

# CIREC MONTHLY news

*Chemical Industry Reporting for Russia, regional partners, and Central Europe*

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**Russia-Ukraine-Belarus-Kazakhstan-Uzbekistan-Azerbaijan  
Czech Republic-Hungary-Poland-Romania-Serbia-Slovakia**

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## Key points from Issue 363

### Central European petrochemical markets

- PKN Orlen produced 482,700 tons of ethylene at Plock in 2020 against 474,800 tons in 2019, whilst propylene dropped from 442,000 tons to 441,700 tons
- Orlen-Unipetrol increased HDPE exports in the fourth quarter last year to a record level of 91,200 tons, helped by the start-up of the new PE3 plant
- Imports of propylene into Poland totalled 137,800 tons from 151,600 tons in 2019
- In 2020 Poland imported 100,100 tons of butadiene of which 36,454 tons came from Austria and 35,900 tons from Hungary
- Ethylene production for MOL's two sites at Tiszaújváros and Bratislava amounted to 798,000 tons in January-December 2020 versus 739,000 tons in 2019

### Russian chemical production

- Russian production of chemicals overall increased by 7.2% in 2020 against 2019
- Russian propylene production amounted to 2.699 million tons in 2020
- Russian polyethylene production increased by 61% in 2020 to 2.987 million tons
- Russia produced 4.385 million tons of methanol in 2020 against 4.442 million tons, with volumes affected in the fourth quarter by the enforced non-technical Tomet outage
- Metafrax produced 1.154 million tons of methanol against 1.091 million tons in January-December 2020 whilst Sibmetakhim at Tomsk reduced production from 884,600 tons to 871,100 tons
- Synthetic rubber production in Russia totalled 1.535 million tons in 2020 against 1.522 million tons in 2019. Both exports and imports of rubber declined last year whilst overall domestic consumption of rubber increased to 757,300 tons in 2020 against 749,900 tons

### Russian chemical trade

- Exports of chemical products fell from 51.6 million tons (\$19.1 billion) in 2019 to 49.1 million tons (\$15.8 billion; imports fell from 11.4 million tons (\$33.8 million) to 10.8 million tons (\$28.9 million)
- PTA imports into Russia totalled 294,500 tons in 2020 against 383,700 tons in 2019. China shipped 274,700 tons in 2020 to Russia against 261,500 tons
- Russian TDI imports amounted to 54,106 tons in the twelve months of 2020 vs 51,812 tons 2019
- Export shipments of Russian methanol totalled 2.126 million tons in 2020
- Russian paraxylene exports dropped from Russia to 141,300 tons in 2020 against 157,400 tons
- Russian exports of synthetic rubber amounted to 978,600 tons in 2020, down from 993,200 tons in 2019. Average prices for Russian synthetic rubber exports dropped from \$1589 per ton in January to December 2019 to \$1286 in 2020

### Eurasian project news

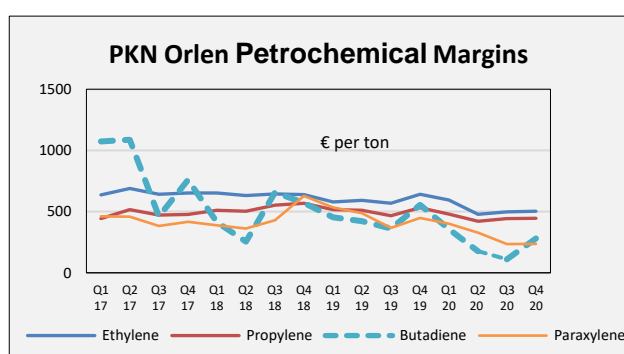
- SIBUR has commenced activity on the Amur Gas Chemical Complex
- Bashneft has announced a tender for a project to install a new polyolefin complex at Ufaorgsintez
- Kazanorgsintez announced about start of EVA/LDPE project
- Metafrax will expand the production of resins after the launch of the AKM complex at Gubakha
- Versalis has won a contract to provide Uzbekistan licenses for a vinyl acetate (LDPE/EVA) swing unit

## CENTRAL & SOUTH EAST EUROPE

PKN Orlen Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Ethylene	482.7	474.8
Propylene	441.7	442.0
Butadiene	60.5	62.7
Toluene	10.9	19.6
Phenol	44.2	44.6
Polyethylene	335.5	356.5
PVC	289.4	237.0
Polypropylene	345.0	342.5

### PKN Orlen 2020 petrochemical margins & production

PKN Orlen produced 482,700 tons of ethylene at Plock in 2020 against 474,800 tons in 2019, whilst propylene dropped from 442,000 tons to 441,700 tons. In other areas of production PKN Orlen produced 60,500 tons of butadiene in Poland, against 62,700 tons in 2019, whilst phenol production dropped slightly from 44,600 tons to 44,200 tons. Orlen's BOP JV at Plock produced 335,500 tons of polyethylene in 2020 against 356,500 tons in 2019 whilst polypropylene production rose from 342,500 tons to 345,000 tons.



Petrochemical sector margins continued a downward trajectory in 2020 from the preceding two years, with butadiene witnessing the sharpest fall until some recovery in the fourth quarter. Orlen's petrochemical margins showed continued declining trends in the fourth quarter although ethylene probably held up better than other feedstocks.

Butadiene margins saw a sharp drop from €556 per ton to €282 per ton whilst paraxylene dropped from €448 per ton to €236. Polyolefin margins

were up overall in 2020 over 2019, but petrochemical margins were all lower.

Regarding petrochemical sales, Orlen's PTA and fertilisers rose by volume in 2020, with other products reporting slight falls. Orlen increased petrochemical sales in 2020 by 13% in Poland on higher sales of ethylene, PTA, fertilisers, and PVC.

In the Czech Republic, petrochemical sales rose 22% in 2020, driven by higher sales of polyethylene (following the launch of PE3), polypropylene and PVC. In

Lithuania, Orlen Lietuva increased by 200% over 2019 on higher volumes of propylene sold to external customers.

### Orlen Group Sales

Sales of petrochemical products by the group totalled 1.4 million tons, up 17%, with polyolefins up 47%, fertilisers up 12%, PVC up 115%, PTA up 15%, and sales of olefins broadly flat. Sales revenues of the

PKN Orlen Group Chemical Sales (unit-kilo tons)		
Product group	Jan-Dec 20	Jan-Dec 19
Monomers	899	869
Polymers	498	540
Aromatics	375	368
Fertilisers	1,122	1,067
Plastics	396	371
PTA	631	508

Orlen Group in the fourth quarter of 2020 amounted to zł 23,173 million and were lower by zł (4,327) million. The decrease in sales revenues reflects (30%) decrease in crude oil prices.

In the fourth quarter crude throughput for the Orlen Group totalled 7.4 million tons with sales of 6.2 million tons. The petrochemical segment posted a fourth-quarter EBITDA of zł 508 million, up 187% on the same period in 2019.

PKN Orlen Group Petrochemical Sales (zł million)		
Product group	Jan-Dec 20	Jan-Dec 19
Monomers	2806	3585
Polymers	1869	2390
Aromatics	716	1080
Fertilisers	825	903
Plastics	1320	1218
PTA	1384	1893
Other	1688	2277
Total	10608	13346

Sales revenues of the Orlen Group dropped in 2020 from zł 111,203 million (€25.850 billion) to zł 86,178 million (€19.261 million).

Petrochemical revenues dropped from zł 13,346 million against zł 10,608 million with plastics the sole product category=y to exceed 2019's results.

The operating costs fell from zł 97,301 million to zł 77,083 million. The largest

item in the cost structure constitutes the cost of materials and energy consumption related mainly to the crude oil and other chemicals used in technological processes. The decrease in the costs of materials and

Polish Exports of PTA (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belarus	28.9	37.5
Germany	315.1	328.9
Lithuania	20.8	4.0
Switzerland	8.9	6.7
Turkey	16.7	32.9
Others	28.0	31.8
Total	418.3	441.8

energy consumption by 33% resulted mainly from the reduction by (4.4) million tons of crude oil processing as a result of maintenance shutdowns mainly in PKN Orlen and in the Unipetrol Group. PKN Orlen's net profit dropped from zł 4,298 million (€999 million) in 2019 to zł 3.383 million (€756 million) in 2020.

### Orlen-PTA exports & Polish consumption

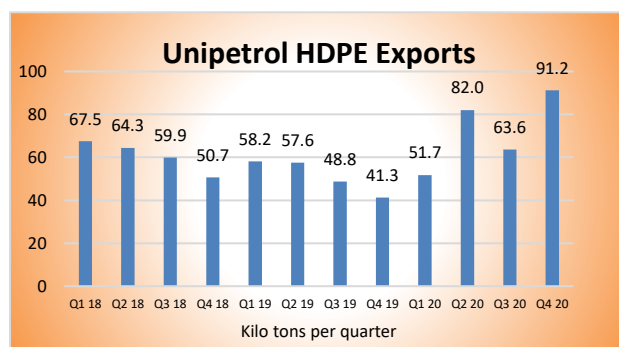
Despite increased volumes of PTA sales from 508,000 tons in 2019 to 631,000 tons in 2020 revenues in this product area dropped from zł 1893 million to zł 1384 million. Exports of

PTA from Poland dropped from 441,800 tons in 2019 to 418,300 tons in 2020, with Germany the largest destination taking 315,100 tons last year. PTA production at Wloclawek dropped in 2020 to 605,000 tons and the shortfall was made up by imports into the Polish market, rising from 6,300 tons in 2019 to 25,200 tons in 2020. Overall Polish PTA consumption amounted to 212,000 tons in 2020 against 213,000 tons in 2019.

### Orlen's investment outline 2030

Orlen has outlined aims to reduce carbon dioxide (CO<sub>2</sub>) emissions by 20% by 2030 from its refining and petrochemical assets, and by 33% in its energy divisions. Poland's energy mix has coal at its core, with more than half of its electricity still produced with the most polluting fossil fuel; coal mining, meanwhile, remains a large employer in the country. The company's 10-year strategy, called Orlen2030, includes plans to take over Lotos.

The group initiated a number of capital projects in 2020 aimed at maximising profits and expanding its



product mix. Progress was made on capex projects in the petrochemical segment, the project to expand Anwil's fertiliser capacities, and the process to transform Orlen Południe into a state-of-the-art biorefinery, which included the construction of a green glycol unit and other projects.

### Orlen-Unipetrol 2020

Orlen-Unipetrol increased HDPE exports in the fourth quarter in 2020 to a record level of 91,200 tons, helped by the start-up of the new PE3 plant.

Overall, for 2020 Orlen-Unipetrol's results were adversely affected by low margins in the refining and petrochemical segment. After recording a kc 100 million loss in the first quarter for the full year the EBITDA loss amounted to kc 365 million.

Orlen Unipetrol processed 6.08 million tons of crude in 2020, whilst sales volumes of refinery products amounted to 5.27 million tons. Petrochemical product sales amounted to 1.66 million tons against Kc 1.92

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Ethylene	16.0	71.1
Propylene	5.1	7.1
Butadiene	0.8	3.9
Benzene	29.0	37.0
Toluene	7.5	10.1
Ethylbenzene	100.7	151.7

Polish Propylene Imports (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Czech Republic	4.1	0.9
Germany	11.8	18.6
Lithuania	20.6	30.3
Russia	21.4	26.4
Ukraine	75.8	86.8
Others	4.0	9.1
Total	137.8	151.6

Polish Butadiene Imports (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Austria	36.8	37.2
Czech R	1.7	1.2
Germany	27.7	23.0
Hungary	35.9	39.2
Others	3.0	0.0
Total	100.1	100.5

Polish Methanol Imports (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belarus	13.6	16.9
Lithuania	10.1	11.9
Germany	10.1	34.8
Norway	41.3	62.2
Russia	514.5	396.4
Others	81.6	133.8
Total	671.1	656.0

Grupa Azoty's most important investment has taken delivery of the propane-propylene splitter, involving a total transport weight of more than 890 tons. In addition to the first storage tank for propylene on the

Polish TDI Imports (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Germany	25.3	29.9
Netherlands	12.3	8.3
Hungary	33.8	28.3
Saudi Arabia	5.6	3.8
Others	0.8	4.2
Total	80.1	74.5

will be able to start all installations. In addition to the establishment of storage facilities for propane and ethylene hydrotechnical work in the maritime part of the investment and the construction of the quay are both underway.

million tons in 2019. Investments totalled almost Kc 10 billion in 2020 which went primarily to the ongoing modernisation of production technologies in both refineries at Kralupy and Litvinov, in addition to a new gas-fired boiler house of the steam cracker and the last phase of completion of the polyethylene unit, PE3.

The transport division of Orlen Unipetrol, Unipetrol Doprava, been updating its fleet with the introduction of Siemens Vectron MS locomotives. Unipetrol Doprava provides transport services also to the neighbouring countries within the significant and long-lasting exchange of goods between the Orlen Group companies. The first Siemens Vectron MS in the fleet was added in 2017 and added two more in the spring of 2018.

#### Polish chemical imports Jan-Dec 2020

Imports of propylene into Poland totalled 137,800 tons from 151,600 tons in 2019, with imports dropping in each of the main suppliers including Ukraine, Russia, Lithuania, and Germany. Propylene from Lithuania is supplied from Orlen's refinery at Mazeikiu. Other important petrochemical monomers where Poland depends on imports include ethylbenzene, which is sourced solely from the Czech Republic, and butadiene. In 2020 Poland imported 100,100 tons of butadiene of which 36,454 tons came from Austria and 35,900 tons from Hungary.

