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MONTHLY NEWS

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

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Features from this issue

Central European petrochemical markets

- MOL and Thyssenkrupp have laid the foundation stone for new polyol complex in Hungary
- Propylene imports into Poland amounted to 75,600 tons in the first half of 2019 against 98,200 tons in the same period in 2018
- Anwil from the Orlen Group is considering increasing the production capacity of EDC by 100,000 tpa

Russian chemical production

- Chemical production in Russia rose 3.4% in the first eight months in 2019 against January to August 2018
- Russian ethylene production totalled 2.054 million tons in the first eight months in 2019 against 1.989 million tons in the same period in 2018
- Having produced its first propylene in September ZapSibNeftekhim is preparing to produce polyethylene from its own ethylene at the new Tobolsk complex
- Methanol production in Russia totalled 2.957 million tons in the first eight months in 2019 against 2.761 million tons in same period in 2018

Russian chemical trade

- Russian propylene exports amounted to 49,700 tons in the first eight months in 2019 against 67,600 tons in the same period in 2018
- Styrene exports from Russia increased to 81,500 tons in the first eight months in 2019 against 64,100 tons in the same period in 2018.
- Russian methanol exports totalled 1.405 million tons in the first eight months in 2019 against 1.2 million tons
- Russia imported 28,300 tons of TDI in the first seven months in 2019 against 26,900 tons
- Butanol exports from Russia dropped in the first seven months this year to 38,500 tons from 43,500 tons in the same period in 2018
- Russian PTA imports totalled 251,000 tons in the first seven months in 2019 against 138,000 tons in the same period in 2018

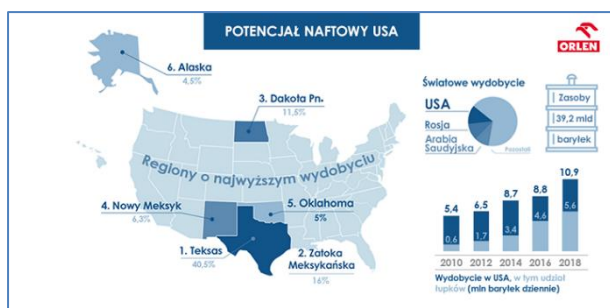
Russian & regional chemical projects

- Tatneft has bought out stakes in enterprises that are associated with the creation of PTA and PET plants in Tatarstan
- SIBUR has completed the construction of ZapSibNeftekhim and the complex is currently it is being commissioned. Full start-up is projected for the third and fourth quarters this year
- The development of the petrochemical industry in Kazakhstan includes the creation of a special petrochemical zone in the Atyrau region
- For the construction of the divinyl styrene synthetic rubber (DSSK) of Nizhnekamskneftekhim, two columns have been installed recently
- A huge methanol project is under review in the Russian Far East, involving 7.2 million tpa of capacity, although at this early stage it cannot be factored into supply-demand balances

CENTRAL & SOUTH-EAST EUROPE

PKN Orlen-crude and Central European petrochemical margins

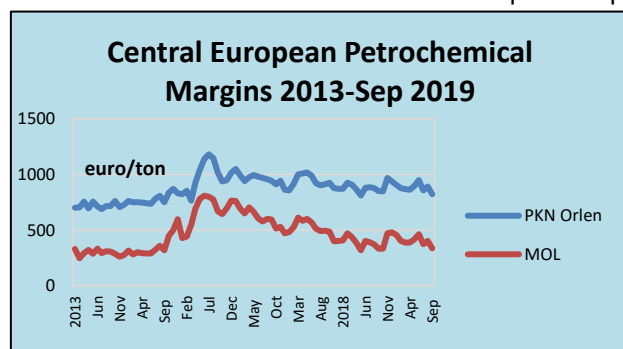
PKN Orlen has arranged for another 100,000 tons of crude from the US to be delivered in October, to be supplied to refinery at Plock. PKN Orlen is now analysing the possibilities of including US sources permanently in its oil supply portfolio. This year the Orlen group has also processed US oil in the Czech Republic and Lithuania, reducing the dependency on Urals crude.



tons of crude oil from Saudi Aramco Products Trading company in six spot deliveries between May and October.

Crude diversification has helped PKN Orlen to overcome any issues regarding contaminated Russian oil, although this has not been without inconvenience. Up to 50% of crude supply to Orlen in Poland is supplied currently from non-Russian sources and in the case of the entire group it is already over 40%. This compares to around to a total of 5% in 2012-2013.

The chloride contamination issue and subsequent suspension of supplies via Druzhba has appeared to have



no significant impact on the group's results in the second and third quarters. The Plock refinery receives around 1.4 million tons of crude per month, 700,000 tons of which comes from non-Russian sources, including 300,000 tons from Saudi Arabia. In total, Orlen's refineries in Poland, the Czech Republic and Lithuania receive 30% of their crude oil from outside Russia.

Petrochemical margins in Central Europe dropped in the third quarter for both the Orlen and MOL groups, covering the plants in Poland, Czech

Republic, Hungary and Slovakia. The MOL Group's petrochemical margin for the third quarter dropped to €370 per ton against €422 per ton in the second quarter whilst the Orlen Group margin for petrochemicals fell from €906 to €859 per ton. At the same as petrochemical margins dropped refining margins increased.

The MOL Group refining margin overall amounted to \$5.7 per barrel in the third quarter versus \$3.5 in the second whilst Slovnaft's margin rose from \$4.5 to \$6.7 per barrel. Orlen's refining margin for the third quarter jumped to \$8.2 per barrel from \$6.5.

MOL's Quarterly Margins 2019	Q1	Q2	Q3
Brent dated (\$/bbl)	63.2	68.8	61.9
MOL Group refinery margin (\$/bbl)	3.1	3.5	5.7
MOL + Slovnaft refinery margin (\$/bbl)	3.8	4.5	6.7
MOL Group petrochemicals margin (€/ton)	415.2	421.8	370.0

MOL-polyol project

MOL and Thyssenkrupp have laid the foundation stone for new polyol complex in Hungary. The MOL

Group is investing a total of €1.2 billion in the new plant complex. It is expected to be commissioned in 2021 and will produce around 200,000 tpa of polyols.

This investment project will make MOL Group the only Central and East European company to control the entire value chain from crude oil extraction to polyol production. The Tiszaújváros complex will produce polyol using efficient and environmentally friendly technologies such as the HPPO process (propylene oxide from hydrogen peroxide) developed by ThyssenKrupp and Evonik.

Central European olefin-polyolefin outages

The olefin plant of PKN Orlen at Plock underwent an enforced shutdown between 4 to 25 September, following a compressor problem. After restarting in late September PKN Orlen stated that it had taken advantage of the unit failure to carry out maintenance planned for October-November on the unit.

Following on from the olefin outage at Plock, Unipetrol was forced to declare force majeure on PVC deliveries from the Spolana plant from 24 September, affecting deliveries. The plant has a production capacity of 135,000 tpa.

MOL announced a force majeure on the supply of polypropylene on 23 September. The outage took place from plant No. 4 at the petrochemical complex at Tiszaujvaros. This plant with a capacity of 50,000 tpa was closed for unscheduled repairs on 20 September for unknown reasons. Total polypropylene capacity for the MOL Group, including both Tiszaujvaros and Bratislava, amounts to 535,000 tpa.

One of the cornerstones of MOL Group strategy is to expand the company's petrochemical value chain and produce more valuable products. The polyol plant and the previously opened synthetic rubber plant are the main parts of this strategy. The synthetic rubber plant of MOL Group and the Japanese JSR Corporation produces 60,000 tpa of solution polymerization styrene-butadiene rubber (S-SBR). The butadiene feedstock plant at Tiszaujvaros was commissioned in 2015.

Polish propylene imports, Jan-Jun 2019

Propylene imports into Poland amounted to 75,600 tons in the first half of 2019 against 98,200 tons in the same period in 2018. Besides a sharp increase in production at Plock, imports into Poland were also made possible from Orlen Lietuva in Lithuania. The main source of propylene imports into Poland in the first half of 2019 was Ukraine, supplying 31,000 tons from the Karpatneftekhim plant at Kalush against 39,900 tons in the same period last year. Russian propylene imports into Poland rose to 19,300 tons in January to June 2019 against 11,800 tons in 2018.

Orlen Poludnie-propylene glycol & bioethanol

The southern branch of PKN Orlen, Orlen Poludnie, is being transformed into a biorefinery as part of which it is constructing Poland's first installation for the production of ecological, environmentally friendly propylene glycol.

Polish Propylene Imports (unit-kilo tons)		
Country	Jan-Jun 19	Jan-Jun 18
Azerbaijan	0.0	3.9
Austria	2.3	0.0
Czech Republic	0.9	4.4
Germany	6.0	30.5
Lithuania	5.7	0.0
Russia	19.3	11.8
Ukraine	31.0	39.9
Hungary	7.1	7.7
Others	3.4	0.0
Total	75.6	98.2

Orlen Poludnie has also signed a contract for the purchase of a license and a base project for a second-generation bioethanol plant at Jedlicze. The main purpose of this project is to strengthen the company's position on the biocomponents market and to meet EU challenges obliging Poland to use renewable fuels and biocomponents in transport.

The capacity of the propylene glycol plant at Trzebinia is being designed to produce 30,000 tpa, which means that the production of propylene glycol in the refinery could cover as much as 75% of domestic demand for this product. The production of ecological propylene glycol will allow the use of glycerine produced at Trzebinia, which is obtained in the

production of biodiesel mainly from rapeseed oil. For the bioethanol installation at the Jedlicze refinery, Orlen signed a contract with Clariant for the purchase of a license and base project support. The capacity of the bioethanol plant at Jedlicze is expected to be 25,000 tpa, to be produced from non-food raw materials, primarily straw, obtained from Polish farmers. This would allow the plant to use the potential of local agriculture in the south-eastern region of Poland.

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Aug 19	Jan-Aug 18
Ethylene	62.1	59.8
Propylene	7.0	12.4
Butadiene	3.8	0.4
Benzene	31.9	24.3
Toluene	7.3	9.8
Ethylbenzene	104.8	91.2

At 25,000 tpa the Orlen is around half the size of the flagship ethanol plant Clariant broke ground on last year at Craiova in Romania which is close to start-up. Clariant investing around €140 million in the Romanian facility which is now close to start-up.

Czech petrochemical exports, Jan-Aug 2019

Ethylene exports from Unipetrol totalled 62,100 tons in the first eight months in 2019 against 59,800 tons in the

same period in 2018. Propylene exports from Unipetrol dropped to 7,000 tons from 12,400 tons, whilst ethylbenzene exports from the Czech Republic totalled 91,200 tons against 104,800 tons. Benzene exports increased from 24,300 tons to 31,900 tons.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Aug 19	Jan-Aug 18
Caustic Soda Liquid	243.8	203.5
Caustic Soda Solid	45.2	77.3
Ethylene	351.8	351.1
Propylene	300.3	214.4
Butadiene	43.2	34.2
Toluene	8.3	9.6
Phenol	30.5	31.8
Caprolactam	110.3	110.0
Acetic Acid	4.4	10.0
Polyethylene	252.1	262.7
Polystyrene	42.3	41.9
EPS	72.4	53.5
PVC	192.9	174.6
Polypropylene	229.3	186.1
Synthetic Rubber	190.3	183.3
Ammonia (Gaseous)	1585.0	1700.0
Ammonia (Liquid)	67.6	86.8
Pesticides	37.6	36.4
Nitric Acid	1534.0	1531.0
Nitrogen Fertilisers	1282.0	1297.0
Phosphate Fertilisers	304.5	280.8
Potassium Fertilisers	282.3	270.7

Anwil-EDC expansion

Anwil from the Orlen Group is considering increasing the production capacity of EDC at Wloclawek by 100,000 tpa. The company wants to determine the project details to be determined by the end of January 2020 in a feasibility study on the concept of increasing EDC production capacity. The VCM plant has a capacity of 320,000 tpa at Wloclawek for which Anwil announced that it was also considering expanding. In other projects, Anwil is building a third line of nitrogen fertiliser installations with a production capacity of 495,000 tpa which would increase fertiliser capacity to 1.461 million tpa by 2022. For logistics, Anwil is considering a tender for the development of the Maritime Terminal concept in the Port of Gdansk.

