in January-September 2016 took place in an argon production by 13.2% to 146,800 cubic metres, whilst iodine fell by 17.2% to 156.4 tons.

**SOCAR OGPC & Chinese investors?**

SOCAR has suggested that Chinese investors could provide around 50% of the project OGPC in Azerbaijan. In June, 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.

**Technip EPC contract for Sumgait complex**

Azerkhimya and Technip concluded the EPC-contract (Engineering, Procurement and Construction) on 5 November for the reconstruction of the Ethylene-Polyethylene plant at Sumgait. Technip's EPC contract will coordinate closely with the Azerbaijani-US JV SOCAR-KBR for the provision of consulting services in project management.

As part of the reconstruction modernisation will be carried on existing processing units, in addition to the construction of new facilities at Sumgait. Azerkhimya hopes to complete the project

for the construction of new facilities and reconstruction of the existing infrastructure at the Ethylene-Polyethylene plant by 2021. The design process, tendering for purchase of equipment and the selection of contractors and full completion of construction will be carried out by Azerkhimya in the period 2016-2020.

**Tajikistan ammonia project**

Azot in Tajikistan began the second stage of reconstruction of fertiliser production on 18 November at Sarband, which will comprise additional capacities of 500,000 tpa of ammonia and urea. The project is scheduled to take three years to complete on a site of 45 acres. In September 2016 the government of Tajikistan and China signed an investment agreement on the reconstruction and commissioning of the new plant for Azot.

The first stage of the project is scheduled for completion in February 2018, which involves upgrading the existing production capacity of which ammonia and urea to 320,000 tpa. Around \$360 million has been allocated for the project. Azot's current capacities include 110,000 tpa of ammonia and 180,000 tpa of urea.



<b>Russian Domestic Chemical Prices 2016 (euros per ton)</b>										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Ethylene	297.3	257.0	263.2	349.2	328.2	357.9	370.3	376.3	392.4	427.9
Propylene	304.7	329.0	290.7	340.6	417.7	476.0	491.6	410.6	411.4	470.6
Benzene	385.3	403.6	431.6	450.1	484.2	492.2	486.8	481.9	550.2	530.7
Xylene,	364.4	375.6	420.0	457.6	470.3	499.2	490.5	506.7	536.3	502.5
Toluene	277.0	257.8	304.8	342.0	386.9	416.0	426.3	429.5	459.9	473.2
Styrene	556.3	611.0	655.7	744.9	826.6	850.9	870.9	721.9	802.9	791.0
Plasticizer Alcohols	487.8	476.4	493.2	530.7	536.5	558.7	574.1	582.2	616.4	625.7
Butanols	427.2	470.5	485.8	496.5	488.2	571.7	597.2	578.3	625.8	634.1
Methanol	127.2	126.4	107.4	112.6	112.6	120.3	120.4	125.6	137.3	146.1
Methanol wood	112.1	113.4	142.6	105.6	106.9	111.2	174.1	176.6	0.0	189.7
MEG	543.1	518.0	535.2	558.4	546.4	543.6	558.2	588.8	666.2	653.8
Phenol	711.6	714.2	754.4	783.5	794.9	866.7	890.4	0.0	980.7	944.6
Acetic acid	303.3	318.1	339.2	380.4	401.7	418.7	437.0	439.0	454.3	469.9
Butyl acetate	517.7	0.0	538.5	483.3	445.5	501.5	539.6	528.0	531.2	502.9
Caprolactam	1084.2	1113.3	1176.5	1291.1	1307.6	1360.0	1397.2	1416.5	1498.6	1522.1
Formalin	102.1	105.7	115.9	126.6	129.1	127.2	133.6	137.7	149.0	150.0
Acetone	262.9	258.3	256.3	262.4	277.4	471.3	484.6	625.3	482.5	468.6
Polyethylene	924.4	924.5	981.4	1075.2	1086.7	1125.1	1154.0	1170.5	1205.7	1191.8
Polystyrene	1022.7	1032.3	1044.0	1136.2	1153.6	1198.8	1200.2	1202.5	1186.3	1147.5
PVC	530.1	524.3	575.3	685.9	742.7	748.0	786.1	813.0	839.9	819.8
Epoxy resins	1857.3	1733.7	1870.8	1984.7	2083.5	2153.3	2158.1	2173.6	2332.2	2327.4
Polypropylene	837.3	861.3	891.3	946.1	975.8	1021.6	1054.8	1060.5	1123.4	1139.2
Amino-resins	213.0	217.4	218.8	229.8	222.3	224.8	225.1	235.9	248.6	253.7
Phenolic resins	305.4	360.8	511.5	408.8	396.4	384.1	385.7	376.7	455.4	469.8
Silicone polymers	2029.3	2425.5	2619.1	2585.3	2581.1	2668.7	2647.8	2806.4	2928.4	2880.3
Synthetic rubber	934.0	949.7	949.9	1033.1	1023.2	1057.7	1088.4	1069.2	1223.6	1244.1
SKMS	697.9	685.8	753.9	804.4	790.9	855.3	894.9	821.0	994.2	1013.1
Butadiene rubber	785.7	798.1	849.0	870.3	925.0	939.8	989.6	985.3	1118.9	1158.6
NPR	1211.8	1231.9	1296.6	1366.4	1393.9	1432.0	1478.7	1523.5	1617.7	1638.2
Isoprene rubber	954.9	1010.4	1028.3	1122.9	1081.8	1058.5	1058.4	1047.4	1222.9	1264.9
Other synthetic rubber	1958.5	1989.1	2034.6	2020.7	1957.3	2020.0	2014.1	2125.8	2294.5	2371.6

**Relevant Currencies**

Czech crown. Kc. \$1= 20.852. €1 = 27.444: Hungarian Forint. Ft. \$1 = 229.253. €1 = 310.141: Polish zloty. zł. \$1=3.016. €1 =4.14 Ukrainian hryvnia. \$1 = 24.8. €1 = 27.7: Rus rouble. \$1 = 65. €1= 72

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