Methanol imports into Poland totalled 671,100 tons in 2020 against 656,000 tons in 2019. Imports from Russia increased from 396,400 tons to 514,500 tons, whilst imports from Norway dropped from 62,200 tons to 41,300 tons. Poland sources methanol from Russia overland through Belarus or delivery via the Finnish ports Hamina-Kotka.

In the isocyanate sector Poland imported 80,100 tons of TDI in 2020 against 74,500 tons in 2019. Hungary and Germany were the two largest suppliers. Poland previously produced TDI at Bydgoszcz but the plant was closed after the assets were purchased by BASF almost a decade ago.

#### Polimery Police, project completed 40%

Grupa Azoty's most important investment has taken delivery of the propane-propylene splitter, involving a total transport weight of more than 890 tons. In addition to the first storage tank for propylene on the construction site, a polypropylene plant reactor and two 110kV transformers to provide the future power system of the Polimery Police project have already been delivered. The distillation column needed to separate propane from propylene produced has also been delivered.

Whereas the MOL polyol project in Hungary has been delayed twelve months the project contractor for Polimery Police which is Hyundai states that this flagship investment for Grupa Azoty is carried out on schedule, so that in the first half of 2023 the company



MOL's Olefin & Polyolefin Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Ethylene	798	739
Propylene	408	365
Butadiene	60	80
Raffinate	88	139
Product	Jan-Dec 20	Jan-Dec 19
LDPE	248	211
HDPE	386	355
PP	536	461

progress is somewhat behind schedule as a result of the pandemic situation. MOL together with the EPC contractor estimates that the project completion will be shifting to H2 2022 (originally in H2 2021) and as a

MOL Group Sales of Refinery and Petrochemical Products (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Hungary	4,605	5,075
Slovakia	1,761	1,931
Croatia	1,840	2,219
Italy	1,584	1,950
Other markets	8,279	8,807
<b>TOTAL</b>	<b>18,068</b>	<b>19,982</b>

Synthos Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Polystyrene	64.3	67.1
EPS	102.5	107.0
Synthetic Rubber	281.8	280.8

## Synthos 2020

Despite encountering lower domestic consumption from the tyre sector in 2020 Synthos produced 281,800 tons of synthetic rubber in 2020 against 280,800 tons in 2019. Tyre production in Poland dropped from 508,000 tons in January to December 2019 to 433,800 tons in 2020. Market estimates in 2020 indicated a fall in tyre consumption in Poland by around 20%.

At the start of January Synthos Dwory (Oswiecim) site suffered a fire at its EBSR plant with minor effect on operating capacity. The site, which is Europe's second largest SBR production unit, has a total capacity of

Polish Tyre Production (unit-kilo tons)		
Category	Jan-Dec 20	Jan-Dec 19
Car Tyres	258.1	295.0
Bus & truck Tyres	163.0	213.0
Tractor tyres	12.7	10.6
<b>Total</b>	<b>433.8</b>	<b>508.0</b>

Czech Petrochemical Imports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Ethylene	3.6	1.3
Propylene	51.5	31.7
Butadiene	63.6	15.1
Benzene	81.2	90.7
Toluene	6.1	4.8
Styrene	34.7	13.9

Exelon Generation, GEH and Finnish Fortum Power and Heat Oy.

## MOL Jan-Dec 2020

MOL's EBITDA dropped 16% in 2020 to \$2.050 billion. The downstream EBITDA decreased in Q4 to \$133 million, hit by depressed refinery margins and the usual Q4 seasonality. Refined crude for the MOL Group totalled 17.278 million tons in 2020 against 17.468 million tons in 2019. Refineries in the group operate in Hungary, Croatia, and Slovakia.

The polyol project at Tiszaujvaros exceeded 75% overall completion at the end of Q4, although a result of the delay the total capex may increase to around €1.3 billion (originally €1.2 billion)

Ethylene production for MOL's two sites at Tiszaujvaros and Bratislava amounted to 798,000 tons in January-December 2020 versus 739,000 tons in 2019 whilst propylene increased from 365,000 tons to 408,000 tons. Butadiene production at Tiszaujvaros dropped from 80,000 tons in January to December 2019 to 60,000 tons whilst raffinate production dropped to 88,000 tons from 139,000 tons. In the polyolefin division, MOL produced 536,000 tons of polypropylene in Hungary against 461,000 tons in 2019, and 386,000 tons of HDPE against 355,000 tons.

270,000 tpa. General polystyrene and EPS production for Synthos dropped slightly in 2020 to 64,300 tons and 102,500 tons respectively, with margins down slightly from 2019.

Regarding energy interests Synthos has signed a Memorandum of Understanding with Vattenfall and to explore opportunities within the offshore wind industry in Poland and the Baltic states. Synthos is also looking at deployment of small modular reactors in Poland. Synthos Green Energy sees SMR technology as an opportunity for the deep decarbonisation of the Polish industry and heating sector.

Synthos in October began a regulatory dialogue with the Polish National Atomic Energy Agency on the possibility of building the BWRX-300 in Poland, with the support of

**Czech petrochemical trade, Jan-Dec 2020**

Ethylbenzene exports from the Czech Republic totalled 100,654 tons in 2020 against 151,666 tons in 2019. Deliveries to Poland were suspended in the second quarter last year before being resumed in July. Benzene and ethylene exports were both down in 2020, dropping from 36,996 tons to 29,049 tons and from 71,080 tons to 15,964 tons respectively.

<b>Czech Methanol Imports (unit-kilo tons)</b>		
<b>Country</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Germany	15.9	15.3
Norway	0.9	13.0
Russia	40.1	43.5
Poland	32.3	5.3
Others	2.0	2.6
Total	91.3	79.8

Regarding imports of petrochemicals, propylene shipments into the Czech Republic increased from 31,704 tons in January to December 2019 to 51,496 tons in 2020. For January to December 2020 Germany supplied 33,541 tons of propylene to the Czech market, followed by Poland with 6,000 tons, Romania with 5,180 tons and Ukraine 3,035 tons.

Butadiene imports into the Czech Republic increased in 2020 to 63,635 tons from 15,061 tons in January to December 2019. Germany provided a total of 59,379 tons in 2020. Styrene imports increased from 13,860 tons to 34,740 tons this year. The Netherlands was the main supplier to the Czech Republic, providing 25,980 tons for €17.057 million.

**Czech chemical trade, Jan-Dec 2020**

A total of 91,260 tons of methanol was imported into the Czech Republic in 2020 versus 79,760 tons in 2019. The largest source of imports was from Russia supplying 40,127 tons against 43,510 tons in January to December 2019, whilst Poland shipped 32,277 tons up from 5,322 tons. Imports of methanol from Poland were mostly redirected from Russian imports. For isopropanol, imports into the Czech Republic rose from 3,556 tons in 2019 to 4,944 tons in 2020. The two largest suppliers were Germany and the Netherlands. Imports rose last year in order to meet the demand for hand sanitizer.

<b>Czech MDI Imports (unit-kilo tons)</b>		
<b>Country</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
China	3.4	2.0
Belgium	10.0	9.0
Germany	12.4	15.2
Hungary	5.0	4.4
Netherlands	3.2	1.6
Others	2.5	1.4
Total	36.5	33.6

MDI imports into the Czech Republic totalled 36,506 tons in 2020 up from 33,587 tons in 2019. TDI imports dropped from 8,349 tons in January to December 2019 to 6,451 tons in 2020. Regarding DINP plasticizers, imports into the Czech Republic dropped from 10,033 tons in 2019 to 8,593 tons, whilst exports rose to 38,821 tons in January to December 2020 up from 33,208 tons.

<b>Polish Chemical Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Caustic Soda Liquid	385.7	349.2
Caustic Soda Solid	74.1	67.0
Caprolactam	157.5	166.6
Acetic Acid	5.6	6.0
Ammonia (Gaseous)	2409.2	2452.0
Ammonia (Liquid)	104.3	103.1
Pesticides	65.1	57.6
Nitric Acid	2408.0	2335.0
Nitrogen Fertilisers	2092.0	1995.0
Phosphate Fertilisers	438.1	459.2
Potassium Fertilisers	369.7	414.7

**Ciech-certificate granted for sodium bicarbonate sales to pharmaceutical sector**

Ciech Soda Deutschland has obtained the prestigious GMP (Good Manufacturing Practice) certificate, confirming the highest quality of sodium bicarbonate production. This enables the German division of the Ciech Group to enter the promising pharmaceutical market. Sodium bicarbonate produced by Ciech in Germany complies with the latest Pharmacopoeia (Pharmacopoeia Code) in the area of quality and composition. This soda is characterized by the highest degree of purity and strictly defined granulometric parameters.

Ciech's profit in the second half of 2020 went up sharply on the back of high margins of more than 25% for soda ash. Moreover, the sales of polyurethane foams saw a strong rebound, with revenue up 53% in the third quarter on the second quarter last year. Whilst revenues overall for polyurethanes were down in the first three quarters, but lower costs helped Ciech record increased profits. Sales to the Polish market accounted for around half of Ciech's sales with the EU accounting for around 45%. By the end of 2021, a new furnace for firing vitreous sodium silicate - the raw material necessary for the production of precipitating silica, from which modern, energy-saving tyres and cosmetics are made will be launched at the Ciech plant at Żary.

## RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Caustic Soda	1,276.0	1,289.0
Soda Ash	3,320.0	3,383.0
Ethylene	4,206.4	2,984.0
Propylene	2,581.9	2,352.1
Benzene	1,363.0	1,470.0
Xylenes	503.3	374.1
Styrene	732.1	730.6
Phenol	238.3	226.0
Ammonia	19,600.0	18,200.0
Nitrogen Fertilisers	11,166.0	11,186.0
Phosphate Fertilisers	4,256.0	4,132.0
Potash Fertilisers	9,455.0	8,242.0
Plastics in Bulk	10,176.0	8,759.0
Polyethylene	3,426.0	2,357.0
Polystyrene	580.4	550.0
PVC	1,060.0	1,046.0
Polypropylene	1,883.3	1,406.1
Polyamide	162.0	167.0
Synthetic Rubber	1,535.0	1,522.0
Synthetic Fibres	173.0	170.8

### Russian chemical production, Jan-Dec 2020

Russian production of chemicals increased by 7.2% overall in 2020 against 2019. The total production of polymers in primary form amounted to 8.34 million tons, which amounts to an increase of 17% over 2019. Polyethylene saw the largest rise of the bulk polymers, followed by polypropylene.

Benzene production amounted to 1.363 million tons in 2020 against 1.470 million tons whilst in the inorganic sector caustic soda production dropped 1.6% to 1.276 million tons. The production of ammonia in Russia by the end of 2020 increased by 2.1%, to 19.6 million tons, following the addition of new capacity at several plants.

### Russian chemical trade, Jan-Dec 2020

Export and import values for Russian chemical and chemical products both fell in 2020, affected by the economic side effects of the pandemic and lower oil process. Export shipments fell from 51.602 million tons (\$19.1 billion) to 49.144 million tons (\$15.8 billion) whilst imports fell from 11.438 million tons (\$33.8 million) to 10.796 million tons (\$28.9 million).

Despite aggregate falls in inorganic and organic chemical exports, Russian shipments of bulk plastics increased from 2.066 million tons in January to December 2019 to 3.229 million tons in 2020. The significant rise in exports of bulk plastics was down almost exclusively to ZapSibNeftekhim and the huge rise in polyethylene shipments from SIBUR. Imports of plastics into Russia did decline slightly in 2020 but still remain higher than exports. The main reason for this position is that Russian producers are only starting to produce some of the more specialised polymers for which customers currently rely on imports. This picture is changing on an annual basis.

Russian Aggregate Trade in Plastics						
Period	Exports ktons	Exports \$ mil	Av price \$/ton	Imports ktons	Imports \$ mil	Av price \$/ton
2019	2.066	2.990	1.441	4.008	9.770	2.434
2020	3.229	3.666	1.120	3.790	9.150	2.355

Russian Chemical & Chemical Product Values (\$ million)				
Product Category	Exports 2020	Exports 2019	Imports 2020	Imports 2019
Inorganic	2649.0	3448.7	3056.6	3797.6
Organic	2439.2	3673.2	4500.3	4438.8
Pharmaceuticals	1002.3	835.3	10672.1	14050.3
Fertilisers	6917.6	8403.7	112.4	133.8
Cosmetics	326.1	346.6	1788.6	1904.3
Soap and detergents	540.5	485.8	1476.7	1521.5
Paints & lacquers	56.4	50.8	740.9	716.2
Protein substances, enzymes	135.0	112.9	39.4	55.2
Explosives	13.1	12.9	241.0	292.8
Photo chemicals	921.3	990.4	3407.0	3397.9
Totals	17020.4	20379.3	28055.1	32327.3

In other areas of trade pharmaceutical imports into Russia in January to December 2020 dropped in value terms from \$14.1 billion in 2019 to \$10.7 billion whilst exports increased from \$835 billion to \$1 billion.

Regarding organic chemical trade, methanol is by far the largest export commodity from Russia where shipments totalled

2.126 million tons in 2020 against 2.042 million tons in 2019. Methanol exports are expected to be boosted over the next few years by the addition of several new plants based in coastal locations or with some access to port terminals.