In addition, Anwil has launched a tender for the investment project for a hydrogen chloride recovery plant from chloro-organic waste. Various ideas are under review, including the production of acid and hydrogen chloride gas which could lead to hydrochloric acid production. The expected date of completion of a comprehensive study is expected in November 2019.

Ciech Romania, soda ash shutdown

The Ciech Group states that it does not intend to leave Romania despite having to stop soda ash production at in Ramnicu Valcea due to steam costs. Unless a solution for securing steam supply at an affordable price is identified, the

Ciech Group plans to build its own steam production unit. The reason for this decision is the termination of the existing contract for the supply of process steam by the CET Govora CHP plant, the only available supplier to Ciech Soda Romania.

The new offer for steam proposed by CET Govora included a price higher by approximately 135% over 2018, whilst it assumes a 20% reduction in supplies. This prevents Ciech Soda Romania from conducting a profitable business. Production at the plant at Ramnicu Valcea could remain closed until the Ciech group builds its own steam production unit. In 2018, the cost of purchasing technological steam exceeded 30% of total costs of Ciech Soda Romania's operations. Apart from Romania, all other Ciech plants have their own sources of technological steam.

Polish methanol exports, Jan-Jun 2019

Polish methanol imports amounted to 266,300 tons in the first half of 2019 at a cost of \$73.926 million, against 386,100 tons in the same period in 2018. Russia supplied 203,600 tons against 228,000 tons in January to June 2018, whilst the end largest source of imports came from Venezuela totalling 24,100 tons against 37,800 tons. Norway reduced export shipments to 13,400 tons in the first half of 2019 against 32,000 tons in January to June 2018 whilst Germany reduced shipments from 47,000 tons to 15,400 tons.

Polish Methanol Imports (unit-kilo tons)		
Country	Jan-Jun 19	Jan-Jun 18
Belarus	2.5	4.3
Russia	203.6	228.0
Norway	13.4	32.0
Germany	15.4	47.0
Venezuela	24.1	37.0
Others	7.4	37.8
Total	266.3	386.1

Polish methanol projects-Orlen and PGC

PKN Orlen is assessing prospects for construction of a methanol plant based on Podkarpacie natural gas, which would be located at Jedlicze in southern Poland. A decision

may be forthcoming in the first quarter in 2020 whether a project may be viable. As Poland imports such large volumes of methanol PKN Orlen decided to examine at least the possibility of running its own plant. An installation with a capacity of between 700,000 and 1 million tpa is being initially considered, depending on technology proposals.

Besides Orlen, the Polish Mining Group (PGG) is also analysing a potential methanol project of 620,000 tpa as part of a coal gasification installation in one of their mines. Approximately 620,000 tpa could be produced from gas produced in the installation. Areas of the Ziemowit mine in Łędziny (part of the Piast-Ziemowit mine) or Jankowice at Rybnik mine are indicated as potential locations for such installations.

Polish PTA Exports (unit-kilo tons)		
Country	Jan-Jun 19	Jan-Jun 18
Belarus	16.5	9.2
Russia	0.0	0.0
Switzerland	2.5	1.0
Netherlands	0.0	2.8
Lithuania	3.0	0.0
Germany	169.6	162.1
Italy	1.5	0.0
Turkey	7.3	0.0
Others	9.5	4.0
Total	210.0	179.1

Regarding gas supply, Poland is dependent predominantly on Russian sources but US supplies are expected to become available on a significant scale through PGNiG by 2022-2023. Terminals are under construction in the Gulf of Louisiana which will facilitate export activity to Poland and if not completely eliminate at least reduce the need to import gas from Russia.

Polish PTA Exports, Jan-Jun 2019

Polish exports of PTA from the Wloclawek plant totalled 210,000 tons in the first half of 2019 against 179,100 tons in the same period in 2018. PKN Orlen exported 169,600 tons to Germany against 162,100 tons last year, whilst shipments to Belarus increased to 16,500 tons from 9,200 tons. Exports to Germany amounted to \$126 million in value in the first half this year from product sales of \$154 million.

Czech Methanol Imports (unit-kilo tons)		
Country	Jan-Aug 19	Jan-Aug 18
Germany	10.1	18.7
Norway	7.3	7.3
Russia	30.7	25.1
Slovakia	0.0	1.1
Poland	3.0	1.3
Others	1.8	0.4
Total	52.9	53.8

Czech chemical trade, Jan-Aug 2019

Propylene imports into the Czech Republic totalled 23,600 tons in the first eight months in 2019 against 28,700 tons in January to August 2018. Benzene imports into the Czech Republic rose to 58,800 tons in the first eight months in 2019 from 52,000 tons in the same period in 2018. Almost all of the benzene imported into the Czech Republic was supplied from Poland.

Czech MDI Imports (unit-kilo tons)		
Country	Jan-Aug 19	Jan-Aug 18
China	1.4	2.1
Belgium	5.5	4.3
Germany	8.3	5.3
Italy	0.2	0.1
Hungary	2.7	4.8
Netherlands	0.7	0.7
Others	0.6	2.4
Total	19.4	19.6

TDI imports into the Czech Republic totalled 5,501 tons in the first eight months in 2019 against 9,288 tons in January to August 2018. TDI import costs dropped from €25.431 million in 2018 to €15.0 million. MDI imports dropped only slightly from 19,600 tons to 19,400 tons.

Methanol imports totalled 52,900 tons in January to August 2019 versus 53,800 tons in the same period in 2018. Russia accounted for 30,700 tons of methanol shipments in the first eight months in 2019. Regarding exports, shipments of phthalic anhydride from the Czech Republic totalled 9,291 tons in the first eight months in 2019 against 11,161 tons in the same period in 2018.

Polish Imports of TDI (unit-kilo tons)			
Country	Jan-Jun 19	Jan-Dec 18	Jan-Dec 17
Germany	14.8	24.9	26.9
Netherlands	2.7	4	3.6
Hungary	14.5	30.4	27
Belgium	0.9	2.6	5.4
Others	3.6	8.9	7
Total	36.5	70.8	69.9

Exports of DINP amounted to 27,062 tons versus 25,626 tons. DINP export destinations in the first eight months in 2019 included Italy with 5,395 tons, Romania with 2,903 tons and Ukraine with 1,606 tons. Caprolactam exports dropped slightly to 24,736 tons in the first eight months in 2019 against 28,991 tons in the same period in 2018.

Polish TDI Imports, Jan-Jun 2019

Imports of TDI into Poland in the first half of 2019 totalled 36,500 tons, measured against 70,800 tons in the whole of 2018 and 69,900 tons in 2017. In the first six months in 2019 Germany supplied 14,800 tons at an average price of €1615 per ton whilst Hungary supplied 14,500 tons at an average price of €1662. Overall TDI import prices averaged €1685 per ton in the first six months, against a full year average of €2745 in 2018 and €2679 in 2017. Average prices are expected to be higher in the second half of 2019 than in the first half.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Aug 19	Jan-Aug 18
Caustic Soda	853.9	844.5
Soda Ash	2,213.0	2,288.0
Ethylene	2,053.8	2,002.0
Propylene	1,629.0	1,527.1
Benzene	963.4	957.8
Xylenes	344.1	407.6
Styrene	482.5	489.6
Phenol	145.4	129.1
Ammonia	12,200.0	12,000.0
Nitrogen Fertilisers	7,578.0	7,107.0
Phosphate Fertilisers	2,827.0	2,656.0
Potash Fertilisers	5,452.0	5,701.0
Plastics in Bulk	5,668.0	5,474.0
Polyethylene	1,514.0	1,484.0
Polystyrene	356.2	362.1
PV	673.0	659.5
Polypropylene	1,073.1	1,012.0
Polyamide	108.8	113.5
Synthetic Rubber	1,008.0	1,105.0
Synthetic Fibres	111.9	112.2

Russian chemical production Jan-Aug 2019

Chemical production in Russia rose 3.4% in the first eight months in 2019 against January to August 2018. The largest increase in production stemmed firstly from mineral fertilisers and secondly bulk polymers. The production of polymers in Russia amounted to 5.668 million tons in the first eight months in 2019, which is 3.4% higher than last year. Rises were reported for PVC, polypropylene and polyethylene, although polystyrene dropped slightly. Russian output of plastic products rose by 1.2% in the first eight months of 2019.

In terms of olefin production, ethylene rose 2.5% in January to August 2019 to 2,054 tons and propylene rose from 1.527 million tons to 1.629 million tons.

Russian benzene production in August amounted to 117,000 tons against 108,000 tons in July, resulting in an increase of 0.5% for the first eight months to 968,000 tons. Xylene production dropped from 407,600 tons in the period January to August 2018 to 344,100 tons in the same period this year, heavily affected by the modernisation of the PTA plant and the reduced need for

paraxylene.

In base chemicals, Russian caustic soda production amounted to 853,900 tons in the first eight months against 844,500 tons in the same period in 2018. Soda ash production was slightly down to 2.213 million tons from 2.288 million tons, whilst ammonia production jumped 200,000 tons to 12.2 million tons.

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Polymer Plant	125.9	117.2
Kazanorgsintez	443.2	409.1
Stavrolen	228.8	213.7
Nizhnekamskneftekhim	432.8	427.8
Novokuibyshevsk Petrochemical	39.5	34.3
Gazprom n Salavat	209.6	253.9
SIBUR-Kstovo	267.5	246.3
SIBUR-Khimprom	35.0	37.1
Tomskneftekhim	186.4	169.1
Ufaorgsintez	85.0	80.5
Total	2053.7	1989.0

Russian petrochemical production & sales

Russian ethylene production, Jan-Aug 2019

Russian ethylene production totalled 2.054 million tons in the first eight months in 2019 against 1.989 million tons in the same period in 2018. The major changes took place at Kazan where production rose from 409,100 tons to 443,200 tons, and Nizhnekamskneftekhim where production rose from 427,800 tons to 432,800 tons. A fire broke out at the Nizhnekamskneftekhim at ethylene plant at Nizhnekamsk on 16 September, and the company incurred a production shut down for a short period.

ZapSibNeftekhim-propylene and polyethylene production

Having produced its first propylene in September ZapSibNeftekhim is preparing to produce polyethylene from its own ethylene at the new Tobolsk complex. When fully operational the products of ZapSibNeftekhim will play an important role in the development of Russian non-resource exports and the replacement of existing imports of polymers, mainly from China and Europe.

For 2019, Russian ethylene production is forecast to exceed 3 million tons for the first time due to the start-up of SIBUR's ZapSibNeftekhim complex at Tobolsk taking place at present. The first production of ethylene is being tested in conjunction with polyethylene and production could start to ramp up in November and December. 2020 should prove a significant year for Russian ethylene

production volumes based on ZapSibNeftekhim's 1.5 million tpa cracker.

Russian Propylene Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Polymer Plant	69.9	70.5
Kazanorgsintez	33.1	26.8
Lukoil-NNOS	199.4	194.8
Stavrolen	92.5	84.1
Nizhnekamskneftekhim	217.0	218.2
Novokuibyshevsk	29.6	26.3
Omsk Kaucuk	31.1	28.2
Polyom	126.9	132.5
Gazprom n Salavat	94.2	110.4
SIBUR Kstovo	115.2	108.7
SIBUR-Khimprom	38.1	42.4
Tomskneftekhim	99.5	89.6
SIBUR Tobolsk	313.9	285.6
Ufaorgsintez	128.4	122.4
Total	1589.0	1540.4

Russian propylene production, Jan-Aug 2019

Russian plants produced 1.589 million tons of propylene in the first eight months in 2019 versus 1.540 million tons in the same period in 2018. SIBUR Tobolsk increased production from 285,600 tons in January to August 2018 to 313,900 tons in the same period in 2018, whilst SIBUR-Kstovo increased production from 108,700 tons to 115,200 tons. In September, the first propylene was produced at the ZapSibNeftekhim pyrolysis unit at Tobolsk.