Russian Organic Chemical Trade (unit-kilo tons)		
Year	Exports	Imports
2020	17.0	28.1
2019	20.4	32.3

Caprolactam and paraxylene are two other organic chemical products where exports are undertaken due to the lack of domestic processing capacity.

#### Ufaorgsintez receiving tenders for polyethylene plant

Bashneft has announced a tender for a project to install an additional polyethylene plant as part of the polyolefin complex in Ufaorgsintez. Production technology is required to cover an expanded range of brands of manufactured products in the pipe segment (PE80, PE100), including cable, film blowing, extrusion polyethylene, monomodal and bimodal polyethylene. Other requirements include the possibility of supplementing comonomers (butene-1, hexene-1), and the production of LLDPE. The capacity of the new polyethylene plant is being targeted at least 250,000 tpa, which would mean that Ufaorgsintez would either need to build more ethylene capacity or agree a long term off-take contract to receive ethylene via the Volga-Urals pipeline network. Applications for bidding were submitted until 12 February 2021 inclusive, and the results of the purchase will be summed up on 20 April.

Propylene exports from Russian producers amounted to 62,900 tons in 2020 against 60,600 tons in 2019, but these shipments could easily be phased out if Lukoil-NNOS goes ahead with its polypropylene project at the Kstovo refinery.

For organic chemical imports PTA is the currently the most important product in Russia, followed by MEG and TDI. MEG is the most important organic chemical in terms of balanced trade, namely that Russia both exports and imports large volumes. MEG imports are almost entirely sourced from Saudi Arabia.

### Russian petrochemical projects

#### Kazanorgsintez EVA/LDPE project

Kazanorgsintez announced that it is close to starting the construction of a new EVA/LDPE plant. The Japanese company Sumitomo Chemical will act as the Licensor. Capacity of the new plant will comprise 100,000 tpa of EVA (or LDPE). The production facility will be located on an empty space in the territory of Kazanorgsintez. The company's own funds and leveraged financing are planned to be used for implementation of the project.

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#### Amur Gas Chemical Complex-Sinopec

Sinopec is reported to have paid 18.3 billion roubles for 40% of the SIBUR's project Amur Gas Chemical Complex. The partners have not yet chosen a scheme of its co-financing. SIBUR is aiming to accelerate the launch of the complex by six months, opening it in late 2024 rather than 2025. In December 2020, SIBUR attracted a syndicated loan of up to \$1.5 billion for one year to cover the initial costs of the project. The Amur Gas Chemical Complex is expected to comprise a total of 2.7 million tpa for basic polymers.

The feedstock source for gas-chemical complex, the Amur Gas Processing Plant, was rated at 72% completion in January this year. In total, six technology lines will be introduced at the Amur GPP, each with a capacity of 7 billion m3/year, as well as 3 helium cleaning and liquefaction plants, each with a capacity of 20 million m3/year.

Gas for the Amur Gas Processing Plant and Amur Gas-Chemical Complex is to be sourced from the pipeline Power of Siberia-1 derived from Gazprom's Yakutia and Irkutsk Gas Production Centres.

The new plant will replace the existing production unit which Kazanorgsintez launched in 1980. The existing facilities are outdated and obsolete. After construction of the new plant, Kazanorgsintez will be able to increase the production of EVA 7.5 times. Due to its unique properties, EVA has a wide application area. EVA is used in agriculture, construction, consumer goods, footwear, medical industry etc.

Kazanorgsintez is the sole EVA producer in Russia and occupies around a 20% share in the domestic market. The remaining market is covered by foreign producers. If necessary, the new EVA plant will allow not only to replace imported products in the domestic market, but also to enter external markets.

### SIBUR financial and production overview 2020

#### SIBUR revenues 2020

SIBUR's revenue decreased by 1.6% to a total of 523.010 billion roubles in 2020 from 531.306 billion roubles in 2019. The fall was due to lower revenue from the segments midstream and plastics, elastomers

and intermediates. These sectors saw lower sales.



SIBUR's financial performance 2019-2020		
	2020	2019
Revenue	523,010	531,306
EBITDA margin, %	34.3%	32.0%
EBITDA by segment		
Olefins & Polyolefins	84,292	48,979
Plastics, Elastomers & Intermediates	18,263	19,511
Midstream	71,368	99,788
Profit for the year	25,634	141,367

volumes and negative pricing dynamics which was partly compensated by revenue growth in olefins and polyolefins. The extra sales from the olefin and polyolefin sector helped drive SIBUR's EBITDA by 5.4% to 179.189 billion roubles from 170.020 billion roubles in 2019. The net profit in 2020 decreased by 81.9% to 25.634 billion roubles from 141.367 billion roubles in 2019, a large part of which was attributed to foreign currency factors.

ZapSibNeftekhim achieved its full design capacity at the end of 2020 whilst the average utilisation rate over the 12-month period was 82%.

SIBUR's polyethylene sales increased fivefold to 1.3 million tons; polypropylene sales increased by 51.7% to 1.1 million tons.

SIBUR's monomer & intermediate production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Benzene	169.4	168.3
Styrene	200.1	189.6
PTA	261.3	104.1
Propylene	1224.4	892.4
Ethylene Oxide	297.5	312.6
Butadiene	207.1	281.0
Isoprene	0.0	68.0
Isobutylene	28.0	156.1
Ethylene	1857.3	819.8

Ethylene production for SIBUR increased from 819,800 tons in 2019 to a total of 1.857 million tons in January to December 2020. Propylene production at the three sites of Kstovo, Perm and Tobolsk increased from 892,400 tons to 1.224 million tons.

### SIBUR's operating profit and costs

SIBUR's operating costs increased by 1.6% in 2020 to 409.723 billion roubles from 401.415 billion roubles in 2019. The increase was mainly driven by the launch of ZapSibNeftekhim which involved greater usage of

SIBUR Feedstock Costs (billion roubles)				
Product	2020	% of feedstock costs	2019	% of feedstock costs
NGLs	57,541	51.5%	57,668	48.8%
APG	26,844	24.0%	29,790	25.2%
Paraxylene	3,804	3.4%	4,295	3.6%
Benzene	2,799	2.5%	3,976	3.4%
<b>Total feedstock costs</b>	<b>111,770</b>	<b>100.0%</b>	<b>118,087</b>	<b>100.0%</b>

LPGs. Overall SIBUR's operating profit decreased by 12.8% in 2020 to 113.287 billion roubles, down from 129.891 billion roubles in 2019. The corresponding operating margin totalled 21.7% and 24.4% in 2020 and 2019

respectively.

In 2020, feedstock and material costs decreased by 5.3% to 111.770 billion roubles from 118.087 billion, decreasing to 21.4% of SIBUR's total revenue from a level of 22.2% in 2019. The decrease was largely driven by lower purchases of PTA due to the completion of expansion of the Polief plant at Blagoveshchensk,

and lower expenses related to APG purchases. SIBUR observed the redistribution of LPG purchasing volumes from sale to internal use at the ZapSibNeftekhim cracker.

### SIBUR's change in the business model

Until 2020 SIBUR's main export commodity comprised liquefied hydrocarbon gases (LNG) including propane, butane, and isobutane. Last year, in accordance with the OPEC agreements, Russian oil companies were forced to reduce oil production, which led to a decrease in associated gas processing production. As a result, the supply of associated gas to gas processing plants decreased, but due to the increase in processing at Tobolsk, the company managed to maintain production volumes. According to the company's 2020 accounts, more than 60% of the company's operating profit, polymers and other petrochemical products were not related to LPG.

Other factors included lower methanol purchases following the sale of Togliatti-based assets. Costs related to purchases of benzene decreased by 29.6% to 2.799 billion roubles from 3.976 billion roubles largely due to a decline in the average purchase price.

In 2020, SIBUR's transportation and logistics expenses decreased by 8.0% to 73.047 billion roubles from 79.387 billion roubles in 2019, decreasing to 14.0% of total revenue from 14.9%. The decrease in transportation and logistics costs was mainly driven by lower LPG sales

volumes due to the increased LPG internal use at the ZapSibNeftekhim cracker.

## Russian petrochemical production

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Angarsk Polymer Plant	208.4	204.3
Kazanorgsintez	581.8	608.4
Stavrolen	342.5	283.6
Nizhnekamskneftekhim	619.1	618.2
Novokuibyshevsk Petrochemical	46.8	62.1
Gazprom N Salavat	376.4	338.0
SIBUR-Kstovo	387.2	411.7
SIBUR-Khimprom	52.3	55.0
Tomskneftekhim	277.6	275.5
Ufaorgsintez	116.1	126.0
ZapSibNeftekhim	1193.2	0.0
Total	4201.5	2982.9

Salavat produced 338,000 tons against 376,400 tons whilst Ufaorgsintez reduced production from 126,000 tons to 116,100 tons.

Russian Propylene Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Angarsk Polymer Plant	118.9	112.4
Kazanorgsintez	89.7	44.7
Lukoil-NNOS	212.4	304.2
Stavrolen	128.1	115.5
Nizhnekamskneftekhim	297.8	307.8
Novokuibyshevsk Petrochemical	79.7	46.3
Omsk Kaucuk	75.4	47.9
Polyom	169.8	183.6
Gazprom n Salavat	139.0	146.1
SIBUR Kstovo	170.2	177.2
SIBUR-Khimprom	54.3	63.8
Tomskneftekhim	163.0	149.2
SIBUR Tobolsk	377.4	463.7
Ufaorgsintez	176.9	189.7
ZapSibNeftekhim	446.3	0.0
Total	2698.7	2352.1

Due to prolonged maintenance last year SIBUR-Tobolsk reduced propylene production from 463,700 tons in 2019 to 377,400 tons. Nizhnekamskneftekhim reduced propylene production slightly from 307,800 tons to 297,800 tons, whilst Lukoil-NNOS at the Kstovo refinery reduced output from 249,900 tons to 187,500 tons. Gazprom neftekhim Salavat produced 139,000 tons against 146,200 tons.

Russian Producer Propylene Exports (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Lukoil-NNOS	24.9	39.2
SIBUR-Kstovo	3.9	9.4
Omsk Kaucuk	0.8	0.0
Angarsk Polymer Plant	21.1	0.0
Stavrolen	13.1	12.1
Total	63.7	60.6

SIBUR-Kstovo reduced production of propylene from 177,200 tons to 170,200 tons in January to December 2020. In 2014, the plant underwent a large-scale reconstruction, during which the capacity of the main technological unit for the production of ethylene and propylene was increased. SIBUR-Kstovo aims in 2020-2021 to increase propylene capacity to 180,000 tpa together with the expansion of ethylene capacity

### Russian ethylene production, Jan-Dec 2020

Russian ethylene production totalled 4.202 million tons in 2020 against 2.963 million tons in 2019. ZapSibNeftekhim produced 1.193 million tons providing most of the increase last year. Nizhnekamskneftekhim increased ethylene production very slightly from 618,200 tons to 619,100 tons whilst Kazanorgsintez dropped slightly from 608,400 tons to 581,800 tons.

Other important ethylene producers included SIBUR-Kstovo which produced 387,200 tons versus 411,700 tons. Almost all ethylene produced at SIBUR-Kstovo is processed at SIBUR's facilities in the Nizhny Novgorod region including ethylene oxide and ethylene glycols and VCM-PVC. In Bashkortostan Gazprom neftekhim

In terms of feedstocks, ZapSibNeftekhim relies on LPGs delivered from the gas processing plants in West Siberia, whilst Kazanorgsintez relies heavily on ethane feedstock supplies from the Orenburg and Minnibayev gas plants but also needs to purchase other hydrocarbons. Propane supplies are purchased by Kazanorgsintez mostly from Uralorgsintez and SIBUR-Novatek at Tobolsk, usually in volumes of 8-10,000 tons per month.

### Russian propylene production, sales & exports, Jan-Dec 2020

Russian propylene production amounted to 2.699 million tons in 2020 against 2.352 million tons in 2019. The increase was due largely to the start-up of the plant at ZapSibNeftekhim at Tobolsk where production amounted to 446,300 tons versus no activity in the previous year. The aim was for full capacity to be achieved by the end of 2020.

to 420,000 tpa and benzene 104,000 tpa. Propylene is partially processed by SIBUR-Neftekhim into acrylic acid, partially supplied to other plants in the country and abroad.

Propylene exports from Russian producers amounted to 62,900 tons in 2020 against 60,600 tons in 2019. Lukoil-NNOS reduced export sales from 39,200 tons to 24,900 tons whilst Stavrolen reduced from 13,100 tons to 12,100 tons. The Angarsk Polymer Plant exported 21,000 tons of propylene in 2020 against zero in 2019, all of which was sent to China.

Exports of propylene from Angarsk have contributed to a tight domestic market supply balance in Russia for propylene, which has helped maintain some price equilibrium. Overall sales of propylene on the domestic market dropped from 490,600 tons to 391,100 tons.

<b>Russian Propylene Domestic Sales (unit-kilo tons)</b>		
<b>Company</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Angarsk Polymer Plant	50.6	76.6
SIBUR-Kstovo	149.7	152.5
Lukoil-NNOS	165.6	249.9
Others	25.2	11.3
<b>Total</b>	<b>391.1</b>	<b>490.6</b>

Although production was started at ZapSibNeftekhim all volumes were consumed internally in the production of polypropylene. The largest propylene supplier to the domestic merchant market in 2020 was Lukoil-NNOS, shipping 165,600 tons against 249,900 tons followed by SIBUR-Kstovo which reduced from 152,500 tons to 149,700 tons. Lukoil-NNOS reduced sales on the merchant market due to reduced production in 2020. Due to increased export sales Angarsk Polymer Plant reduced propylene sales on the domestic merchant market from 76,600 tons to 50,600 tons.

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<b>Major Russian Propylene Purchasers (unit-kilo tons)</b>		
<b>Consumer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Saratovorgsintez	156.5	186.7
Volzhskiy Orgsintez	10.7	9.9
Akrilat	11.6	6.9
SIBUR-Khimprom	65.9	59.1
Omsk-Kaucuk	15.9	34.6
Tomskneftekhim	10.1	4.9
SIBUR Tobolsk	73.9	134.3
Moscow Refinery	18.9	21.2
Ufaorgsintez	9.1	5.6
Khimprom Kemerovo	4.3	3.4
Plant of Synthetic Alcohol	20.6	10.9
Others	7.1	5.9
<b>Total</b>	<b>405.5</b>	<b>486.6</b>

Regarding consumers, Saratovorgsintez reduced purchases of propylene from 186,700 tons in 2019 to 156,500 tons in 2020. The combination of lower propylene production and sales by Lukoil-NNOS and lower demand due to the pandemic affected acrylonitrile production at Saratov.

SIBUR-Tobolsk reduced merchant propylene purchases from 134,300 tons in January to December 2019 to 73,900 tons in 2020.

<b>Russian Styrene Production (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Nizhnekamskneftekhim	303.8	307.4
Angarsk Polymer Plant	35.6	37.5
SIBUR-Khimprom	151.0	140.3
Gazprom n Salavat	198.5	199.1
Plastik, Uzlovaya	48.0	50.3
<b>Total</b>	<b>737.0</b>	<b>734.7</b>

SIBUR-Khimprom increased purchases of merchant propylene from 59,100 tons to 65,900 tons, all of which is used in the production of oxo alcohols.

Revived production of isopropyl alcohol (isopropanol) at the Plant of Synthetic Alcohol at Orsk in 2020 resulted in purchases of propylene of 20,600 tons in 2020 against 10,900 tons in 2019.

<b>Russian Styrene Exports (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Angarsk Polymer Plant	15.1	9.0
Plastik Uzlovaya	0.0	0.7
Gazprom neftekhim Salavat	80.8	100.4
Nizhnekamskneftekhim	1.4	6.6
SIBUR-Khimprom	11.8	2.8
<b>Total</b>	<b>109.1</b>	<b>119.6</b>

#### **Russian styrene production & sales, Jan-Dec 2020**

Russia produced 737,000 tons of styrene in 2020 versus 734,700 tons in the same period in 2019. The largest producer Nizhnekamskneftekhim reduced production from 307,400 tons to 303,800 tons. Gazprom neftekhim Salavat reduced production slightly from 199,100 tons to 198,500 tons. SIBUR-Khimprom at Perm increased production from 140,300 tons to 151,000 tons.

Russian styrene producer exports dropped in 2020 to 109,100 tons against 119,600 tons. Gazprom neftekhim reduced shipments from 119,600 tons to 109,100 tons. Finland took 64.7% of Russian styrene exports followed by Turkey with 18.8% and Norway with 5.3%. Revenues from exports declined from \$123 million in January to December 2019 to \$85.6 million in the same period in 2020.

### Bulk Polymers

Russian Polyethylene Exports (unit-kilo tons)		
Country	2020	2019
Belarus	63.4	0.4
Belgium	19.1	45.4
China	655.4	101
Kazakhstan	111	77.5
Serbia	15.4	18.6
Turkey	29.6	0
Ukraine	50.1	37.3
Uzbekistan	18.3	15.4
Others	50.1	68.7
Total	1012.4	364.3

#### Russian polyethylene production and trade, Jan-Dec 2020

Russian polyethylene production increased significantly in 2020, rising 61% to 2.987 million tons against 1.857 million tons. LLDPE production rose to 527,400 tons against 254,600 tons in 2019, whilst LDPE production fell 1% to 634,800 tons.

Russian polyethylene exports totalled 1.012 million tons in 2020, rising from 364,300 tons in January to December 2019. At the same time imports of polyethylene declined from 677,000 tons to 554,000 tons.

Russian HDPE production rose by 90% in 2020 to 1.827 million tons against 864,000 tons in 2019. Kazanorgsintez reduced production by 2% to 484,800 tons whilst Stavrolen increased by 21% to 318,000 tons. Gazprom neftekhim Salavat increased production of HDPE to 120,000 tons against 106,000 tons in 2019. ZapSibNeftekhim

produced 902,000 tons in 2020 having started up at the beginning of the year. After the launch of

Russian HDPE Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Kazanorgsintez	484.8	495.7
Stavrolen	318.0	262.3
Gazprom neftekhim Salavat	121.9	106.0
ZapSibNeftekhim	902.0	0.0
Total	1826.7	864.0

ZapSibNeftekhim SIBUR increased the capacity of polymers threefold, whilst at the same time reducing the amount of LPG exports. About 3 million tpa of LPG can be processed at ZapSibNeftekhim.

The start-up of ZapSibNeftekhim meant that Russian HDPE exports increased from 160,000 tons in 2019 to 664,000 tons in 2020, whilst imports dropped from 396,000 tons to 252,000 tons. The most significant impact from the new olefin and polyolefin plant at Tobolsk was seen in LLDPE exports which rose from 7,690 tons in 2019 to 157,000 tons in 2020 whilst imports dropped slightly from 78,400 tons to 67,000 tons.

#### Russian polypropylene production & trade, Jan-Dec 2020

Russian polypropylene production increased by 31% in 2020 to 1.883 million tons against 1.406 million tons in 2019. Six of the eight producers increased capacity utilisation. SIBUR Tobolsk increased production by 8% to 505,100 tons, which

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Ufaorgsintez	120.5	127.5
Stavrolen	110.9	105.2
Neftekhimya	149.8	137.4
Nizhnekamskneftekhim	219.5	211.7
Polyom	184.2	209.8
Tomskneftekhim	148.7	146.8
SIBUR-Tobolsk	505.1	467.7
ZapSibNeftekhim	444.6	0.0
Total	1883.3	1406.1

is 8% more in 2019 whilst ZapSibNeftekhim at Tobolsk produced 444,600 tons in its first year.

Russian Polypropylene Imports (unit-kilo tons)		
Category	Jan-Dec 20	Jan-Dec 19
Homopolymers	93.0	59.0
Block	60.3	54.7
Random	36.7	33.8
Other	34.0	35.1
Total	224.0	182.6

Polyom at Omsk reduced production by 14% over 2019 to 184,200 tons, whilst in Tatarstan Nizhnekamskneftekhim produced 219,700 tons against 211,700 tons in 2019. Tomskneftekhim increased production by 1% against 2019 to 148,300 tons whilst Ufaorgsintez reduced production by 6% to 120,300 tons. The Moscow refinery Kapotnya increased production by 9% to 149,800 tons which is 9% more

than in 2019. Stavrolen produced 111,000 tons against 105,200 tons in 2019.



Russian Polypropylene Exports (unit-kilo tons)		
Country	2020	2019
Belarus	92.4	83.6
Belgium	44.1	9.3
China	178.2	75.0
Kazakhstan	19.4	26.3
Lithuania	10.2	6.9
Poland	45.3	25.7
Serbia	15.8	19.7
Turkey	186.2	28.0
Ukraine	39.9	14.3
Uzbekistan	7.9	11.4
Vietnam	24.3	0.2
Others	59.5	18.6
Total	723.2	319.0

Despite the increase in production, imports of polypropylene into Russia increased 23% to 224,000 tons against 182,800 tons in 2019. PP-homo imports amounted to 93,000 tons against 59,000 tons whilst imports of block copolymers rose from 54,700 tons to 60,300 tons. Random copolymer imports amounted to 36,700 tons against 33,800 tons a year earlier.

Russian polypropylene exports amounted to 723,200 tons in the period January to December 2020, of which 24% of shipments went to Turkey and 23% to China. Exports rose from the 319,000 tons in 2019. Revenues from polypropylene exports increased from \$367.8 million in 2019 to \$649 million in 2020.

#### SIBUR polyolefins Jan-Dec 2020

SIBUR's revenues from sales of polyethylene increased more than four times in 2020 to 79.846 billion roubles from 18.588 billion roubles in the corresponding period of 2019. This measured against a fivefold growth in sales volumes despite a 14.6% decrease in the

average selling price. SIBUR's polyethylene sales increased due to the start of HDPE and LLDPE

SIBUR Polyolefins (unit-kilo tons)		
Production	Jan-Dec 20	Jan-Dec 19
Polyethylene	1464.6	379.2
Polypropylene	1107.3	813.2
Purchases from third parties	153.0	147.2
Total	2724.9	1339.6
Total Sales	Jan-Dec 20	Jan-Dec 19
Polyethylene	1310.6	260.6
Polypropylene	1117.7	736.7
Total	2428.3	997.3
Domestic Sales	Jan-Dec 20	Jan-Dec 19
Polyethylene	435.6	164.4
Polypropylene	551.8	432.4
Total	987.4	596.7
Export Sales	Jan-Dec 20	Jan-Dec 19
Polyethylene	875.0	96.2
Polypropylene	565.8	304.3
Total	1440.9	400.6

production at ZapSibNeftekhim, resulting mainly in export sales growth. The share of export sales increased to 65.2% of total polyethylene revenue from 33.7% in 2019, while 34.8% and 66.3%, respectively, were derived from domestic sales.

Production of polyethylene increased from 379,200 tons in 2019, all of which produced at Tomsk, to 1.465 million tons in 2020 produced at Tomsk and Tobolsk. Polypropylene production rose for SIBUR from 813,200 tons in 2019 to 1.107 million tons in 2020.

Revenues from sales of polypropylene for SIBUR increased by 38.9% to 79.429 billion roubles from 57.202 billion roubles in the corresponding period of 2019. This was based on a 51.7% increase in sales volumes despite an 8.5% decrease in the average selling price.

#### Russian PVC production & trade, Jan-Dec 2020

Production of Russian PVC totalled 978,400 tons in 2020, up by 0.2% from 973,300 tons in 2019.

RusVinyl matched its total production from 2019 at 339,800 tons, whilst Sayanskimplast produced 299,500 tons of PVC in January-December up from 294,500 tons in the previous year.

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Bashkir Soda	267.6	263.4
Kaustik	76.5	77.6
RusVinyl	339.8	339.8
Sayanskimplast	294.5	292.5
Total	978.4	973.3

Baskhir Soda Company produced 267,600 tons of PVC in January-December 2020 at the Sterlitamak plant, up 2%, whilst Kaustik at Volgograd produced 76,500 tons in 2020 versus 77,500 tons in 2019.

Imports of PVC into Russia decreased by 20% in 2020 and amounted to 199,000 tons against 50,900 tons in 2019. Germany was the main source of imports followed by China and Ukraine. Exports of PVC fell from 249,000 tons to 246,000

tons. India was the leading destination for Russian PVC exports followed by Belarus and Italy. Revenues from exports dropped from \$242 million to \$238 million.

## Paraxylene-PTA-PET

Russian Paraxylene Supply/Demand Balance (unit-kilo tons)		
	Jan-Dec 20	Jan-Dec 19
Production	280.0	218.3
Domestic Sales	146.5	96.7
Exports	141.3	157.4
Surplus/Deficit	-21.5	6.6

Russian Paraxylene Exports (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Gazprom Neft	82.2	103.3
Kirishinefteorgsintez	47.7	40.6
Ufaneftekhim	11.4	13.6
Total	141.3	157.4

in 2019 to \$476. In the domestic market the main consumer Polief purchased paraxylene from the Atyrau

Russian PTA Imports by Country (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belgium	8.0	26.0
India	0.0	1.0
China	274.7	261.5
South Korea	7.0	69.0
Poland	3.0	3.0
Portugal	0.0	4.0
Thailand	0.0	3.0
Turkey	0.0	6.3
Others	1.9	0.6
Total	294.5	383.7

journey from Dalian in China before moving to

Russian PTA Imports by Region (unit-kilo tons)		
Location	Jan-Dec 20	Jan-Dec 19
Kaliningrad	211.5	240.4
Moscow	77.0	74.8
Others	6.0	64.5
Total	294.5	383.7

tons in 2019. Import costs dropped from \$195.8 million to \$113.5 million.

SIBUR's PTA & PET Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Paraxylene Purchases	146.5	96.7
PTA Production	261.3	104.0
PTA Domestic Sales	8.1	3.7
PTA Exports	0.3	0.2
PET Production	267.4	224.4
PET Domestic Sales	256.1	235.7
PET Exports	6.4	3.8

capacity at Polief was increased in 2019 by 78,000 tpa to a total of 350,000 tpa.

### Russian paraxylene consumption & trade Jan-Dec 2020

Russian paraxylene consumption increased in 2020 due to the mostly full operations of the Polief plant at Blagoveshchensk. Polief purchased a total of 146,504 tons of paraxylene in 2020 against 96,079 tons in 2019. The largest volume of 107,200 tons to the Blagoveshchensk plant was supplied by the Ufaneftekhim plant (owned by Bashneft), and 25,800 tons by the Omsk refinery (owned by Gazprom Neft).