Russian propylene sales & exports Jan-Aug 2019

Russian propylene exports amounted to 49,700 tons in the first eight months in 2019 against 67,600 tons in the same period in 2018. Lukoil-NNOS reduced exports from 47,700 tons in January to August 2018 to 31,800 tons this year, whilst SIBUR-Kstovo increased exports from 9,600 tons to 6,100 tons. Stavrolen at Budyennovsk exported 12,200 tons against 7,900 tons.

Russian Propylene Exports (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Lukoil-NNOS	31.8	47.7
SIBUR-Kstovo	6.1	9.6
Stavrolen	11.8	10.4
Total	49.7	67.6

Propylene sales on the Russian domestic market totalled 315,900 tons in the first eight months in 2019 versus 289,000 tons in the same period in 2018. Lukoil-NNOS at Kstovo shipped 156,500 tons against 148,700 tons whilst SIBUR-Kstovo increased sales from 81,000 tons to 94,500 tons. The third largest supplier to the merchant market is Angarsk Polymer Plant which shipped 49,600 tons in the first eight months versus 47,600 tons. Lukoil-NNOS

spends most of its propylene to Saratovorgsintez, SIBUR-Kstovo ships of all its monomer to SIBUR subsidiaries and Angarsk Polymer ships to consumers such as Omsk Kaucuk and SIBUR-Khimprom.

Demand for propylene on the Russian domestic market dropped in September due to repair work on several polypropylene plants. Consumption of propylene monomer was reduced by polypropylene producers Polyom, Ufaorgsintez, Stavrolen, Nizhnekamskneftekhim and Tomskneftekhim. In addition, scheduled repair began on 8 September at the acrylonitrile production at Saratovorgsintez which lasted for 30 days

during which the company reduced the volume of propylene processing.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Polymer Plant	49.6	47.6
Omsk Kaucuk	0.0	1.3
SIBUR-Kstovo	99.5	81.0
Akrilat	5.5	5.0
LUKOil-NNOS	156.5	148.7
Tomskneftekhim	0.0	0.2
Gazprom Neftekhim Salavat	4.6	4.9
SIBUR-Khimprom	0.0	0.2
Tobolsk-Polymer	0.1	0.3
Total	315.9	289.0

Prices of propylene on the domestic market have been affected by low demand and also lower European prices. Over September the reduction in prices on the Russian market amounted to 2000-3000 roubles. In the Volga Federal District, the propylene fraction fell to 53,500-56,400 roubles per ton. In the Siberian Federal District, monomer was sold at 50,500-51,000 roubles per ton.

Saratovorgsintez purchased 132,200 tons of propylene in the first eight months in 2019 against 111,200 tons in January to June 2018. SIBUR

Tobolsk increased merchant purchases to 81,900 tons from 38,800 tons in the first eight months in 2018, whilst SIBUR-Khimprom at Perm reduced inward shipments to 39,400 tons from 39,900 tons.

Due to scheduled repairs Nizhnekamskneftekhim acquired 3,000 tons of propylene for delivery in September. This included purchases of 1,000 tons of propylene from the Angarsk Polymer Plant and 2,000 tons from Lukoil-NNOS. A scheduled shutdown had been planned for Lukoil-NNOS in October, but that has now been delayed. As a result, the market in October remains balanced.

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Nizhnekamskneftekhim	208.2	206.2
Angarsk Polymer Plant	24.2	21.4
SIBUR-Khimprom	89.6	91.7
Gazprom n Salavat	126.3	131.5
Plastik, Uzlovaya	34.2	40.0
Total	482.5	490.7

Salavat increasing shipments from 24,400 tons to 26,900 tons and SIBUR-Khimprom increasing shipments from 24,500 tons to 27,400 tons. SIBUR-Khimprom uses styrene for the production of expandable polystyrene.

Russian Styrene Domestic Sales		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Polymer Plant	13.5	10.1
Plastik	0.7	9.0
Gazprom n Salavat	26.9	24.4
SIBUR-Khimprom	27.4	24.5
Nizhnekamskneftekhim	2.1	3.8
Total	70.6	71.8

tpa of styrene, 11,300 tpa of expandable polystyrene and 23,000 tpa of ABS plastics.

Russian Styrene Exports (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Polymer Plant	6.8	4.5
Plastik Uzlovaya	0.2	3.2
Gazprom neftekhim Salavat	68.7	52.6
Nizhnekamskneftekhim	4.6	0.0
SIBUR-Khimprom	1.2	3.8
Total	81.5	64.1

from Salavat is Finland, followed by Norway and Turkey.

Russian styrene production Jan-Aug 2019

Russia produced 482,500 tons of styrene in the first eight months in 2019, against 490,700 tons. Gazprom neftekhim Salavat reduced styrene production to 126,300 tons against 131,500 tons, followed by SIBUR-Khimprom at Perm where production decreased from 91,700 tons to 89,600 tons.

Styrene sales on the Russian domestic merchant market totalled 70,600 tons in January to August 2019 against 71,800 tons in the same period in 2018, with Gazprom neftekhim

SIBUR Holding and the styrene producer Plastik have renewed contracts for processing of ethylbenzene. Up to 50,000 tpa could be supplied from SIBUR-Khimprom at Perm to Plastik at Uzlovaya.

Until December 2013, Plastik was part of SIBUR and after becoming an independent company has maintained contact with the group in order to produce styrene. Plastik specialises in the production of ABS plastics and suspension polystyrene. The capacities include 60,000

Russian styrene exports, Jan-Aug 2019

Styrene exports from Russia increased to 81,500 tons in the first eight months in 2019 against 64,100 tons in the same period in 2018.

Gazprom neftekhim Salavat shipped 68,700 tons in the first eight months against 52,600 tons, whilst Angarsk Polymer Plant shipped 6,800 tons this year against 4,500 tons. The main destination for styrene exported

Bulk Polymers

Russian HDPE Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Kazanorgsintez	369.2	357.4
Stavrolen	210.8	197.4
Nizhnekamskneftekhim	0.0	17.7
Gazprom n Salavat	66.9	79.9
Total	646.9	652.4

Nizhnekamskneftekhim produced exclusively linear polyethylene grades and has not produced HDPE.

Russian HDPE production, Jan-Aug 2019

Russian producers increased the production of HDPE by 1% in January-August 2019 to 646,900 tons against the same period last year. Kazanorgsintez increased production by 3.3% to 369,200 tons in the first eight months this year, after producing 50,800 tons in August against 48,200 tons in July.

Stavrolen at Budyennovsk increased polyethylene production 7% in the to 210,800 tons, whilst Gazprom neftekhim Salavat reduced production by 16% to 66,900 tons. This year

Imports of HDPE into Russia totalled 232,400 tons in January-August 2019 against 157,900 tons in the same period in last year. This year's record imports were partially caused by the outages in the past few months at plants. Producers from Uzbekistan, South Korea and Saudi Arabia accounted for the main increased in imports in August 2019. LLDPE shipments to the Russian market increased in the first seven months of 2019 by 8% year on year to 234,130 tons. Local producers increased their production by 24%.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Ufaorgsintez	89.9	86.5
Stavrolen	78.4	76.8
Neftekhimiya	96.2	89.7
Nizhnekamskneftekhim	143.3	142.2
Polyom	146.6	148.0
Tomskneftekhim	99.3	91.8
SIBUR Tobolsk	319.9	319.5
Total	973.6	954.5

319,500 tons in the same period in 2018. Polyom at Omsk produced 146,600 tons of polypropylene which was down by 1%. Nizhnekamskneftekhim produced 143,300 tons in the first eight months of 2019, compared to 142,500 tons in 2018.

SIBUR-Netkanika agreement on polypropylene

SIBUR and Netkanika signed a strategic cooperation agreement aimed at facilitating the export of polypropylene nonwoven materials produced by Netkanika from SIBUR's polypropylene.

SIBUR produces a wide range of polypropylene grades, including feedstock for nonwovens finding application in hygiene and healthcare. Netkanika currently acquires about 20,000 tpa of polypropylene for the production of high-quality brands of non-woven materials. Global manufacturers of personal hygiene products for adults and children use Netkanika products both at Russian and enterprises located outside Russia. At present, the company is aimed at developing the range of brands and increasing production volumes, including for export markets.

Netkanika LLC is one of the largest manufacturers of high-quality non-woven polypropylene spunbond and span melt materials used for the production of baby and adult hygiene products, medical clothing, mattresses and spring blocks, heat, moisture and windproof membranes. Netkanika production is located in the Trinity administrative district of Moscow.

Russian Polypropylene Imports (unit-kilo tons)		
Category	Jan-Aug 19	Jan-Aug 18
Homopolymers	38.2	47.9
Block	37.2	32.2
Random	20.8	24.2
Other	23.9	26.9
Total	120.1	131.2

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Bashkir Soda	169.1	173.5
Kaustik	50.7	62.3
RusVinyl	226.2	213.5
Sayanskkhimpast	184.9	173.1
Total	630.9	622.4

Russian polypropylene production, Jan-Aug 2019

Russia's production of polypropylene rose in the first eight months of 2019 by 2% to 973,700 compared to 954,100 tons. Four producers out of seven raised their capacity utilisation, with SIBUR Tobolsk and NPP Neftekhimiya at the Moscow refinery accounting for the main increase in production.

SIBUR Tobolsk produced 319,900 tons of polypropylene in January-August 2019 against

Tomskneftekhim increased polypropylene production by 8% to 99,300 tons in the first eight months, whilst Ufaorgsintez rose 1% to 89,900 tons. NPP Neftekhimiya (Kapotnya) produced 96,200 tons over the stated period, up by 7%. Stavrolen increased output of propylene polymers in the first eight months of 2019 to 78,600 tons from 74,100 tons a year earlier.

Polypropylene imports into Russia decreased in the first eight months of 2019 to 120,100 tons compared with 131,200 tons in the same period in 2018. Imports of homopolymer to Russia totalled 38,200 tons in the first eight months of 2019, compared to 47,900 tons whilst imports of block copolymers amounted to 37,200 tons in January-August 2019, compared to 32,200 tons.

Imports of propylene copolymers in Russia amounted to 20,800 tons in January-August 2019, against 24,100 tons. Russian imports of other polymers of propylene for the period amounted to 23,900 tons in the first eight months of the year, compared with 26.900 tons year on year.

Regarding export activity, Russian shipments of polypropylene totalled 151,200 tons in the first eight months in 2019. SIBUR accounted for around 40% of Russian exports from its SIBUR-Tobolsk plant. The majority of Russian polypropylene exports comprise homopolymer grades.

Russian PVC, Jan-Aug 2019

Russian production of PVC rose 1% in the period January to August 2019 to 630,900 tons d to 622,400 tons. RusVinyl produced 30,100 tons of PVC in August, with emulsion PVC accounting for 2,300 tons, compared to 29,500 tons a month earlier. Overall PVC production at RusVinyl was 226,400 tons in January-August 2019, up by 6%.

Sayanskkhimpast produced 184,900 tons of resin in January-August, compared to 173,100 tons whilst Bashkir Soda

Company achieved production of 169,100 tons compared to 173,500 tons. Kaustik at Volgograd produced 50,700 tons in the first eight months of 2019 versus 62,300 in 2018.

Exports of PVC from Russia totalled 130,100 tons in the first eight months of 2019, up by 55% from 83,900 tons in January to August 2018. Imports also increased by 174% to 36,900 tons against 13,500 tons. Indian buyers were the main foreign importers of Russian resin this year, taking 75,300 tons, followed by Turkish and Polish producers with shipments of 11,200 tons and 4,600 tons.

PX-PTA chain

Russian Paraxylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Gazprom Neft	0.0	41.5
Ufaneftekhim	66.2	79.1
Total	66.2	120.6

Russian paraxylene sales Jan-Aug 2019

Paraxylene sales on the Russian domestic market amounted to 66,200 tons in the first eight months in 2019 versus 120,600 tons in the same period in 2018. Ufaneftekhim reduced sales from 79,100 tons to 66,200 tons, whilst Gazprom Neft at Omsk reduced shipments from 41,500 tons to no shipments at all. Regarding future supply, Taneko at Nizhnekamsk has now started construction of the aromatics complex aimed for completion in 2021. This will eventually result in the construction of a 147,000 tpa plant for paraxylene, intended to be integrated into PTA and PET production.

Russian Paraxylene Exports (unit-kilo tons)		
Producer	Jan-Jul 19	Jan-Jul 18
Gazprom Neft	52.5	82.3
Ufaneftekhim	24.7	50.3
Kirishinefteorgsintez	8.9	26.2
Total	86.0	158.9

Paraxylene exports totalled 86,000 tons in the first seven months in 2019 against 158,900 tons in the same period last year. The largest rise was seen in deliveries to the Kotka port in Finland at the Oiltanking terminal.

Tatneft-SafPet acquisition

Tatneft has bought out stakes in enterprises that are associated with the creation of PTA and PET plants in Tatarstan. The company acquired 32.8% in Safpet Active LLC, previously 100% of the shares were owned by Ak Bars Holding Company. Tatneft also bought 0.49% in Safpet LLC in Nizhnekamsk, 99.51% of the company LLC Safpet Asset. These changes were made to the Unified State Register of Legal Entities on 10 September 2019.

SafPet plans to launch the production of PTA and PET. The capacity for PTA was declared at 210,000 tpa and for PET 250,000 tpa, 87,500 tpa of fibre and 25,000 tpa of film. In 2017, the Kazan branch of the State

Expertise Commission issued a negative opinion on the design documentation and engineering survey results for the production of PTA and PET. Paraxylene was planned to be launched in 2019 at Taneko's facilities as part of the aromatics production complex but this has been delayed until 2021.

Russian PTA Imports (unit-kilo tons)		
Country	Jan-Jul 19	Jan-Jul 18
Belgium	15.9	1.6
India	1.0	4.8
China	185.3	75.6
South Korea	42.0	44.4
Poland	2.3	0.0
Turkey	2.0	0.0
Thailand	3.0	12.0
Total	251.4	138.3

Russian zero-rated PTA tariffs extended to end of 2022

The Sub-Commission on Customs and Tariff Regulation extended the duty-free import of PTA until 2022. The rate was reduced from 5 to 0% for the period from 1 January 2016 to 31 December 2017 inclusive, then the duty-free import was extended until the end of 2019.

Russian PTA Imports 2019		
Country	Kilo tons	\$ million
Belgium	15.9	13.6
India	1.0	0.8
China	185.3	162.4
South Korea	42.0	36.2
Poland	2.3	1.9
Turkey	2.0	1.6
Thailand	3.0	2.6
Total	251.4	219.1

Russian PTA imports, Jan-Jul 2019

Russian PTA imports totalled 251,400 tons in the first seven months in 2019 against 138,300 tons in the same period in 2018. China supplied 185,300 tons in January to July 2019 against 75,600 tons in the same period in 2018, whilst South Korea increased shipments from 44,400 tons to 42,000 tons. Thailand reduced exports to 3,000 tons from 12,000 tons.

Import costs for PTA into the Russian market increased to \$219 million in the first seven months in 2019 against \$138 million in the same period

in 2018. Russian main importers Alko-Naphtha at Kaliningrad and the Senezh PET plant near Moscow purchased 166,000 tons and 32,900 tons respectively in the first seven months in 2019.

Alko Naphtha purchased 67.2% of imports in the first seven months this year from China at a cost of \$96.1 million. South Korea provided 21.5% at a cost of \$30.8 million and Belgium 8.9% at a cost of \$12.7 million. Senezh purchased 78.5% of its PTA imports in the first seven months in 2019 at a total cost of \$23 million.

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Rosneft	87.3	96.6
Gazprom Neft	52.7	69.4
Lukoil	68.3	81.6
Magnitogorsk MK	34.3	37.8
Nizhnekamskneftekhim	192.7	156.0
Novolipetsk MK	4.7	5.3
Gazprom n Salavat	115.9	118.6
Kirishinefteorgsintez	52.6	44.1
Slavneft	37.6	48.8
Severstal	27.0	24.6
Bashneft	47.1	63.6
Ural Steel	6.8	5.9
Uralorgsintez	56.1	60.0
Zapsib	50.4	49.1
SIBUR	53.4	51.7
Total	887.0	913.1

Russian Benzene Domestic Purchases (unit-kilo tons)		
Consumer	Jan-Aug 19	Jan-Aug 18
Kuibyshevazot	126.7	139.1
Azot Kemerovo	80.7	89.3
Shchekinoazot	44.3	49.1
Kazanorgsintez	40.5	44.7
Khimprom	0.3	2.4
ARE laboratories	0.0	2.5
Omsk Kaucuk	12.8	14.4
Chelyabinsk MK	0.0	2.5
Nizhnekamskneftekhim	0.0	26.6
Novolipetssk	0.6	15.8
Samarorgsintez	33.1	19.7
Zapsib	43.0	36.1
SIBUR-Khimprom	64.0	44.5
Promsintez	2.7	5.6
Tumazi Carbon Plant	0.0	0.4
Ufaorgsintez	18.2	2.6
Uralorgsintez	50.6	39.9
Zavod im Ya M Sverdlova	0.8	4.9
Export	39.6	53.1
Total	557.7	593.5

Russian PET imports, Jan-July 2019

Russia's imports of PET in January-July 2019 amounted to 102,000 tons, 19% higher than in 2018. Supplies of PET to the Russian market from China increased by 34% in the seven months of 2019 to 93,600 tons. The share of Chinese suppliers in the structure of imports increased from 85% last year to 90% this year. The leading Chinese suppliers of PET to the Russian market are manufacturers Jiangsu Sanfangxiang, Yisheng, Wankai and Sinopec.

Aromatics

Russian benzene production, Jan-Aug 2019

Benzene production in Russia totalled 887.900 tons in the first eight months in 2019 against 913,300 tons in the same period in 2018. Rosneft's plants at Angarsk, Ryazan and Novokuibyshevsk reduced production from 96,600 tons to 87,300 tons, whilst Nizhnekamskneftekhim increased production from 156,000 tons in the first eight months in 2018 to 192,700 tons. Gazprom neftekhim Salavat produced 115,900 tons versus 118,600 tons, whilst Uralorgsintez produced 56,100 tons versus 60,000 tons. Novolipetsk Metallurgical Plant will resume production of benzene for nitration in October or November 2019. Production of the product was stopped in June due to the lack of demand from nitrobenzene producers.

SIBUR-Kstovo is the sole SIBUR plant where benzene is produced, increasing to 53,400 tons in the first eight months this year against 51,700 tons in the same period in 2018.

In September SIBUR and Sulzer GTC signed an agreement on the provision of licensed technologies for the processing of pyrolysis gasoline for the reconstruction of benzene production at the Kstovo plant. The agreement provides for the participation of Sulzer GTC in the design of a new plant for the extraction of aromatic compounds using GT-BTX technology, as well as in the reconstruction of an existing benzene plant, including a fractionation unit and hydrotreatment of the first and second stages, thermal hydrodealkylation.

After the reconstruction, the installation will become a centre for the processing of pyrolysis gasoline supplied to Kstovo from other SIBUR plants, which will allow producing high-purity benzene with the lowest operating costs, as well as recovering non-aromatic substances for future use as cracking raw materials.

Russian benzene market, Jan-Aug 2019

Sales of benzene on the Russian domestic market dropped in the first eight months in 2019 to 557,700 tons from 597,500 tons in the same period last year, the fall due partly to lower caprolactam production. Producers reducing deliveries included Stavrolen, falling from 46,600 tons to 28,500 tons, whilst Gazprom Neft reduced from 63,000 tons to 53,400 tons and Angarsk Polymer Plant reduced from 31,000 tons to 26,800 tons.

As Russia's largest merchant consumer of benzene Kuibyshevazot continues to import product to supplement purchases from domestic producers and continues to import from Karpatneftekhim in Ukraine. In line with lower caprolactam production, Kuibyshevazot reduced total purchases of benzene in the first eight months in 2019 to 126,100 tons from 139,100 tons in the same period in 2018. Other caprolactam producers also reduced shipments, whilst for other important developments included Nizhnekamskneftekhim which was idle on the market in the first eight months due its own increased production. The largest rise in purchases came from SIBUR-Khimprom at Perm increased purchases from 44,500 tons to 64,000 tons.

Despite not buying benzene in the first eight months this year Nizhnekamskneftekhim was forced to purchase merchant supplies in September in order to maintain styrene production whilst the cracker was undergoing maintenance. Up to 2,000 tons of benzene was shipped to Nizhnekamskneftekhim from coal-based producers Severstal and the West Siberian MK.

Russian caprolactam, Jan-Aug 2019

Russian caprolactam production totalled 251,900 tons in the first eight months in 2019 against 266,900 tons in the same period in 2018. Kuibyshevazot reduced caprolactam production from 145,700 tons in January to August 2018 to 138,100 tons in January to August 2019, whilst a fall was also recorded for Azot at Kemerovo. Of the three producers Azot at Kemerovo exports nearly all of its caprolactam, Shchekinoazot around 84% and Kuibyshevazot the smallest at no more than 17%. Kuibyshevazot processes caprolactam into polyamide where production is rising and thus exports may fall further in 2019.

Russian Caprolactam Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Kuibyshevazot	138.1	145.7
Shchekinoazot	40.3	36.6
SDS Azot	73.5	84.6
Total	251.9	266.9

Russian Phenol Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Ufaorgsintez	50.7	43.6
Kazanorgsintez	46.1	45.2
Novokuibyshevsk Petrochemical	48.5	40.3
Total	145.4	129.1

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Novokuibyshevsk Petrochemical	37.7	29.3
Kazanorgsintez	2.4	4.0
Ufaorgsintez	45.9	36.9
Borealis	1.3	7.0
Total	87.2	77.2

Novokuibyshevsk Petrochemical Plant and Ufaorgsintez.

Russian phenol, Jan-Aug 2019

Russian phenol production increased in the first eight months in 2019 at all three operational plants. Ufaorgsintez recorded the largest rise in production, rising from 43,600 tons in the first eight months last year to 50,700 tons. Production for all three plants totalled 145,400 tons in the first eight months in 2019 against 129,100 tons in the same period last year.

Phenol sales on the Russian merchant market totalled 87,200 tons in the first eight months in 2019 against 77,200 tons in the same period in 2018. Kazanorgsintez reduced merchant sales in the first eight months in 2019 order to increase production of bisphenol A, although this was compensated by domestic shipments from the

Synthetic Rubber

Russian rubber market Jan-July 2019

The consumption of rubber in the Russian domestic market amounted to 417,400 tons in the first seven months against 498,300 tons in the same period in 2018. The decline in the Russian rubber market this year is primarily attributed to the fall in Russian tyre production and the wider global automotive industry.

Russian Rubber Market (inc Synthetic & Natural) (unit-kilo tons)		
	Jan-Jul 19	Jan-Jul 18
Production	882.0	974.0
Exports	594.5	595.8
Imports	129.9	120.1
Supply/Demand Balance	417.4	498.3

in the main markets of China, USA, and the EU economic area.