### Russian paraxylene trade Jan-Dec 2020

Russian paraxylene exports amounted to 141,300 tons in 2020 against 157,400 tons in 2019, with revenues from sales dropping from \$115.7 million to \$60.0 million. Paraxylene export prices fell sharply in 2020, dropping from \$772 per ton in 2019 to \$476. In the domestic market the main consumer Polief purchased paraxylene from the Atyrau refinery in November, the first time that Russia has imported this product from Kazakhstan.

### Russian PTA imports, Jan-Dec 2020

PTA imports into Russia totalled 294,500 tons in 2020 against 383,700 tons in 2019. China shipped 274,700 tons in 2020 to Russia against 261,500 tons whilst imports from South Korea fell from 69,000 tons to 7,000 tons. Average prices for PTA imports amounted to \$580 per ton in January to December 2020 against \$627 per ton in the same period in 2019.

Regarding the mode of delivery, PTA imports from China to Kaliningrad are now available by rail. The Zabaykalsk on the Sino-Russian border and then transiting through Russia and Latvia before arriving at the Kaliningrad. Last year a new container system was introduced enabling shipments of up to 2,650 tons of PTA which can be delivered in shorter time than by sea.

Ekopet at Kaliningrad accounted for 63.3% of imports over 2020, 211,400 tons against 240,400

### Russian PTA production, Jan-Dec 2020

PTA production at the Polief plant totalled 261,300 tons in the four quarters in 2020 against 104,000 tons in 2019. PET production at SIBUR's combined sites of Blagoveshchensk in Bashkortostan and Tver amounted to 267,400 tons against 224,400 tons.

Most of the PTA produced by Polief was consumed internally in 2020, with only 8,100 tons sold on the merchant market between January to December. PTA

## Aromatics

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Angarsk Polymer Plant	84.5	80.4
Gazprom Neft	97.8	74.0
LUKoil-Neftekhim	24.4	43.0
LUKoil-Permnefteorgsintez	49.5	59.0
Magnitogorsk MK	43.0	51.2
Nizhnekamskneftekhim	284.9	275.3
Novolipetsk MK	1.1	7.2
Gazprom n Salavat	199.6	187.1
Severstal	36.1	40.7
SIBUR-Holding	74.9	81.9
Slavneft-Yaroslavlorgsintez	65.9	63.0
Surgutneftegaz	64.6	68.5
Ryazan RN Holding	32.8	39.2
Ufaneftekhim	88.1	79.6
Ural Steel	10.1	11.6
Uralorgsintez	87.6	86.5
Zapsib	60.1	70.6
Novokuibyshevsk Petrochemical	16.4	22.2
Total	1321.3	1341.0

Russian Benzene Producer Sales (unit-kilo tons)		
Company	Jan-Dec 20	Jan-Dec 19
Angarsk Polymer Plant	54.5	47.4
SIBUR-Kstovo	79.7	73.0
Severstal	35.2	40.5
Uralorgsintez	84.9	78.8
Kirishinefteorgsintez	11.5	38.0
West Siberian MC	64.3	67.7
Ryazan NPZ	28.4	42.7
Slavneft-Yanos	60.7	61.0
Gazprom Neft (Omsk)	65.2	74.9
Gazprom neftekhim Salavat	30.1	36.0
Stavrolen	24.4	41.9
Nizhnekamskneftekhim	26.4	9.9
Ufaneftekhim	7.3	4.1
Karpatneftekhim	5.3	35.4
Ukratnafta	0.0	2.0
Belarussian refineries	16.5	4.5
Atyrau	29.6	24.6
Chelyabinsk MK	11.6	15.6
Altay-Koks	20.2	30.3
Koks	22.7	24.6
Magnitogorsk MK	46.4	46.2
Nizhny Tagil MK	16.5	21.4
Others	0.9	5.7
Full Total	742.2	826.0

## Russian benzene production Jan-Dec 2020

Russian benzene production of all grades declined slightly in 2020 from 1.341 million tons to a total of 1.321 million tons. Nizhnekamskneftekhim increased benzene production from 275,300 tons to 284,900 tons, whilst Gazprom neftekhim Salavat increased production from 187,100 tons to 199,600 tons. Rosneft's benzene plants at Angarsk, Novokuibyshevsk, Ufa and Ryazan produced a combined total of 222,800 tons against 229,400 tons in 2019, whilst Gazprom Neft at the Omsk refinery increased benzene production from 74,000 tons to 97,800 tons.

Regarding domestic merchant sales, Russian benzene producers shipped 742,200 tons in 2020 against 826,000 tons in 2019. In the second half of 2020 benzene stocks came under greater pressure from maintenance outages which were carried out at several plants. SIBUR-Kstovo increased shipments to the merchant market from 73,000 tons in January to December 2019 to 79,700 tons in 2020, whilst Gazprom Neft at Omsk reduced shipments from 74,900 tons to 65,200 tons.

As a result of market tightness in the third and fourth quarters merchant consumers looked towards imports in order to resolve the shortfalls. In Tatarstan TAlF bought several thousand tons of benzene from Naftan in Belarus for delivery to Kazanorgsintez, for the production process for Bisphenol A.

Nizhnekamskneftekhim intends to double the production of benzene following the construction of the new EP-600 cracker which is expected to be completed in 2024. The extra benzene will be sold mostly to Kazanorgsintez for cumene and Bisphenol A production whilst any remaining quantities will probably be exported. New benzene capacity of 245,800 tpa will add to the existing capacity of 265,000 tpa.

Deliveries of benzene from Belarus to Russia increased significantly in 2020, both from the Naftan and Mozyr refineries, and rose from 4,500 tons to 16,500 tons. Shchekinoazot was the major importer of benzene from Belarus in 2020 due to geographical proximity.

Regarding domestic consumers Kuibyshevazot reduced benzene purchases from 174,700 tons to 170,600 tons in 2020 whilst Azot at Kemerovo reduced purchases from 121,500 tons to 91,800 tons. For the production of cumene Kazanorgsintez

purchased a total of 65,300 tons of benzene in January to December 2020, versus 67,800 tons in 2019.

Russian Benzene Consumers (unit-kilo tons)		
Consumer	Jan-Dec 20	Jan-Dec 19
Kuibyshevazot	170.6	174.7
Azot Kemerovo	107.8	121.5
Shchekinoazot	77.3	64.5
Kazanorgsintez	65.3	67.8
Omsk Kaucuk	23.6	21.3
Novokuibyshevsk Petrochemical	49.4	53.8
Zapsib	36.2	60.7
SIBUR-Khimprom	99.7	97.0
Ufaorgsintez	10.2	22.8
Uralorgsintez	72.9	75.6
Others	56.5	29.9
Total	769.6	789.5

caprolactam producers.

Russian Benzene Exports (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Altay Koks	0.0	4.1
Chelyabinsk MK	1.8	1.5
Gazprom Neft	1.7	0.0
Gazprom neftekhim Salavat	3.5	0.7
Koks	4.6	6.4
Magnitogorsk MK	0.0	14.0
Moskoks	1.4	8.4
Nizhniy Tagil	0.8	3.8
Novolipetsk MK	21.5	14.8
Kirishinefteorgsintez	48.5	29.4
SIBUR-Kstovo	0.0	2.0
Slavneft	0.7	0.0
Severstal	3.2	2.7
Stavrolen	0.0	0.0
Ufaneftekhim	1.9	1.1
Uralorgsintez	0.8	0.6
Ural Steel	6.1	7.7
Total	96.6	97.3

Russian Caprolactam Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Kuibyshevazot	189.8	212.7
Shchekinoazot	59.9	60.5
SDS Azot	120.9	118.3
Total	370.6	391.5

tons of caprolactam in 2020 against 55,700 tons in 2019. Kuibyshevazot uses most of its caprolactam production in internal processing in the production of polyamide whilst Azot at Kemerovo and Shchekinoazot export most of its production.

Russian Caprolactam Exports (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Kuibyshevazot	53.4	55.8
Shchekinoazot	54.5	55.7
SDS Azot	127.3	115.5
Total	235.2	227.0

The rise in demand from Omsk Kaucuk was due to the start-up of the modernised phenol facilities. In the styrene sector SIBUR-Khimprom at Perm purchased 99,700 tons of benzene in 2020 against 97,000 tons in 2019.

#### Russian benzene exports, Jan-Dec 2020

Russian benzene exports, including petroleum and coke, totalled 96,600 tons in 2020 against 97,300 tons in 2019. Although volumes were little changed overall there were changes in regarding to production method. Whilst coke-based benzene producers reduced exports in 2020 Russian oil gas producers increased exports of benzene. This was due largely to the sharp weakening of demand in Russia in the spring from

The largest exporter of benzene from Russia is the Kirishi refinery (owned by Surgutneftegaz). Due to its close proximity to the Baltic Sea ports, the producer increased shipments to Liepaja last year by from 29,400 tons to 48,500 tons. Gazprom neftekhim Salavat also increased exports from 700 tons to 3,500 tons.

For coke-based benzene producers Novolipetsk Metallurgical Combine achieved the highest volume of 21,500 tons, rising from 14,800 tons in 2019. Magnitogorsk Metallurgical Combine and Altay Koks reduced exports respectively from 14,000 tons and 4,100 tons in 2019 to zero.

#### Russian caprolactam production, Jan-Dec 2020

Russian caprolactam production amounted to 370,600 tons in January to December 2020 against 391,500 tons in the same period in 2019. Kuibyshevazot reduced production from 212,700 tons to 189,800 tons whilst SDS Azot at Kemerovo increased production to 120,900 tons from 118,300 tons.

Caprolactam exports from Russia totalled 235,200 tons in 2020 against 227,000 tons in 2019. Kuibyshevazot reduced exports from 55,800 tons in January to December 2019 to 53,400 tons in 2020 whilst Azot at Kemerovo exported 127,300 tons up from 115,500 tons. Shchekinoazot exported 54,500 tons in 2020 against 55,700 tons in 2019.

#### Russian orthoxylene market, Jan-Oct 2020

Orthoxylene export sales from Russia amounted to 167,900 tons in 2020 against 143,300 tons in 2019.



Gazprom Neft reduced shipments to 84,100 tons against 99,200 tons in 2019 whilst Ufaneftkhim increased sales from 27,900 tons to 64,800 tons.

<b>Russian Orthoxylene Domestic Sales (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Gazprom Neft	84.1	99.2
Ufaneftkhim	64.8	27.9
Kirishinefteorgsintez	19.0	16.2
<b>Total</b>	<b>167.9</b>	<b>143.3</b>

The major consumer on the domestic market Kamteks-Khimprom, which uses orthoxylene for the production of phthalic anhydride reduced purchases from 78,800 tons in 2019 to 67,200 tons in 2020. Gazprom neftekhim Salavat reduced purchases from 13,300 tons to 11,500 tons.

#### **Russian toluene market, Jan-Dec 2020**

Russian toluene production fell from 320,000 tons in 2019 to a total of 307,000 tons in 2020. The largest producer was Ufaneftkhim which increased volumes from 42,900 tons to 47,400 tons. Despite the fall in toluene sales on the merchant market increased from 135,900 tons to 147,200 tons in 2020. Domestic consumers consist largely of fuel, paint and explosive manufacturers of which the largest is TAIF-NK in Tatarstan. At the start of the year TAIF-NK announced tender for the purchase of 25,000 tons of toluene for delivery in 2021.

<b>Russian Toluene Production (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Kinef	30.0	31.1
Gazprom n Salavat	20.9	23.9
Slavneft-Yaros	42.5	41.4
LUKoil-Perm	28.9	28.0
Gazprom Neft	78.8	91.7
RN Holding	45.1	45.4
Ufaneftkhim	47.4	42.9
Others	13.6	15.7
<b>Total</b>	<b>307.3</b>	<b>320.0</b>

#### **Russian phenol market, Jan-Dec 2020**

Russian phenol production rose to 231,100 tons in 2020 from 221,600 tons in 2019. Novokuibyshevsk Petrochemical produced 71,300 tons of phenol against 75,900 tons in 2019 whilst Ufaorgsintez reduced production from 74,200 tons to 63,900 tons. Kazanorgsintez increased slightly from 71,500 tons to 66,400 tons. The significant change came from Omsk Kaucuk which produced 29,500 tons against no activity in 2019.

<b>Russian Phenol Production (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Ufaorgsintez	63.9	74.2
Kazanorgsintez	66.4	71.5
Novokuibyshevsk Petrochemical	71.3	75.9
Omsk Kaucuk, Omsk	29.5	0.0
<b>Total</b>	<b>231.1</b>	<b>221.6</b>

125,800 tons. Omsk Kaucuk supplied 21,400 tons of phenol to the domestic market, compensating for lower sales from Ufaorgsintez and Kazanorgsintez. Ufaorgsintez reduced sales from 64,700 tons in January to December 2019 to 35,900 tons whilst Novokuibyshevsk Petrochemical company increased shipments from 57,300 tons to 58,000 tons.