Synthetic rubber production in Russia fell 6-7% in the first seven months in 2019, dropping from 974,000 tons last year to 882,000 tons. Exports of synthetic rubber totalled 594,500 tons in the first seven months in 2019 against 595,800 tons in the same period in 2018. Increasing exports of synthetic rubber to compensate for lower domestic demand is restricted by weaknesses elsewhere in the automotive industry

Russian Tyre Production (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
Car Tyres	196.5	205.5
Lorry tyres	27.2	34.9
Agricultural tyres	6.6	7.3
Total	230.3	247.8

important sector tyres.

Tyre production in Russia dropped in the first seven months from 247,800 tons in January to July 2018 to 230,300 tons. All sectors of tyre manufacture, including car, lorry and agricultural recorded falls in output volume in the first seven months in 2019. At the same time non-tyre sectors of consumption are rising, although not sufficiently to compensate for the decline in demand from the most

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
E-SBR	26.5	17.6
Block	23.3	18.5
SSBR	8.1	5.5
SBR	45.3	55.9
Polybutadiene	137.7	141.0
Butyl Rubber	75.4	72.2
HBR	79.7	75.7
NBR	20.5	18.5
Isoprene	158.8	170.4
Others	19.4	20.5
Total	594.6	595.9

Russian synthetic rubber exports, Jan-Jul 2019

Export volumes for Russian synthetic rubber in the first seven months in 2019 totalled 594,600 tons against 595,900 tons in the same period in 2018. Average product prices for synthetic rubber rose in the first seven months from \$1603 per ton to \$1618 per ton. By product category, isoprene rubber exports totalled 158,800 tons in January to July 2019 against 170,400 tons. Isoprene rubber prices fell to \$1366 per ton in the first seven months in 2019 from \$1441 in January to July 2018.

Export sales of butyl rubber from Russia rose slightly from 75,400 tons to 72,200 tons January to July 2019, whilst exports of halogenated butyl rubber (HBR) rose to 79,700 tons against 75,700 tons. Export prices of butyl rubber averaged \$1565 per ton in January to July 2019 and for halogenated butyl rubber at \$2356 per ton from \$2109 per ton in the same period in 2018. Regarding

export destinations, China was the largest recipient of Russian rubber shipments in the first seven months in 2019, accounting for 10.2%, followed by Poland with 10.1% and India with 9.9%. Other leading markets included India, Hungary, Poland, and Mexico.

Tatneft-SIBUR Togliatti

Tatneft is currently in the process of striving to buy SIBUR Togliatti from SIBUR, in addition to the industrial park Togliattisintez. These assets include the production of MTBE, butadiene, isoprene and other intermediate products, as well as the infrastructure of the industrial park. The capacity of SIBUR Togliatti includes a total of 217,000 tpa of rubbers. In 2018, SIBUR Togliatti achieved revenues of 13.6 billion roubles (\$208.6 million) and net profit of 968.3 million roubles (\$14.9 million), indicating that SIBUR is not offloading an unprofitable business. The infrastructure park Togliattisintez in 2018 achieved revenues of 1.7 billion roubles (\$26.0 million) and a net profit of 300.7 million (\$4.6 million).



The acquisition by Tatneft of the listed assets aims to ensure the vertical integration of Kama Tyres tyre business in Tatarstan and to increase its value. The aim is to continue its development of the Togliatti facilities as part of the implementation of Tatneft's petrochemical and chemical strategy. Estimated value of assets at Togliatti may lie in the range of \$160-220 million. SIBUR has not been active in wanting to sell these assets, but the offer from Tatneft was interesting enough to justify offloading the rubber and raw material plants. SIBUR Togliatti will help close the basic raw materials needs of the

Tatneft tyre complex, which has been struggling in the past couple of years due to the pricing policy of the current sole supplier Nizhnekamskneftekhim. According to Tatneft, the transaction is planned to be completed before the end of 2019 assuming the necessary corporate procedures proceed normally.

SIBUR Togliatti is the only SIBUR site where isoprene monomer is produced as raw materials for isoprene and butyl rubber, used in the tyre and rubber industry. In 2018, the company produced a total of 182,500 tons of rubber. In the first seven months in 2019 SIBUR-Togliatti exported 38,000 tons of butyl rubber against 30,600 tons in the same period in 2018, whilst isoprene rubber exports rose from 13,900 tons to 20,200 tons.

SIBUR Togliatti Rubber Exports (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
Isoprene Rubber	20.2	13.9
Butyl Rubber	38.0	30.6
SBR	27.5	24.8
Others	0.5	0.0
Total	86.2	69.2

SIBUR Togliatti currently includes capacities for butyl rubber (75,000 tpa), copolymer rubbers with a capacity of 60,000 tpa, butadiene (80,000 tpa), isoprene (90,000 tpa) and isoprene rubbers (82,000 tpa). The capacity for the production of isobutylene-isobutane fraction stands at 165,000 tpa and isobutylene at 60,000 tpa. About 70% of products are exported. The main consumers include tyre companies such as Bridgestone, Pirelli, Nokian, Cordiant, Kenda, and

Nexen, etc. Togliatti is located around 400 kilometres from Tatneft's main tyre plants in Tatarstan, and logistics are available either by rail, road and possibly river (Volga-Kama).

Price conflict for isoprene rubber & impact on tyre production

One of the reasons justifying Tatneft's interest in the Togliatti rubber facilities is the continued dispute

Nizhnekamskneftekhim-divinyl styrene rubber project

For the construction of the divinyl styrene synthetic rubber (DSSK) of Nizhnekamskneftekhim, two columns have been installed recently, having been delivered from plants in Bashkortostan. Currently, the construction of foundations is at the completion stage, the installation of metal structures and equipment is in progress. More than 30% of the necessary equipment has already arrived at the site. Production is scheduled to be commissioned in 2020, with a capacity of 60,000 tpa. DSSK is used in the production of environmentally friendly, green tyres, which have good wear resistance, frost resistance and dynamic endurance, as well as in the rubber and shoe industry, in the manufacture of conveyor belts.

In addition to DSSK, Nizhnekamskneftekhim is constructing a new unit for thermoplastic elastomers (TEP), which are used in the production of polymer-bitumen binders (PBB). The capacity of this plant will be 10,000 tpa.

with its main rubber supplier Nizhnekamskneftekhim. Tatneft and Nizhnekamskneftekhim have been fighting in the FAS (Federal Anti-Monopoly Commission) and the courts in the past two years over rubber prices. Tatneft has even started buying its raw materials from other sources rather than depending on its traditional supplier Nizhnekamskneftekhim, which is being questioned why it had raised rubber prices across the board by a range of 10–27% in 2018.

Nizhnekamskneftekhim's majority owner TAIF stated that prices were agreed in 2015 by a protocol lasting until 31 December 2019. When in April this year Tatneft-Neftekhimsnab, which secures rubber supply for the tyre plants, proposed to

extend same contract Nizhnekamskneftekhim stated that it wanted to conclude a new agreement. In March this year Tatneft started a court case against Nizhnekamskneftekhim for rubber prices and in August 2019 the anti-monopoly commission (FAS) stated that the petrochemical producer did not comply with the requirements. Accordingly, Tatneft is fully determined to bring the legal dispute to a conclusion.

This year, the Tatneft tyre complex had to reduce production due to insufficient supplies of raw materials. In the first half of the year, Tatarstan's tyre plants produced 4.3 million tyres, a third less than a year earlier, as Nizhnekamskneftekhim reduced supplies of isoprene rubber by around 30%. The Tatneft tyre complex was forced to reduce output overall by 29% in the first half of the year and was forced to concentrate only on fulfilling minimum contract supplies.

After the purchase of SIBUR's Togliatti assets, the structure of supplies of raw materials to the Tatneft tyre complex should undergo radical changes. However, to what extent Tatneft will receive raw materials from Togliatti and whether it is enough to fully cover the needs of Tatarstan tyre manufacturers is still uncertain.

Nizhnekamskneftekhim sells around 50-70,000 tpa of various synthetic rubber grades to the Tatneft tyre plants. These volumes are not critical for the company in terms of volume as over 80% of production is exported. Notwithstanding, market sources suggest that Tatneft's reduced need to buy raw materials from its neighbour would represent a negative development for Nizhnekamskneftekhim.

Nizhnekamskneftekhim Rubber Exports (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
Isoprene Rubber	124.8	127.9
Butyl Rubber	38.6	41.8
HBR	80.6	76.4
Polybutadiene	100.1	101.6
Total	344.1	347.6

Nizhnekamskneftekhim rubber exports, Jan-Jul 2019

In the first seven months in 2019 Nizhnekamskneftekhim exported 124,800 tons of isoprene rubber against 127,900 tons in the same period in 2018. Polybutadiene exports amounted to 100,100 tons versus 101,600 tons, whilst halogenated butyl rubber exports rose slightly from 76,400 tons to 80,600 tons. In total Nizhnekamskneftekhim exported 344,100 tons in the first seven months against 347,600 tons in the same period last year.

SIBUR-Sinopec nitrile (NBR) & SEBS rubber projects

SIBUR and China Petroleum & Chemical Corporation (Sinopec) signed a Memorandum of Understanding to cooperate in nitrile butadiene rubber (NBR) production. The parties to the Memorandum have agreed to set up a joint venture (JV) for the production of nitrile butadiene rubber with a capacity of 50,000 tpa in China. SIBUR's share in the joint venture will be 40% and Sinopec's 60%.

Russian Imports of SEBS Rubber Unit-kilo tons			
Country	Jan-Jul 19	Jan-Dec 18	Jan-Dec 17
US	0.8	1.3	1.3
Germany	2.2	3.4	6.0
Belgium	4.5	6.9	3.8
South Korea	1.0	3.0	1.8
France	0.9	2.3	2.1
Switzerland	0.7	1.1	1.2
China	0.5	1.7	1.8
Netherlands	0.3	0.6	0.7
Others	3.9	7.6	6.9
Total	14.9	27.9	25.5

SIBUR and Sinopec have agreed to cooperate in the production of SEBS (block copolymers based on styrene, ethylene and butylene). SIBUR and Sinopec will equally create a joint venture in Russia to produce SEBS with a capacity of at least 20,000 tpa. SEBS is used as a modifier of thermoplastic materials, available in the form of granules. Estimates indicate global consumption of SEBS ranges from 200,000 tpa to 270,000 tpa, with a growth rate estimated at 5-7%. Russia imported 14,900 tons in the first seven months this year.

Methanol & related products

Russian methanol production, Jan-Aug 2019

Methanol production in Russia totalled 2.957 million tons in the first eight months in 2019 against 2.761 million tons in same period in 2018. The largest proportional rise was recorded by Angarsk Petrochemical Company which increased production from 2,200 tons to 29,200 tons. The largest volume rise was recorded

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Shchekinoazot	630.6	319.7
Sibmetakhim	626.8	623.7
Metafrax	713.3	761.5
Akron	69.4	71.7
Azot, Novomoskovsk	167.3	194.1
Angarsk Petrochemical	29.2	2.2
Azot, Nevinnomyssk	83.2	73.6
Tomet	528.0	572.1
Ammoni	109.2	142.5
Totals	2957.0	2761.1

by Shchekinoazot which increased production from 319,700 tons to 630,600 tons, whilst Tomet at Togliatti reduced production from 572,100 tons to 528,000 tons.

Metafrax at Gubakha reduced production to 713,300 tons in the first eight months in 2019 against 761,500 tons last year whilst Sibmetakhim at Tomsk increased production from 623,700 tons to 626,800 tons.

Ammoni at Mendeleevsk, which is in the process of being sold, reduced methanol production from 142,500 tons in January to August 2018 to 109,200 tons this year.

Metafrax is seen as the most market developed of the Russian methanol producers, in terms of undertaking export activity in addition to internal processing. Formaldehyde and urea-formaldehyde concentrate are major products for the company, which is currently undergoing a major brand change.

Russian Methanol Exports (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Azot Nevinnomyssk	0.0	1.5
Azot Novomoskovsk	50.4	97.5
Akron	4.4	10.0
Metafrax	281.8	350.7
Sibmetakhim	315.8	330.4
Tomet	241.4	194.9
Shchekinoazot	497.6	214.1
Ammoni	13.5	1.6
Total	1405.0	1200.8

Russian methanol exports, Jan-Aug 2019

Russian methanol exports totalled 1.405 million tons in the first eight months in 2019 against 1.201 million tons in the same period in 2018. Shchekinoazot recorded the largest rise in export activity in the first eight months in 2019, shipping 497,600 tons against 214,100 tons in the same period in 2018. Azot at Novomoskovsk reduced exports from 97,500 tons to 50,400 tons in the same period in 2018. Metafrax exported 281,800 tons in the first eight months in 2019 versus 350,700 tons in January to August 2018.

Russian methanol expansions

The commissioning of new methanol production facilities in Russia and the promise of other new projects may have a downward effect on product pricing for existing producers, not only in the domestic market but also the international market. Already there is evidently a surplus of methanol on the European market impacting on prices and production volumes, indicating that supply could become more plentiful should projects in the Gulf of Finland and other locations materialise.

In terms of current effects, Evrokhim has been forced to reduce capacity utilisation at Azot at Novomoskovsk, where the methanol plant was running at lower capacity in both July and August. As a result, the average monthly capacity load in 2019 was 80% with production reduced for the eight months from 194,000 tons to 167,000 tons.

Aside the range of ambitious million-ton grassroot projects both Shchekinoazot and Nizhnekamskneftekhim intend to introduce new plants of 500,000 tpa by 2021-2022, whilst Tomet expects to increase capacity by

Russian Market Balance for Methanol 2019		
	Jan-Aug 19	Jan-Aug 18
Production	2957.0	2761.1
Exports	1394.8	1200.9
Domestic Sales	962.5	1032.3
Captive/Inventory	599.7	527.9

200,000 tpa by 2021. Thus, whilst uncertainty remains over the new grassroot projects Russia can at least expect to add 1.2 million tpa of additional capacity by 2022. As this increase is likely to impact significantly on export volumes, questions arise over logistics and distribution channels.

Logistics for Russian methanol producers

Finland is the main destination for Russian methanol exports, before further distribution, and consequently Finland's infrastructure for transshipping petrochemicals is important for considering future methanol projects in Russia. More than 50% of the external deliveries of Russian methanol are carried out through terminals

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	Jan-Jul 19	Jan-Jul 18
Finland	577.6	557.0
Poland	227.0	166.0
Slovakia	90.4	72.1
Romania	57.9	51.0
Belarus	31.3	52.0
Lithuania	74.5	42.7
Turkey	17.3	0.0
Others	188.9	140.4
Total	1265.0	1081.2

in Finland, but according to traders, the operators of these terminals do not intend to expand transshipment capacities. In the past two years logistical difficulties have been encountered during the transshipment of methanol through Finnish ports with accounts of rail cars being held up for periods of more than 20 days.

Aside Finland, Russian methanol exports are shipped at two terminals in the southern ports, including SVL in the port of Kavkaz and Cargokhim in Temryuk. The latter is not equipped with storage tanks and transports methanol by direct overflow from railway tanks to the vessel, and SVL is not planning expansion. Methanol is also exported from Russia through the Vilaris terminal on the Belarussian

border, whilst small volumes (5,000 tons per month) are transhipped through Mockavos Terminalas.

The Vilaris terminal, which is located at the Belarussian-Polish border crossing Bruzgi-Kuznitsa, increased methanol transshipment capacity in September this year. Due to the installation of new tanks the volumes of transshipment of Russian methanol increased from 21-22,000 tons to 25-27,000 tons per month. Vilaris is loading methanol from Russian railway tanks for 1,520 mm gauge into European cars for 1,435 mm gauge by direct overflow using six pumps. Shipments of Russian methanol to the Vilaris complex in January-July increased by 33,200 tons compared to 2018 to 150,200 tons. Shchekinoazot shipped 84,000 tons through this route. In 2018 223,700 tons of methanol were shipped through the Vilaris terminal, compared with

48,000 tons in 2017. The largest increase in methanol shipments came to the port of Kavkaz, as the only supplier Shchekinoazot increased its exports in this direction by 33,600 tons to 49,800 tons. The product is accumulated and reloaded at the SVL complex, from where it is shipped mainly to Turkey.

Russian methanol domestic sales, Jan-Aug 2019

Sales of methanol on the Russian domestic merchant market dropped in the first eight months in 2019, with domestic sales totalling 962,500 tons versus 1,035,300 tons in the same period in 2018. Ammoni at

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Azot Nevinnomyssk	21.4	11.1
Azot Novomoskovsk	104.5	92.1
Metafrax	158.5	190.8
Sibmetakhim	252.7	240.2
Tomet	263.1	355.0
Shchekinoazot	96.6	34.6
Ammoni (Mendeleevsk)	65.8	108.6
Others	0.0	2.8
Total	962.5	1035.3

Mendeleevsk reduced domestic sales from 108,600 tons to 65,800 tons, whilst Azot at Novomoskovsk increased from 92,100 tons to 104,500 tons and Tomet dropped from 355,000 tons to 263,100 tons. Metafrax reduced shipments from 190,800 tons to 158,500 tons.

Nizhnekamskneftekhim remains the largest individual buyer of merchant methanol on the Russian market, purchasing 156,600 tons in the first eight months against 163,400 tons in the same period in 2018. SIBUR Togliatti increased purchases from 83,000 tons to 105,400 tons, whilst Uralorgsintez increased inward shipments from

45,400 tons to 54,600 tons. In the resin sector the largest buyer of methanol in the first eight months was Kronospan which purchased 69,989 tons followed by Metadynea taking 51,874 tons and Uralkhimplast taking 29,416 tons

Regarding domestic prices quotations from the Volga Federal District, varied in September in the range of 17,500-21,000 roubles per ton, including VAT. For consumers located in the Ural Federal District, the price range is 18,000-22,000 roubles per ton, including VAT. Enterprises located in the Siberian Federal District sell methanol in the range of 17,500-21,500 roubles per ton, including VAT. October market signals indicated a further weakening in prices.

Sirius Holding-methanol project for Khabarovsk

A huge methanol project is under review in the Russian Far East, involving 7.2 million tpa of capacity, although at this early stage it cannot be factored into supply-demand balances. In the near future, i.e., before

Preliminary Cost Breakdown for Khabarovsk methanol project		
Costs	Roubles	\$ USD
Total	740 billion	11.3 billion
Gas fields Yakutia	250 billion	3.8 billion
Gas pipeline	150 billion	2.3 billion
Methanol plant	300 billion	4.6 billion
Infrastructure	40 billion	614 million

the end of October, a working group is to be formed in the Khabarovsk Kray to study the first steps in developing ideas for the Sirius Holding methanol project. Although seemingly improbable at the moment, the fact that Chinese investors are interested in methanol supply in the Russian Far East indicates the potential of any new plant close to the Chinese border.

Gas deposits in the west of Yakutia have been identified as the main feedstock source, which would involve the construction of an industrial complex 3.5 km from the village of Ayan. This would then be followed by the construction of a gas pipeline with a capacity of 20 billion cubic metres per annum and a length of 1,200 km.

The working group will include the Chinese investors Sherwood Energy (a subsidiary of Sirius Holding), which is interested in importing methanol to China, and the regional authorities. The Khabarovsk working group will deal with the elaboration of the road map and determine the terms. At the same time this initiative cannot yet be called a structured project at the level of a feasibility study.

With total costs of more than \$11 billion finding finance may prove to be beyond the consortium, but equally should it succeed it would provide a large supply for the Chinese market. By economies of scale, moreover, it would act as serious global player whilst undermining the competitiveness of other Russian projects in the Far East.

Organic chemicals

Russian butanol production, Jan-Aug 2019

Russian normal butanol production amounted to 91,600 tons in the first eight months in 2019, versus 94,200 tons in the same period in 2018 whilst isobutanol production rose from 64,700 tons to 67,500 tons. SIBUR-Khimprom at Perm increased the production of isobutanol from 26,900 tons in January to August 2018 to 26,400 tons in 2019 whilst Gazprom neftekhim Salavat produced 40,100 tons versus 38,900 tons.

The Salavat plant reduced production of isobutanol from 25,000 tons to 22,700 tons, primarily to meet demand from the acrylates' division. In workshop for the production of butanols at Salavat, a scheme was implemented for receiving propylene directly from the refinery. This scheme will reduce the loss of propylene during storage, as well as ensure stable operation of pumping equipment.

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Petrochemical	15.5	18.6
Azot, Nevinnomyssk	9.6	9.8
Gazprom n Salavat	40.1	38.9
SIBUR-Khimprom	26.4	26.9
Total	91.6	94.2
Russian Isobutanols Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Angarsk Petrochemical	9.1	10.0
Gazprom n Salavat	22.7	25.0
SIBUR-Khimprom	35.6	34.1
Total	67.5	64.7

Russian butanol sales, Jan-Aug 2019

Russian sales of butanols on the domestic merchant market amounted to 35,500 tons in the first eight months in 2019 against 43,300 tons in the same period in 2018. The share of n-butanol in the total supply was 86%, and isobutanol 14%.

Akrilat at Dzerzhinsk remained the largest consumer of butanols on the domestic market, taking 12,000 versus 12,500 tons in January to August 2018, whilst Dmitrievsky Chemical increased inward shipments from 9,400 tons to 11,300 tons. Akrilat purchases most of its butanols from

SIBUR-Khimprom, whilst Dmitrievsky Chemical Plant buys largely from Angarsk and Salavat. The problem facing consumers for 2019 and 2020 may possibly be one of supply on the domestic market as domestic producers focus more on captive consumption and internal processing.

The situation on the Russian domestic butanol market is stable in the first part of the fourth quarter. SIBUR

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Gazprom n Salavat	4.3	6.1
SIBUR-Khimprom	18.8	18.4
Angarsk Polymer Plant	10.3	13.0
Azot Nevinnomyssk	1.3	2.0
Others	0.9	3.8
Totals	35.5	43.3

offers normal butanol at 71,500 roubles per ton, including VAT, whilst isobutanol is sold at 51,000 roubles per ton. The prices of Gazprom neftekhim Salavat's n-butanol is shipped at 73,500 roubles, while isobutanol is shipped at 72,500 roubles, respectively, per ton, including VAT. Angarsk Petrochemical Company offers normal butanol in the Siberian Federal District at 55,000 roubles per ton, including VAT.

Russian phthalic anhydride production Jan-Aug 2019

Russian production of phthalic anhydride amounted to 69,800 tons in the period January to August 2019 against 70,300 tons in the same period in 2018. Kamteks-Khimprom produced 62,000 tons against 62,400 tons whilst Gazprom neftekhim Salavat increased production from 8,000 tons to 7,800 tons. The Russian market for phthalic anhydride is undergoing changes regarding both import competition and future consumption patterns, which should affect Kamteks-Khimprom directly. Domestic consumption of phthalic anhydride is expected to fall this year following the launch of the new SIBUR DOTP plant, which is phthalate based rather than phthalic.

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	Jan-Aug 19	Jan-Aug 18
Gazprom neftekhim Salavat	7.8	8.0
Kamteks-Khimprom	62.0	62.4
Total	69.8	70.3

By the end of this year both Russian phthalic anhydride producers may be forced into reducing capacity utilisation. Around 65% of phthalic anhydride consumption in Russia stems from plasticizers and up to 30% is used in the paint and varnish industry. The paint and varnish industry in recent years has been developing due to water-

soluble materials. At the same time, the alkyd paint and varnish segment are changing slowly, and is not able to compensate for the reduction in phthalic anhydride consumption in the plasticizer market.