<b>Russian Phenol Exports (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Omsk Kaucuk	5.8	0.0
Kazanorgsintez	0.0	3.1
Ufaorgsintez	27.7	12.0
NNK	2.7	6.0
<b>Total</b>	<b>36.1</b>	<b>21.2</b>

Russian phenol exports rose to 36,100 tons in 2020 against 21,200 tons in 2019. Poland was the largest destination for Russian exports. Ufaorgsintez exported 27,700 tons, but Kazanorgsintez did not ship to the export market in 2020. The Novokuibyshevsk Petrochemical Plant exported only 2,700

tons of phenol in 2020 against 6,000 tons in 2019.

<b>Kuibyshevazot-Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Polyamide-6	142.0	147.6
Tyre Cord Fabric	4.4	3.5
Caprolactam	189.7	212.7
Ammonia	1048.0	1085.0
Urea	329.9	366.9
Ammonium Nitrate	721.0	672.8
Ammonium Sulphate	465.6	531.5

#### **Kuibyshevazot Jan-Dec 2020**

Kuibyshevazot reduced sales of commercial products by 13% in 2020 to 46.9 billion roubles, whilst the net profit dropped by 17% to 3.3 billion roubles. The decrease was due to unfavourable conditions on world markets, as well as a drop in demand for caprolactam and polyamide. Production of caprolactam at the company's facilities decreased by more than 10% to 140,800 tons and polyamide by 3.8% to 142,000 tons.

## Synthetic rubber

Russian C4 Purchases (unit-kilo tons)		
Consumer	Jan-Dec 20	Jan-Dec 19
Omsk Kaucuk	97.7	56.9
Nizhnekamskneftekhim	100.5	170.2
Togliattikaucuk	211.1	187.2
Sterlitamak Petrochemical Plant	17.0	0.0
Total	426.3	414.4

### Russian C4s, Jan-Dec 2020

C4 sales on the domestic market in Russia totalled 426,300 tons in 2020 against 414,400 tons in 2019. As a reflection of rubber plant by volume Togliattikaucuk increased merchant purchases of C4s from 187,200 tons to 211,100 tons, whilst Nizhnekamskneftekhim reduced purchases from 170,200 tons in 2019 to 100,200 tons. Omsk Kaucuk increased purchases from

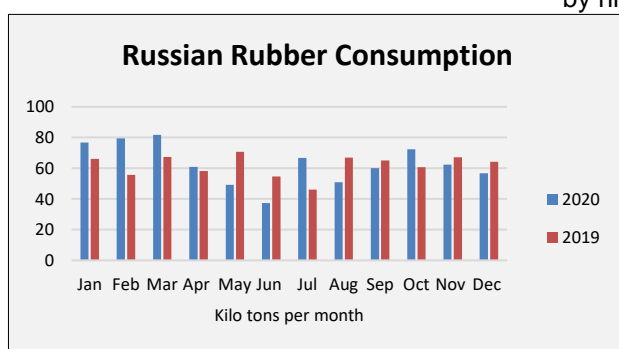
56,900 tons to 97,700 tons.

The largest supplier C4 in 2020 consisted of SIBUR-Kstovo which shipped 89,200 tons against 97,400 tons in 2019. Tomskneftekhim shipped 82,200 tons of C4s against 81,400 tons in January to December 2019, whilst Stavrolen increased deliveries from 69,900 tons to 55,100 tons. Gazprom neftekhim Salavat supplied a total of 42,900 tons of C4s to Nizhnekamskneftekhim and Togliattikaucuk, against 33,300 tons in 2019.

Russian Synthetic & Natural Rubber Market (unit-kilo tons)		
	Jan-Dec 20	Jan-Dec 19
Production	1535.0	1522.0
Exports	978.6	993.2
Imports	200.9	221.1
Supply/Demand Balance	757.3	749.9

### Russian rubber production and market balance 2020

Synthetic rubber production in Russia totalled 1.535 million tons in 2020 against 1.522 million tons in 2019. Both exports and imports of rubber declined last year whilst overall domestic consumption of rubber increased to 757,300 tons in 2020 against 749,900 tons. Over the 12-month period consumption volumes dropped in the middle part of the year but were helped by higher quantities in the first and last quarters.



Whilst demand for tyres was lower in 2020, rubber consumption was helped by demand from other sectors. Tyre production in 2020 amounted to 46.0 million pieces against 49.0 million pieces in the same period in 2019. Translating into volume Russian tyre manufacturers reduced consumption of rubber, natural and synthetic, from 388,900 tons in 2019 to 365,200 tons in 2020. In the context of the pandemic the decline last year was relatively modest and higher volumes are forecast to be

produced in 2021. Amongst the synthetic rubber producers Nizhnekamskneftekhim has started the production of styrene-divinyl synthetic rubber (DSSK), whilst Voronezhskintezkaucuk launched a new brand of high-viscosity polybutadiene rubber at the beginning of 2020. Ufaorgsintez has also launched production of six new EPDM brands.

Russian Tyre Production (unit-mil pieces)		
Product	Jan-Dec 20	Jan-Dec 19
Car Tyres	37.6	41.0
Lorry tyres	6.8	6.5
Agricultural tyres	1.7	1.5
Total	46.0	49.0

Russian Tyre Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Car Tyres	298.4	325.4
Lorry tyres	53.7	51.6
Agricultural tyres	13.1	11.9
Total	365.2	388.9

The higher performance in 2020 was largely accounted to the redirection of production from Togliattikaucuk away from exports to the new owners Tatneft's tyre plants in Tatarstan.

Most of the increase was seen in the first few months of 2020 and end, whilst the market went through a slow

period in the middle of the year. The downturn in the auto industry led to a decline in production in the tyre industry, but other applications have helped compensate for the lower consumption of tyres on the Russian market.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec19
E-SBR	34.7	43.6
Block	61.4	42.8
SSBR	7.5	12.3
SBR	129.6	70.9
Polybutadiene	225.7	236.5
Butyl rubber	142.9	123.5
Halogenated butyl	113.2	141.9
NBR	34.8	35.6
Isoprene	218.2	268.2
Others	8.7	17.8
Total	976.6	993.2

The Russian government has been set the task to come up with new ways of helping companies producing synthetic rubber. Russia provides about 10% of the world's production of synthetic rubber, of which about two-thirds is exported. Fluctuations in natural rubber markets and prices have an important effect on synthetic rubber prices.

For the early part of 2021 butadiene spreads have become very attractive for the production of styrene-butadiene rubber. Thus, styrene butadiene rubber (ESBR 1502), which is widely used in the production of tyres, is currently more expensive than a year and a half ago. Synthetic rubber prices have been helped by reduced production of natural rubber in 2020.

Russian Synthetic Exports by Destination (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belarus	31.1	36.5
Brazil	28.0	30.1
China	211.9	138.6
Czech	27.2	35.2
Germany	36.8	31.2
Hungary	32.9	72.4
India	101.6	75.9
Mexico	28.9	50.8
Poland	87.8	110.9
Romania	31.6	47.4
Serbia	13.8	15.1
Slovakia	32.9	42.9
Turkey	67.2	48.1
Ukraine	19.7	19.0
US	32.6	51.6
Others	194.5	187.4
Total	978.6	993.2

#### Russian synthetic rubber exports, Jan-Dec 2020

Russian exports of synthetic rubber amounted to 978,600 tons in 2020, down from 993,200 tons in 2019. Average prices for Russian synthetic rubber exports dropped from \$1589 per ton in January to December 2019 to \$1286 in 2020. As a result of lower volumes and prices revenues from synthetic rubber exports dropped from \$1.340 billion to \$967 million in January to December 2020.

Regarding shipment destinations China represented the largest market for Russian exporters in 2020, accounting for nearly 22.3% of total sales. Exports to China amounted to 211,900 tons in 2020 against 138,600 tons in 2019. This was followed by Poland with 9.8%, India with 10.2% and Hungary with 3.9%. India accounted for 101,600 tons in 2020 against 75,900 tons in 2019.

#### SIBUR rubber markets Q1-Q4 2020

SIBUR's synthetic rubber production dropped in 2020 to 427,300 tons from 516,600 tons in 2019. The effects of the sale of the Togliatti assets resulted in lower commodity rubber production, principally isoprene, falling from 301,600 tons in January to December 2019 to 190,100 tons in 2020. Speciality rubber production by SIBUR dropped from 101,000 tons to 40,500 tons. As a result of the sale of

SIBUR's Revenues from Synthetic Rubber Sales (billion roubles)				
	2020	% of revenues	2019	% of revenues
Total	38.744	7.4%	55.048	10.4%
Domestic	13.061	33.7%	18.691	34.0%
Export	25.683	66.3%	36.357	66.0%

Togliatti SIBUR was required to purchase 90,312 tons of rubber from other suppliers compared against 31,005 tons in the previous year. Sales of elastomers from SIBUR plants declined on the domestic market to 142,800 tons against 171,000 tons in 2019.

In 2020, SIBUR's revenue from elastomers sales decreased by 29.6% to 38.744 billion roubles from 55.048 billion roubles in 2019, in conjunction with an 18.5% fall in sales volumes and a 13.6% decrease in the average price. In 2020, export sales accounted for 66.3% of total elastomers revenue, while 33.7% was attributable to domestic sales.

<b>SIBUR-Synthetic Rubber Production (unit-kilo tons)</b>		
	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Commodity Rubber	190.1	301.6
Speciality Rubber	40.5	101.0
Thermoplastic elastomers	106.4	83.0
3rd part purchases	90.3	31.0
Total	427.3	516.6
<b>SIBUR-Synthetic Rubber Domestic Sales (unit-kilo tons)</b>		
	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Commodity Rubber	94.0	115.2
Speciality Rubber	8.7	11.6
Thermoplastic elastomers	40.1	44.2
Total	142.8	171.0
<b>SIBUR-Synthetic Rubber Export Sales (unit-kilo tons)</b>		
	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Commodity Rubber	155.4	217.6
Speciality Rubber	75.0	100.3
Thermoplastic elastomers	57.1	38.5
Total	287.5	356.3

#### Voronezhsintezkaucuk Jan-Dec 2020

SIBUR's Voronezh site boosted the output of thermoplastic elastomers in April 2020 (SBS polymers) by 50,000 tpa for a total of 135,000 tpa. Voronezhsintezkaucuk reduced exports in 2020 to 138,500

<b>Voronezhsintezkaucuk Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Polybutadiene	62.2	70.1
SBR (inc TEPS)	75.8	90.2
Others	0.6	5.2
Total	138.5	165.5

tons against 165,500 tons in 2019. SBR is the largest of the rubber grades exported from Voronezh, followed by butadiene rubber. Currently the company is expanding capacity of butadiene rubber where costs have risen recently from 1.1 to 1.3 billion roubles. At the start of 2020 Voronezhsintezkaucuk launched a new brand of high-viscosity polybutadiene rubber (SKD-ND VV), adding 20,000 tpa of capacity to the 76,000 tpa already in operation.

#### Nizhnekamskneftekhim-rubber exports Jan-Dec 2020

Nizhnekamskneftekhim's exports of synthetic rubbers fell in 2020 to 545,000 tons against 582,000 tons in 2019. Isoprene rubber exports amounted to 179,400 tons against 198,800 tons in 2019 whilst exports of halogenated butyl rubber fell from 142,000 tons to 124,700 tons.

<b>Nizhnekamskneftekhim Rubber Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Isoprene Rubber	179.4	198.8
Butyl Rubber	75.9	68.9
HBR	124.7	142.0
Polybutadiene	157.0	168.6
Others	8.0	3.7
Total	545.0	582.0

tyre plants in Tatarstan. Tatneft's conflict with Nizhnekamskneftekhim over pricing for isoprene and butyl rubber was a key factor in deciding to purchase its own facilities for the production of these products at Togliatti.

At the end of 2020 Nizhnekamskneftekhim started up the new facility for DSSK rubber. The production capacity consists of 60,000 tpa of DSSK, in addition to 10,000 tpa of thermoplastic elastomers (TEP, SBS). The production licensor for the DSSK project was the Japanese company ETIC Inc. This new

The production of thermoplastic elastomers at Voronezh rose in 2020 to 106,400 tons against 83,000 tons in 2019. Domestic sales of TEPs rose to 40,118 tons from 44,400 tons whilst exports rose from 38,500 tons to 57,100 tons. Rises in production and sales in TEPs were facilitated by the increase in capacity from 85,000 tpa to 135,000 tpa.

With the launch of a new production facility, Voronezhsintezkaucuk is now able to produce new brands of thermoplastic elastomers, which are in demand in the shoe industry, automotive industry, the packaging segment, as well as in the production of household products (for example, hygiene products and products that come into contact with food).

The decline in sales volumes was mainly caused by the sale of Togliatti-based assets in the fourth quarter of 2019, partially compensated by the increased capacity of thermoplastic elastomers production at the Voronezh production site.

The Russian anti-monopoly institution FAS issued a fine to Nizhnekamskneftekhim in late November for 1.5 billion roubles for contraventions in the synthetic rubber market. This follows the dispute in 2019 between Nizhnekamskneftekhim and Tatneft and its



grade of rubber provides better grip on wet roads, thus increasing driving safety. DSSK is also the basis for the production of environmentally friendly "green" tyres.

Togliattikaucuk Rubber Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Isoprene Rubber	5.8	35.4
Butyl Rubber	53.0	55.6
SBR	37.8	38.3
Others	0.2	0.5
Total	96.7	129.8

#### Togliattikaucuk-rubber exports Jan-Dec 2020

Togliattikaucuk exported a total of 96,700 tons of synthetic rubber in 2020 against 129,800 tons in 2019. Isoprene rubber exports from Togliatti dropped from 35,400 tons to 5,800 tons, whilst butyl rubber fell from 55,600 tons to 53,000 tons and SBR exports dropped from 38,300 tons to 37,800 tons. The switch of ownership of the Togliatti rubber assets from SIBUR to Tatneft has impacted heavily on sales

distribution. The transfer has largely amounted to replacing exports with domestic shipments.