Russian Organic Chemical Imports (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
Ethylene glycol	31.6	32.2
Propylene glycol	12.8	14.4
Acetic Acid esters	1.1	1.6
Isopropanol	9.8	10.8
Maleic anhydride	3.4	3.3
DINP	17.1	14.5
DOP	0.9	5.6
Phthalic anhydride	8.9	9.0
PTA	251.9	138.4
TDI	28.3	26.9
Lysine	33.8	59.4
Amino acids	11.9	17.8
Methionine	19.8	14.4
Cyclic amides	2.8	2.6

Russian organic chemical trade, Jan-Jul 2019

Butanol exports from Russia dropped in the first seven months this year to 38,500 tons from 43,500 tons in the same period in 2018. Normal butanol export shipments dropped from 21,000 tons to 15,800 tons and isobutanol shipments rose from 22,500 tons to 22,700 tons. 2-EH exports dropped from 14,300 tons to 4,100 tons due mostly to the increase in domestic demand from SIBUR-Khimprom's new DOTP plant at Perm.

Methanol comprises by far the largest volume organic chemical exported from Russia, totalling 1.265 million tons in the period January to July 2019. By far the largest organic chemical to be imported into Russia this year, at least in terms of volume, is PTA where inward shipments rose from 138,400 tons to 251,900 tons. However, this trend is starting to slow down in the fourth quarter this year

as the expanded Polief plant increases utilisation rates.

Russian TDI Imports (unit-kilo tons)		
Country	Jan-Jul 19	Jan-Jul 18
Hungary	5.6	5.1
Germany	5.9	10.6
China	1.4	0.1
South Korea	0.5	1.0
Saudi Arabia	6.3	5.4
UK	0.0	0.1
US	5.8	2.4
Turkey	0.1	0.0
Japan	1.0	1.2
Belgium	0.5	0.5
Netherlands	0.9	0.0
France	0.2	0.2
Poland	0.0	0.1
Iran	0.0	0.1
Total	28.3	26.9

Other imports in the organic chemical sector cover a range of products such as ethylene and propylene glycol, isopropanol and methionine. Lysine imports into Russia have declined this year, from 59,400 tons in January to July 2018 to 33,800 tons whilst TDI imports rose from 26,900 tons to 28,300 tons and methionine from 14,400 tons to 19,800 tons. In the changing plasticizer market DOP imports dropped from 5,600 tons to 900 tons whilst DINP imports rose from 14,500 tons to 17,100 tons.

Other products

Russian TDI-MDI imports, Jan-Jul 2019

Russia imported 28,300 tons of TDI in the first seven months in 2019 against 26,900 tons in the same period in 2018. The three largest sources of imports in the first seven months in 2019 included Saudi Arabia with 6,300 tons, Germany with 5,900 tons and Hungary with 5,600 tons. Prices of TDI imports into Russia averaged €1919 per ton in July, higher than €1781 per ton in June and the highest value since January this year.

Russian Imports of MDI (unit-kilo tons)		
Country	Jan-Jul 19	Jan-Jul 18
Hungary	4.4	2.5
Germany	9.2	8.8
China	20.6	10.6
South Korea	1.4	0.9
Lithuania	0.0	0.2
Saudi Arabia	22.3	19.6
Japan	1.3	1.4
Belgium	9.8	8.2
Netherlands	19.1	22.4
Others	0.2	1.9
Total	89.4	78.1

MDI imports into Russia totalled 89,400 tons in the first seven months in 2019, against 78,100 tons in the same period in 2018. Saudi Arabia was the largest supplier, providing 22,300 tons against 19,600 tons in the previous year.

China increased shipments of MDI from 10,600 tons to 20,600 tons, whilst the Netherlands accounted for 19,100 tons of MDI imports in the first seven months in 2019 against 22,400 tons in the same period in 2018.

Regarding the Russian downstream isocyanate market Avtokomtekhnoledzhi will invest 30 million roubles in the production of plastic and polyurethane products for the oil refining and food

industries in Volzhsky. Production is planned to begin in the second quarter of 2020. Upon reaching the design capacity, more than 14,000 units of products with a total value of more than one hundred million roubles per annum will be produced on the new line.

Fosagro-nitric acid

Fosagro aims to launch a new nitric acid production unit at Cherepovets in the fourth quarter, involving a capacity of 130,000 tpa. The new nitric acid production unit will facilitate an increase in the production of ammonium nitrate, which is in high demand in the domestic market. Also at Cherepovets, Fosagro is close to launching a new plant for sulphuric acid with a capacity of 1.1 million tpa and a plant for the production of ammonium sulphate with a capacity of 300,000 tpa. These facilities will eliminate the need to outsource these products.

Shchekinoazot-ammonium sulphate

Shchekinoazot is completing work on the ammonium sulphate project which follows the launch of the SK-200 sulphuric acid plant. The company is also starting the construction of a nitric acid plant.

The Chinese corporation CNCEC, selected as the general contractor for the ammonia and urea complex based at Shchekinoazot, expects to complete the preparation of project documentation in March 2020. The capacity of the new production, which is to be located in the Efremov branch of Shchekinoazot, will amount to 525,000 tpa of ammonia and 700,000 tpa of urea. In 2018, a group of specialists was assembled at the main site of Shchekinoazot, who are carrying out work on a project for a small installation of urea and ammonia. Haldor Topsoe and Stamicarbon are licensors of ammonia and urea respectively. The completion of installation works, and commissioning are planned for 2022-2023.

Russian caustic soda trade, Jan-Jul 2019

Russia's exports of liquid caustic soda amounted to 270,000 tons in January-July 2019 for a total value of \$55.8 million, of which the three main destinations included Turkey, Ukraine and Belarus. At the same period a year earlier exports of liquid caustic soda from the country were 255,000 tons for \$68.4 million,

Exports of solid caustic soda from Russia for seven months of this year amounted to 27,000 tons, down 9% year on year (43,200 tons). The main countries for Russian solid caustic exports included Belarus (13.6%) Ukraine (10.2), and Kazakhstan (8.6%). Imports of solid caustic amounted to 14,000 tons in the first seven months in 2019, versus 15,900 tons in 2018. China was the main source in both years.

Shchekinoazot-dimethyl ether plant

Shchekinoazot officially opened its dimethyl ether plant (DME) in September, although production started in December 2018. The aim of the enterprise is development of DME market in Russia and abroad, comprising a capacity of 20,000 tpa. The plant was designed by ThyssenKrupp Uhde Engineering Services GmbH and investment in the project amounted to over €20 million.

Russian lysine market 2019

Lysine imports into Russia have declined this year partly due to increased availability from the Shebelinka plant, where production capacity has been increased from 57,000 tpa to 72,000 tpa. However, Russia



of bran.

remains import dependent and in essence awaiting the delayed DonBioTech project at Volgodonsk near Rostov. This project is now expected to start production in mid-2021 after originally setting 2014 as a target start-up date. Debt problems have been the main cause of the delays and the company hopes to restart construction in 2020 after repaying creditors. The project for the construction of a complex comprises processing capacity of 250,000 tpa of grain, including 100,000 tpa of lysine sulphate, 20,000 tpa of gluten, 11,000 tpa of starch and 95,000 tpa

Imports of lysine into Russia amounted to 72,000 tons in 2018 which is 20% more than in 2017, but now have dropped in 2019 due to increased domestic production. The main supplier countries in 2018 were Indonesia (over 50%), South Korea (about 30%) and the USA (about 11%). The price of lysine in Russia at the end of 2018 was in the range of €1.6-1.7/kg (whilst in Europe €1.24/kg).

Anqore-acrylonitrile, econitrile

AnQore has announced the launch of Econitrile under which the company produces and supplies certified, sustainable acrylonitrile. With a significantly lower impact on the environment, this product constitutes an important first step towards a far more sustainable value chain. Econitrile is made from non-fossil feedstocks and is the first mass-produced sustainable acrylonitrile and has a 60% lower overall carbon footprint when compared with AnQore acrylonitrile. Econitrile is produced at the AnQore plant located on the Chemelot Industrial site at the Geleen site in the Netherlands.

At present, there are already two lysine producers in Russia including the Shebelinka plant in the Belgorod region (72,000 tpa) and the AminoSib plant in the Tyumen region (30,000 tpa). Russian companies produce lysine sulphate, while lysine monohydrochloride is purchased abroad. In the first case, the concentration of the active substance is at least 51%, in the second 98%. The Belgorod Shebelinka Plant provides about 65% of the country's needs in this amino acid, having increased concentration in 2018 from 60% to 75%. Starting in 2020, the company plans to sell liquid lysine.

Ukraine

Ukrainian polymer imports, Jan-Aug 2019

Imports of PVC into Ukraine decreased by 36% in the first eight months of this year to 31,100 tons. The key suppliers of PVC to the Ukrainian market were producers from Europe, accounting for 65% of total imports in the first eight months of this year. The growth in demand for Ukrainian PVC from the domestic market this year has led to a reduction in export activity. In January-August, 106,400 tons of PVC were shipped for export compared to 115,000 tons in the same period in 2018. The key importers of Ukrainian PVC were consumers from India and Turkey, their share in total exports was 58% and 20%.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	Jan-Aug 19	Jan-Aug 18
LDPE	37.4	39.0
LLDPE	38.8	36.9
HDPE	48.8	37.2
PP	90.1	80.8

In the first eight months of 2019 imports of polyethylene to the Ukrainian market rose by 10% to 178,400 tons against 162,500 tons in the same period in 2018. HDPE imports amounted to 63,800 tons against 50,000 tons, whilst LDPE imports dropped 5% to 52,300 tons. LLDPE imports rose to 38,800 tons against 36.900 tons in the same period in 2018.

Imports of polypropylene on the Ukrainian market amounted to 90,100 tons against 86,700 tons in January to August 2018. The increase in supplies was mainly attributable to propylene homopolymers (PP-homo). Over eight months, the total supply of PP-homo reached 69,300 tons against 65,300 tons in the same period last year. Imports of propylene block copolymers amounted to 9,100 tons of PP-block were imported against 8,700 tons, whilst random copolymer imports dropped to 10,600 tons from 11,200 tons. import deliveries of PET to Ukraine decreased by 2% in January-August compared to the same period last year and amounted to 102,200 tons.

Belarus

Belarussian polymer trade, Jan-July 2019

Imports of polypropylene into Belarus totalled 64,600 tons in first seven months of this year, up 10.8% compared to the same period in 2018. Homopolymer imports rose 9.5% to 43,000 tons compared with 36,900 tons. Russian producers occupied the Belarussian market with the share of about 86%. Total imports of propylene copolymers in the country reached 21,600 tons in Jan-July 2019, up 13.3%. Imports of PVC into Belarus rose in the first seven months of 2019 to 22,864 tons from 19,858 tons in the same period in 2018. Similarly, to polypropylene, Russian producers took a share of about 86% of the Belarussian PVC market.

Belarussian Acrylonitrile Exports (unit-kilo tons)		
Product	Jan-Jul 19	Jan-Jul 18
Russia	1.1	1.7
Hungary	0.0	1.8
Iran	0.0	2.0
Netherlands	7.7	0.0
Turkey	14.9	19.6
Total	24.5	25.1

Exports of polyethylene from Belarus rose to 60,443 tons in the first seven months from 54,118 tons in the same period last year. LDPE exports amounted to 42,256 tons versus 39,654 tons. Belarus exports of polyethylene in the January to July 2019 yielded

revenues of \$66.708 million down from \$68.472 million. Regarding polyamide, Belarussian exports amounted to 37,264 tons in the first seven months this year against 42,934 tons in the same period in 2018. Revenues dropped from \$91.155 million to \$66.646 million as average prices fell from \$2,123 per ton to \$1,788 per ton.