Omsk Kaucuk Rubber Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
SBR	42.6	19.2
Others	0.2	0.5
Total	42.8	19.7

#### Omsk Kaucuk, rubber exports Jan-Dec 2020

Omsk Kaucuk increased exports of synthetic rubber in 2020 to 42,800 tons against 19,700 tons in 2019. The company's share in the Russian production of general-purpose rubbers currently comprises around 24%. Exports are conducted through the

Kombinatnaya station at Omsk where Russian Railways offers a discount if Omsk Kaucuk can ship enough volume of rubber, and other products such as MTBE and LPGs.

## Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Shchekinoazot	986.5	931.5
Sibmetakhim	871.1	884.6
Metafrax	1154.0	1091.0
Akron	97.8	106.1
Azot, Novomoskovsk	223.2	258.4
Angarsk Petrochemical	59.3	48.4
Azot, Nevinnomyssk	124.4	129.2
Tomet	760.4	835.4
Ammoni	108.3	157.5
Totals	4385.0	4442.2

#### Russian methanol production Jan-Dec 2020

Russia produced 4.385 million tons of methanol in 2020 against 4.442 million tons in same period in 2019, the first decline in production levels for several years. The decline was due primarily to the enforced stoppage at Tomet in the fourth quarter.

Metafrax produced 1.154 million tons of methanol against 1.091 million tons in January-December 2020 whilst Sibmetakhim at Tomsk reduced production from 884,600 tons to 871,100 tons. Due to reduced production in October and November, followed by an enforced shutdown in December, the Tomet plant reduced production from 835,400 tons in 2019 to 760,400 tons in 2020.

Shchekinoazot increased methanol production volumes from 931,500 tons in January to December 2019 to 986,500 tons in the same period in 2020. Ammoni in Tatarstan reduced methanol production from 157,500 tons in 2019 to 108,300 tons for 2020. Production at

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Azot Nevinnomyssk	8.6	0.0
Azot Novomoskovsk	78.5	75.7
Akron	15.2	9.0
Metafrax	489.8	418.5
Sibmetakhim	487.3	445.9
Tomet	318.7	394.7
Shchekinoazot	722.1	685.1
Ammoni	5.5	13.5
Total	2125.7	2042.3

#### Russian methanol exports, Jan-Dec 2020

Export shipments of Russian methanol totalled 2.126 million tons in 2020 against 2.042 million tons in 2019. Average prices dropped from \$245 per ton in 2019 to \$181 in 2020.

The average ratio of exports as a share of production achieved 49% over the twelve-month period in 2020. Producers sought more sales on the export market in 2020 to offset the decline in the domestic sales.

Russian Methanol Export Destinations (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belarus	114.7	76.6
Finland	840.6	754.8
Kazakhstan	37.5	34.8
Latvia	12.2	11.6
Lithuania	80.1	113.2
Netherlands	186.4	215.8
Poland	373.8	364.6
Romania	66.6	102.3
Slovakia	133.9	151.6
Turkey	32.4	32.2
UK	54.7	11.0
Ukraine	48.2	38.6
Others	11.1	9.8
Total	2095.0	2109.7

Metafrax increased methanol exports from 418,500 tons in 2019 to 489,800 tons in 2020 whilst Sibmetakhim increased exports from 445,900 tons to 487,300 tons. The largest Russian exporter was Shchekinoazot shipping 722,100 tons versus 685,100 tons in 2019.

The main destination for Russian methanol exports remains Finland where volumes totalled 840,600 tons in 2020 against 754,800 tons in 2019. Poland increased purchases from Russia to 373,800 tons in January to December 2020 against 364,600 tons in 2019, whilst Slovakia reduced volumes from 151,600 tons to 133,900 tons. Romania reduced imports from Russia from 102,300 tons to 66,600 tons in January to December 2020.

Shipments of methanol to the ports of Hamina and Kotka in Finland remained the same in January-December at 1.2 million tons which accounted for 57% of total foreign supplies. All Russian producers increased their exports of methanol in this direction, except for Shchekinoazot, which reduced supplies via Finland by 78,200 tons to 16,700 tons.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Azot Nevinnomyssk	16.4	35.7
Azot Novomoskovsk	146.0	158.4
Metafrax	349.6	251.3
Sibmetakhim	328.0	380.0
Tomet	363.4	574.1
Shchekinoazot	150.8	165.2
Ammoni (Mendeleevsk)	65.2	100.8
Total	1419.4	1665.5

#### Russian methanol domestic sales, Jan-Dec 2020

Seasonally high demand for methanol and its derivatives at the end of December against the background of a significant reduction in production at Togliatti led to a decrease in the volume of methanol reserves in the warehouses of its domestic producers.

Russian Methanol Domestic Buyers (unit-kilo tons)		
Consumer	Jan-Dec 20	Jan-Dec 19
Nizhnekamskneftekhim	215.3	244.7
Togliattikaucuk	123.4	156.5
Uralorgsintez	66.5	82.4
SIBUR-Khimprom	18.1	21.8
SIBUR Tobolsk	39.8	44.4
Ektos-Volga	35.5	59.9
Omsk Kaucuk	79.1	91.1
Novokuibyshevsk NPZ	40.4	49.4
Uralkhimplast	21.1	43.5
Metadynea	79.3	81.2
Kronospan	90.4	104.4
Gazprom	130.0	161.8
Khimsintez	19.0	22.8
Volzhsky Orgsintez	10.2	11.8
Slavneft-Yanos	12.6	14.2
Others	436.1	474.5
Total	1,419.4	1665.5

Merchant sales of methanol producers on the Russian domestic market amounted to 1.419 million tons in 2020 against 1.665 million tons in 2019. The large drop in shipments last year is attributed to the pandemic and its effect particularly on the MTBE market, but also other sectors such as rubber.

Nizhnekamskneftekhim reduced purchases of methanol from 244,700 tons in January to December 2019 to 215,300 tons in the same period in 2020 whilst Togliattikaucuk reduced purchases from 156,500 tons to 126,700 tons.

Gazprom reduced purchases of methanol for gas hydrates in Siberia from 161,800 tons in 2019 to 128,900 tons in 2020. In addition, most other significant merchant consumers reduced purchases in 2020.

The largest producer of MTBE in Russia, the Ektos plant at Volzhsky reduced 59,900 tons to 36,900 tons. The company reduced production and exports of MTBE last year due to lower fuel demand. In the formaldehyde and urea-formaldehyde sector Kronospan reduced purchases of methanol in 2020 to 90,400

tons from 104,400 tons in 2019. Despite much reduced consumption in the middle part of the year the company was able to maintain relatively stable numbers over the 12-month period.

Although Gazprom reduced overall purchases of methanol in 2020 to 130,000 tons against 161,800 tons in 2019, the volume to be delivered to the fields and fields of Gazprom Mining Noyabrsk will be significantly increased in 2021. This is mainly due to the expansion and development of the company's production capacity in Siberia.

Methanol in the gas industry is used in the processes of extraction and preparation of hydrocarbons to combat the formation of gas hydrate deposits. Around 9,000 tons of methanol will be delivered this year to Gazprom's production facilities in Yakutia and Kamchatka. The company's specialists have developed logistical schemes for the delivery of chemical reagents to remote regions.

<b>Russian Methanol Supply/Demand Balance 2018-2020</b>			
	<b>2020</b>	<b>2019</b>	<b>2018</b>
Production	4385.8	4442.4	4269.0
Exports	2122.2	2042.14	1798.1
Domestic Sales	1419.5	1515.3	1601.3
Captive/Inventory	844.1	885.0	870.3

Due to the climatic challenges of shipping methanol in Siberia Gazprom has been forced to study different methanol tank containers and various modes of transport, including road. The first tanks of the draining reagent have already been sent from the Sibmetakhim plant at Tomsk to the Chayanda gas field. In January 2021, the first batch of 1,400 tons was delivered to Yakutia, and another 440 tons of methanol to Yamal. Delivery to the Kamchatka Gas Industry Authority will begin in March.

In spite of the increased demand of methanol from the gas industry Russian methanol consumption has been in decline in the past three years, even if 2020 is seen as anomalous in regard to the effects of the

<b>Sibmetakhim Formaldehyde Production Chain (unit-kilo tons)</b>			
<b>Product</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
Methanol	871.1	884.5	891.0
Formaldehyde	11.9	15.1	15.5
Urea-formaldehyde concentrate	57.8	61.5	60.8

pandemic upon economic activity. The second quarter last year was a particularly difficult period, with many derivative plants closed. Even so domestic merchant demand has not changed much for some years and the same applies to internal processing.

<b>Akron Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Ammonia	2700	2600
Urea	1200.	1300
Methanol	98.0	106.0
Formaldehyde	151.0	173.0
Urea-formaldehyde resins	174.0	206.0
Calcium Carbonate	515.0	466.0

#### **Sibmetakhim 2020**

Gazprom Methanol LLC or Sibmetakhim, which is part of the Vostokgazprom Group of Companies, produced 871,100 tons of methanol in 2020, 11,900 tons of formalin, 57,800 tons of urea-formaldehyde concentrate in 2020.

Modernisation of the methanol, formalin and urea-formaldehyde concentrate plants at Tomsk was carried out a planned reloading of the catalyst.

completed in 2020. This involved the replacement by the thermal exchange sections of air-cooling vehicles, vacuum hoods, adjustable fittings, etc. The production of formalin and urea-formaldehyde concentrate also

#### **Akron Organic Chemical Production & Consumption (unit-kilo tons)**

<b>Organic synthesis products:</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Total	423	485
Including domestic consumption	213	248
Methanol	98	106
Including domestic consumption	78	91
Formalin	151	173
Including domestic consumption	131	155
Urea-formaldehyde resins	174	206
Including domestic consumption	4	2

#### **Akron Jan-Dec 2020**

Despite the pandemic the Akron Group increased production by 7% in 2020 to 7.97 million tons. The volume of production of mineral fertilizers for the year increased by 6% and amounted to 6,440 tons. Production of ammonia for 2020 increased by 6%, to 2,700 tons. Last year Akron completed three investment projects including the construction of a new nitric acid unit with a capacity of 135,000 tpa, and the modernisation of the Ammonia-4 unit with

an increase in capacity to 900,000 tpa.

## Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Angarsk Petrochemical company	29.7	28.0
Azot Nevinnomyssk	17.2	16.8
Gazprom neftekhim Salavat	65.4	60.5
SIBUR-Khimprom, Perm	31.0	41.1
Total	143.3	146.5
Russian Isobutanols Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Angarsk Petrochemical company	20.1	17.0
Gazprom neftekhim Salavat	37.1	34.0
SIBUR-Khimprom, Perm	45.1	55.3
Total	102.4	106.2

Russian Butanol Exports (unit-kilo tons)		
N-Butanol	Jan-Dec 20	Jan-Dec 19
Gazprom neftekhim Salavat	2.2	5.2
SIBUR-Khimprom	2.8	6.2
Angarsk Petrochemical	3.8	8.5
Azot Nevinnomyssk	0.5	0.0
Dmitrievsky Chemical Plant	2.2	2.0
Total	11.6	21.9
Isobutanols	Jan-Dec 20	Jan-Dec 19
Gazprom neftekhim Salavat	6.0	9.3
SIBUR-Khimprom	14.4	25.0
Dmitrievsky Chemical Plant	0.0	0.7
Total	20.4	35.0

the merchant market. The major destinations for Russian isobutanol exports included China (31%), Turkey (24.3%) and Czech Republic (14%).

Russian Butanol Consumption (unit-kilo tons)		
Consumer	Jan-Dec 20	Jan-Dec 19
Akrlat	16.0	17.7
Dimitrievsky Chemical	24.1	18.7
Volzhskiy Orgsintez	9.1	9.8
Roshalsky Plant of Plasticizers	2.0	1.6
Others	9.1	7.3
Total	60.2	55.0

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Gazprom n Salavat	7.7	6.3
SIBUR-Khimprom	23.6	28.3
Angarsk Polymer Plant	26.5	17.6
Azot Nevinnomyssk	2.4	2.2
Totals	60.2	54.5

in Russia in 2020.

## Russian butanol production Jan-Dec 2020

Russian normal butanol production totalled 143,300 tons in January to December 2020, against 146,50 tons in 2019. Gazprom neftekhim Salavat was the largest Russian producer, producing 65,400 tons against 60,500 tons in January to December 2019.

Isobutanol production in Russia dropped from 106,200 tons to 102,400 tons in 2020 during which Gazprom neftekhim Salavat increased production to 37,100 tons from 34,000 tons, and SIBUR-Khimprom reduced from 55,300 tons to 45,100 tons.

Exports of normal butanol directly from producers dropped from 21,900 tons in 2019 to 11,600 tons in 2020 whilst isobutanol exports dropped from 35,000 tons to 20,400 tons. Including trader volumes exports of normal butanols amounted to 18,900 tons for \$11.2 million in 2020 whilst exports of isobutanols amounted to 28,100 tons for \$14.2 million.