Belarussian Methanol Market (unit-kilo tons)		
	<i>Jan-Jul 19</i>	<i>Jan-Jul 18</i>
Production	48.7	40.0
Exports	10.7	13.0
Imports	35.9	54.8
Balance	73.9	81.8

Belarussian organic chemical trade, Jan-July 2019

Belarussian acrylonitrile exports totalled 24,500 tons in the period January to July 2019 against 25,100 tons in the same period in 2018. The largest destination for Belarussian exports was Turkey, accounting for 14,900 tons versus 19,600 tons in the previous year. Average prices for Belarussian acrylonitrile exports dropped to \$1337 per ton in the first seven months this year against \$1662 per ton in the same period in 2018.

In other areas of chemical trade, methanol export shipments from Belarus amounted to 6,900 tons in January to July 2019 against 7,100 tons in the same period in 2018. Average methanol export prices amounted to \$299 per ton against \$370 in the first seven months last year. Methanol imports into Belarus totalled 35,934

Belarussian PTA Imports (kilo tons)		
<i>Country</i>	<i>Jan-Jul 19</i>	<i>Jan-Jul 18</i>
Russia	0.0	1.2
Belgium	0.0	0.5
Turkey	1.0	0.0
South Korea	7.5	5.3
Portugal	5.0	0.0
Poland	19.2	7.6
Thailand	0.2	0.0
Total	32.9	14.6

tons in the first seven months in 2019, at \$306 per ton, against 54,801 tons in the same period in 2018 at \$323 per ton. Methanol consumption in the first seven months totalled 73,900 tons against 81,800 tons in the first seven months in 2018.

PTA imports into Belarus in the first seven months amounted to 32,900 tons against 14,600 tons in the same period in 2018. Poland and South Korea were the main suppliers. Prices averaged \$912 per ton in the first seven months against \$808 in the same period in 2018. Ethylene glycol imports rose to 39,658 tons from 34,846 tons in the first seven months in 2017. Mogilevkhimvolokno purchases Bashkir paraxylene and PTA, and produces polyester yarns and fibres based on them.

Belarussian Organic Chemical Exports (unit-kilo tons)		
<i>Product</i>	<i>Jan-Jul 19</i>	<i>Jan-Jul 18</i>
Acrylonitrile	24.5	25.1
Melamine	3.8	1.5
Caprolactam	6.4	4.5
Phthalic anhydride	22.2	28.3
Methanol	10.7	13.0

Belarussian melamine exports, Jan-July 2019

Melamine exports from Belarus totalled 3,804 tons in the first seven months in 2019 against 1,502 tons in the same period last year. Average prices dropped from \$1,490 per ton to \$1,306 per ton. Poland was the main market for Belarussian melamine exports in the period January to July 2019, where 1,561 tons were

shipped, followed by Germany with 840 tons and the Czech Republic with 721 tons.

Azot Grodno Production (unit-kilo tons)		
<i>Product</i>	<i>Jan-Aug 19</i>	<i>Jan-Aug 18</i>
Methanol	56.2	51.3
Caprolactam	80.0	83.3
Polyamide primary	71.9	75.8
Polyamide filled	8.4	8.4
Ammonia	700.6	693.4
Urea	575.9	663.6
Fertilisers	539.5	503.4
Fibres	28.7	27.8

Grodno Azot, Jan-Aug 2019

Grodno Azot increased the output of marketable products by 5.4% for the eight months of 2019. In August, Grodno Azot retained primary polyamide production at the same level I July at 9,400 tons. The production of fibres and chemical threads increased by 3.6% to 3,540 tons, the production of cord fabric decreased by 7%.

The production of mineral fertilisers in August increased by 18.8%. Grodno Azot produced 54,300 tons of urea, 85,500 tons of ammonium nitrate, 32,200 tons of ammonium sulphate. Ammonia output increased by 20.6% and

amounted to 76,130 tons. In August, the plant produced 7,500 tons of technical methanol, reducing production by 5.7%. Sulphuric acid production increased by 1% up to 23,950 tons. Caprolactam production volumes decreased by 10.2% to 10,210 tons.

Central Asia-Caucasus

Uzbek GTL project

Uzbekistan has achieved around 40% of the construction work on the GTL project (OLTIN YO'L GTL), as at the end of September, in which total investment is estimated at \$3.6 billion. Capacities of the project include 311,000 tpa of aviation kerosene, 743,000 tpa of diesel fuel, 431,000 tpa of naphtha and 53,000 tpa of liquefied gas. The plant ownership is divided between Qatar Petroleum (51%) and Sasol (49%). Haldor Topsoe is the licensor of synthesis gas technology.



In addition, licensing agreements for the project were signed with Sasol and Chevron. The construction contractors are Hyundai Engineering Co. Ltd. and Hyundai Engineering and Construction Co., Ltd (South Korea), Enter Engineering Pte. Ltd. (Singapore).

Azerbaijan, methanol production, Jan-Aug 2019

In January-August 2019 Azerbaijan produced 277,400 tons of methanol which is more than double the same period as last year. The methanol plant was commissioned in 2013, transferred to the management of SOCAR Methanol LLC in 2016, and from August 2017 it became the property of the company. The maximum plant capacity is 650-700,000 tpa.

Kazakh polymer trade, Jan-Jul 2019

In January-July 2019, imports of polypropylene to Kazakhstan increased by 17% to 21,300 tons from 18,200 tons in the same period last year. Polypropylene exports from Kazakhstan, by contrast, declined by 39%.

Kazakh benzene and paraxylene 2019

Kazakhstan expects to produce a total of 180,000 tons of benzene and paraxylene in 2019, all of which will be exported. In the first three quarters the Atyrau refinery produced 107,000 tons of aromatic hydrocarbons were produced.

Homopolymer imports rose to 17,100 tons from 13,400 tons in the first seven months, whilst imports of propylene copolymers amounted to 4,200 tons against 4,180 tons in 2018.

Regarding exports, over the first seven months of this year 12,400 tons of polypropylene were shipped from Kazakhstan, versus 17,200 tons in the same period in 2018. Neftekhim at Pavlodar, which is Kazakhstan's only polypropylene producer, shut down its plant for an unscheduled maintenance on 30 September, probably lasting until late October. The plant at Pavlodar has a capacity of 45,000 tpa.

Imports of PVC into Kazakhstan rose in the first seven months of 2019 by 1% to 30,300 tons compared to 29,900 tons. Due to the geographical position, Chinese producers with the share of about 96% of the local market over the stated period were the main PVC suppliers to Kazakhstan. Russia was the second largest PVC supplier; shipments of Russian resin reached 1,200 tons.

Kazakh petrochemical industry & Atyrau complex

As part of the development of the petrochemical industry in Kazakhstan the government has created a special petrochemical zone in the Atyrau region where tax and customs preferences will operate. The state is financing the construction of infrastructure, as this allows to reduce up to 20% of capital and up to 15% of operating costs, whilst simplifying the procedure for attracting foreign labour.

In 2018, construction began on a gas-chemical complex at Atyrau to produce polypropylene, with a capacity of 500,000 tpa, worth \$2.6 billion. The completion date for the construction of the gas chemical complex is planned for 2021. After the polypropylene plant Ministry of Energy has reached preliminary agreement with Borealis to implement a polyethylene project with a capacity of 1.250 million tpa.

Relevant Currencies

Czech crown. Kc. \$1=22.4. €1=25.4; Hungarian Forint. Ft. \$1=279.2 €1=322.2; Polish zloty. zł. \$1=3.70. €1=4.28; Ukrainian hryvnia. \$1=31. 4€1=26.9; Rus rouble. \$1=66.3 €1=76.6

CENTRAL & SOUTH-EAST EUROPE	2
PKN Orlen-crude and Central European petrochemical margins.....	2
MOL-polyol project	2
Central European olefin-polyolefin outages	3
Polish propylene imports, Jan-Jun 2019.....	3
Orlen Poludnie-propylene glycol & bioethanol.....	3
Czech petrochemical exports, Jan-Aug 2019.....	3
Anwil-EDC expansion.....	4
Ciech Romania, soda ash shutdown	4
Polish methanol exports, Jan-Jun 2019.....	4
Polish methanol projects-Orlen and PGC.....	4
Polish PTA Exports, Jan-Jun 2019.....	5
Czech chemical trade, Jan-Aug 2019.....	5
Polish TDI Imports, Jan-Jun 2019.....	5
RUSSIA	6
Russian chemical production Jan-Aug 2019	6
RUSSIAN PETROCHEMICAL PRODUCTION & SALES	6
ZapSibNeftekhim-propylene and polyethylene production.....	6
Russian ethylene production, Jan-Aug 2019	6
Russian propylene production, Jan-Aug 2019	7
Russian propylene sales & exports Jan-Aug 2019	7
Russian styrene production Jan-Aug 2019	8
Russian styrene exports, Jan-Aug 2019	8
BULK POLYMERS	8
Russian HDPE production, Jan-Aug 2019.....	8
Russian polypropylene production, Jan-Aug 2019.....	9
SIBUR-Netkanika agreement on polypropylene	9
Russian PVC, Jan-Aug 2019.....	9
PX-PTA CHAIN	10
Russian paraxylene sales Jan-Aug 2019	10
Tatneft-SafPet acquisition	10
Russian zero-rated PTA tariffs extended to end of 2022	10
Russian PTA imports, Jan-Jul 2019.....	10
Russian PET imports, Jan-July 2019.....	11
AROMATICS	11
Russian benzene production, Jan-Aug 2019.....	11
Russian benzene market, Jan-Aug 2019	12
Russian caprolactam, Jan-Aug 2019.....	12
Russian phenol, Jan-Aug 2019.....	12
SYNTHETIC RUBBER	12
Russian rubber market Jan-July 2019.....	12
Russian synthetic rubber exports, Jan-Jul 2019	13
Tatneft-SIBUR Togliatti	13
Nizhnekamskneftekhim-divinyl styrene rubber project	14
Price conflict for isoprene rubber & impact on tyre production	14
Nizhnekamskneftekhim rubber exports, Jan-Jul 2019	15
SIBUR-Sinopec nitrile (NBR) & SEBS rubber projects.....	15
METHANOL & RELATED PRODUCTS.....	15
Russian methanol production, Jan-Aug 2019.....	15

Russian methanol exports, Jan-Aug 2019	16
Russian methanol expansions	16
Logistics for Russian methanol producers.....	16
Russian methanol domestic sales, Jan-Aug 2019	17
Sirius Holding-methanol project for Khabarovsk	17
ORGANIC CHEMICALS	18
Russian butanol production, Jan-Aug 2019.....	18
Russian butanol sales, Jan-Aug 2019	18
Russian phthalic anhydride production Jan-Aug 2019	18
Russian organic chemical trade, Jan-Jul 2019.....	19
OTHER PRODUCTS.....	19
Russian TDI-MDI imports, Jan-Jul 2019.....	19
Fosagro-nitric acid	20
Shchekinoazot-ammonium sulphate.....	20
Russian caustic soda trade, Jan-Jul 2019.....	20
Shchekinoazot-dimethyl ether plant	20
Russian lysine market 2019	20
Anqore-acrylonitrile, econitrile.....	21
UKRAINE	21
Ukrainian polymer imports, Jan-Aug 2019	21
BELARUS	21
Belarussian polymer trade, Jan-July 2019	21
Belarussian organic chemical trade, Jan-July 2019.....	22
Belarussian melamine exports, Jan-July 2019.....	22
Grodno Azot, Jan-Aug 2019	22
CENTRAL ASIA-CAUCASUS	23
Uzbek GTL project	23
Azerbaijan, methanol production, Jan-Aug 2019.....	23
Kazakh polymer trade, Jan-Jul 2019	23
Kazakh benzene and paraxylene 2019.....	23
Kazakh petrochemical industry & Atyrau complex	23