## Russian domestic butanol sales, Jan-Dec

Merchant butanol sales on the domestic market rose in 2020 to 60,200 tons from 54,500 tons, demand underwent a significant fall in the second quarter due to the economic effects resulting from COVID-19. The largest supplier of butanols to the domestic merchant market in 2020 was Angarsk Petrochemical which shipped 26,500 tons against 17,600 tons in 2019. Most of the butanols produced at Angarsk are sold on

The largest butanol buyer on the domestic market in 2020 was Dimitrievsky Chemical which took 24,100 tons against 18,700 tons of deliveries in January-December 2019 whilst Akrlat at Dzerzhinsk reduced purchases from 17,700 tons to 16,000 tons. Akrlat at Dzerzhinsk reduced purchases from 17,700 tons to 16,000 tons whilst the other only major buyer was Volzhsky Orgsintez which purchased 9,100 tons against 9,800 tons.

## Russian acetone production &amp; exports, Jan-Oct 2020

Russian acetone production increased in 2020 to 145,800 tons against 139,500 tons in 2019. Omsk Kaucuk produced 19,800 tons of acetone from the modernised plant which started up in late 2019. This plant has been the main difference to total production



Russian Acetone Production (unit-kilo tons)		
Producer	Jan-Dec 20	Jan-Dec 19
Ufaorgsintez	41.2	46.7
Kazanorgsintez	37.6	45.5
Novokuibyshevsk Petrochemical	47.2	47.2
Omsk Kaucuk	19.8	0.0
Total	145.8	139.5

Acetone exports from Russia totalled 49,800 tons 2020 against 43,300 tons in 2019. Revenues from acetone exports rose from \$18.9 million to \$20.5 million. The domestic acetone market is also benefiting from upward pressure from European prices and all producers have increased prices in the past few months. Supply has become tighter due to increased captive consumption at Kazanorgsintez which has capacity for Bisphenol A production. Omsk Kaucuk was the most expensive source of domestic acetone supply in December and January, priced at 105,000 roubles per ton. The rise in prices has led some buyers to replace expensive acetone with other raw materials, where technology allows.

### Plant of Synthetic Alcohol-auction

The property of the Orsk Synthetic Alcohol Plant was put up for auction at the start of 2021 with applications from bidders being accepted until 2 March. The Synthetic Alcohol Plant was declared bankrupt in 2019 and production stopped but restarted in 2020 after the rise in demand for isopropyl alcohol for usage as a sanitizer.

Russian Imports of isopropanol (unit-kilo tons)				
Country	2020 Ktons	2020 \$ mil	2019 Ktons	2019 \$ mil
Azerbaijan	2.6	5.4	0.1	1.0
China	18.6	30.5	8.1	7.2
Germany	3.8	5.3	3.6	4.2
Netherlands	1.7	2.3	0.0	0.0
Norway	1.2	0.6	2.2	1.2
South Africa	2.3	3.1	2.6	3.1
South Korea	2.2	2.5	4.8	3.5
United States	5.3	7.7	3.7	4.3
Others	1.6	3.2	1.6	1.2
Total	39.3	60.6	26.7	25.9

### Russian isopropanol market & imports

The first batch of isopropanol of more than 400 tons, produced by the Omsk Kaucuk plant (part of the Titan Group), is sent to Russian consumers. Most of the alcohol was shipped to customers in the Omsk, Moscow and Nizhny Novgorod regions. Isopropanol, produced by Titan Group, was purchased by manufacturers of household chemicals and laboratory reagents. Isopropyl alcohol is used in industry, cosmetics, household chemicals, medicine, is also used as the main component for disinfectants.

SIBUR's Organic Chemical Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
DOTP	99.3	63.4
Oxo Alcohols	162.1	192.4
Acrylates	50.9	50.3
SIBUR's Organic Chemical Domestic Sales (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
DOTP	80.3	57.7
Oxo Alcohols	46.1	43.1
Acrylates	33.0	35.0
SIBUR's Organic Chemical Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
DOTP	20.8	10.7
Oxo Alcohols	28.4	25.7
Acrylates	28.4	26.7

Russian imports of isopropanol increased in 2020 to 39,300 tons against 26,700 tons in 2019. Costs rose from \$25.9 million to \$60.6 million. Imports are expected to decline in 2021 due to the availability of domestic production at Omsk. Novokuibyshevsk Petrochemical Company is now considering the installation of another plant for isopropyl alcohol.

### SIBUR's organic chemicals Jan-Dec 2020

SIBUR's sales of organic chemicals were boosted in 2020 by revenues from the shipments of the plasticizer DOTP, which in value terms rose from 3.981 billion roubles in January to December 2019 to 7.286 billion roubles. Production of DOTP at

Perm rose in volume from 63,400 tons in 2019 to 99,300 tons in 2020. Domestic sales of DOTP rose from 57,700 tons to 80,300 tons whilst exports rose from 10,700 tons to 20,800 tons. In other product areas oxo alcohol production amounted to 162,100 tons in January to December versus 192,400 tons in 2019, which

was due to higher captive internal processing in the production of DOTP. The oxo alcohol and plasticizer division operates at SIBUR-Khimprom at Perm.

The acrylates' division at Dzerzhinsk showed similar production volumes for 2020, whilst showing a rise in domestic sales from 26,700 tons to 28,400 tons and a drop in export sales from 35,000 tons to 33,000 tons. Revenues from domestic and export sales of acrylates declined from 5.259 billion roubles in 2019 to 4.764 billion roubles in January to December 2020.

## Russian TDI-MDI Imports

Russian TDI Imports (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belgium	0.5	1.1
China	7.1	3.9
France	0.1	0.6
Germany	13.0	9.7
Hungary	10.6	9.6
Japan	1.1	1.5
Netherlands	2.1	1.6
Saudi Arabia	7.8	8.2
South Korea	6.5	5.2
Turkey	0.3	0.2
US	2.4	10.1
Others	2.5	0.2
Total	54.1	51.8

### Russian TDI-MDI imports, Jan-Dec 2020

Russian TDI imports amounted to 54,106 tons in the twelve months of 2020 against 51,812 tons for million in 2019. Values of Russian TDI imports rose from a total of \$96.795 million in January to December 2019 to \$105.578 million.

Germany was the largest supplier of TDI to Russia shipping 13,010 tons in 2020 against 9,652 tons in January to December 2019. Other important suppliers included Hungary which increased TDI shipments to Russia to 10,606 tons against 9,579 tons in January to December 2019 and Saudi Arabia which reduced from 8,203 tons to 7,754 tons. Around 43% of TDI imports into Russia were sold into the Moscow region followed by Tatarstan with 16.1%.

MDI imports into Russia amounted to 154,087 tons in 2020 against 147,914 tons in 2019. Values of imports amounted to \$212.263 million in 2020 dropping from \$225.421 million. Saudi Arabia was the largest supplier accounting for 25.4%, shipping 40,800 tons in 2020 against 38,900 tons in 2019. This was followed by China with 24.5% of import volumes and the Netherlands with 19%. The largest region for Russian MDI imports in 2020 was the Vladimir Oblast followed by Moscow.

Russian Imports of MDI (unit-kilo tons)		
Country	Jan-Dec 20	Jan-Dec 19
Belgium	16.8	15.5
China	32.8	29.1
Germany	20.7	16.9
Hungary	4.0	7.3
Japan	1.7	1.9
Netherlands	32.2	34.3
Portugal	3.4	0.0
Saudi Arabia	40.8	38.9
South Korea	1.0	2.1
US	0.0	1.1
Others	0.6	0.8
Total	154.0	147.9

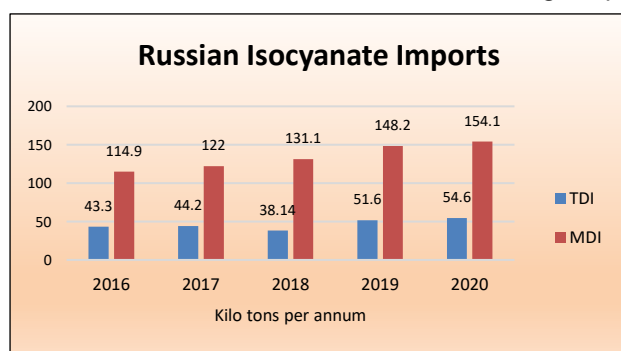
### Isocyanate prices

TDI costs for Russian importers rose sharply in the fourth quarter ending 2020 in December with an average price of \$2787 per ton against the low point of \$1472 per ton in July. Between July and December last year cost values for Russian TDI importers rose in each of those six months.

MDI prices also rose in the second half of 2020 but on a much less sharp trajectory. December average prices per ton amounted to \$1594 measured against \$1272 in July 2020.

Although imports of TDI and MDI both increased in 2020 and are expected to increase again in 2021 building a plant in Russia still remains a distant prospect. Investment ideas into isocyanates a number of projects have been put forward over the past decade, all of which have failed to progress to the construction stage.

Imports have bounced back from the declines in the middle of 2020 but there is some concern over the future direction of consumption patterns and recovery post-COVID.



Over the past five years imports of MDI and TDI into Russia have risen steadily but the market remains still too small to justify a plant inside Russia. Total production of polyurethane in Russia in 2020 amounted to around 400,000 tons, exceeding the figure of 2019 by 3.3%. In the construction sector, demand for polyurethane is still high, despite the negative dynamics of the sector as a whole. The polyurethane industry, despite the unresolved problems, has the prerequisites for growth. With such a wide range of promising applications it may only be a question of time before Russia can justify its own isocyanate plant.

## Producer Performance

### Bashkir Soda 2020

The Bashkir Soda Company increased the production of sodium bicarbonate by 14% in 2020 to 180,000 tons against 157,000 tons in 2019. The company produced 268,500 tons of PVC, 175,300 tons of calcium chloride, and 219,000 tons of caustic soda. The company plans to establish production of processed rubber

Ufaorgsintez Production (unit-kilo tons)		
Product	2020	2019
Ethylene	116.1	126.0
Propylene	176.9	189.7
Benzene	87.6	86.5
Phenol	63.9	74.2
Acetone	46.7	39.7
Polypropylene	120.5	127.5

with a volume of 23,500 tpa. BSK also intends to increase the production capacity of granular calcium chloride to 100,000 tpa. Bashkir Soda Company received revenues of 48.3 billion roubles in 2020.

### Ufaorgsintez 2020

Ufaorgsintez reduced the shipment of the main products in 2020 whilst production levels were generally down on 2019. Ethylene production dropped from 126,000 tons to 116,100 tons whilst propylene dropped from 189,700 tons to 176,900 tons.

Russian Exports of Utropin (unit-kilo tons)		
Country	2020	2019
Australia	2.0	1.8
Chile	1.5	4.0
India	4.4	1.7
Kazakhstan	3.2	2.9
Spain	2.0	6.3
US	1.7	1.8
Others	12.5	12.9
Total	26.9	31.4

A significant drop in sales volumes demonstrate shipments of phenol to 44,690 tons (40% less than in 2019) and acetone to 29,183 tons (37.4% less than in 2019). The shipment of polypropylene last year decreased by 4.1% in 2020, to 125,500 tons, and polyethylene by 6.9% to 87,200 tons. The share of acetone exports in the structure of shipments of Ufa enterprise increased from 20% to 72.2%, phenol from 17.4% to 45.1%.

### Metafrax Trading-utropin

Metafrax Trading International, a part of Metafrax Group, received a status of A grade supplier of utropin for the Dutch company Vivochem BV, Netherlands (included in Bufa group of companies). This assures that the client will continue to work with Metafrax, not with a different supplier. Metafrax Trading International is an affiliated trading company of PJSC Metafrax, a part of Metafrax Group. The company sells the chemical products: methanol, utropin, pentaerythritol, dipentaerythritol and others. Transfer of the products is performed in the European Union: methanol in Finland, utropin and pentaerythritol in Poland, pentaerythritol in Netherlands.

## Ukraine

### Ukrainian polymer imports & production, Jan-Dec 2020

Polypropylene imports into Ukraine amounted to 135,300 tons in 2020 against 132,000 tons in 2019. Homopolymer imports increased from 100,200 tons to 102,800 tons whilst imports of block copolymer

Ukrainian Polypropylene Imports (unit-kilo tons)		
Category	Jan-Dec 20	Jan-Dec 19
Homo	102.8	100.2
Block	13.6	14.0
Random	16.4	16.0
Other	2.4	2.1
Total	135.2	132.3

dropped from 14,000 tons to 13,600 tons. Random copolymer imports rose from 16,000 tons to 16,400 tons.

Polyethylene imports to the Ukrainian market amounted to 265,900 tons in 2020 against 268,700 tons in January to December 2019. HDPE imports rose to 97,300 tons against 95,000 tons, whilst LDPE imports totalled 79,300 tons against 79,600

tons. LLDPE imports totalled 75,900 tons against 81,700 tons in 2019. Imports of other types of polyethylene into Ukraine, including ethylene vinyl acetate amounted 13,400 tons against 12,500 tons in 2019.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
PVC	33.4	49.0
LDPE	79.3	76.6
LLDPE	75.3	81.5
HDPE	97.3	95.0
Ethylene Vinyl Acetate	13.4	12.5
PP	135.2	132.3

Ukrainian imports of PVC dropped 32% in 2020 to 33,400 tons against 49,000 tons in 2019. European producers accounted for 83% of imports of PVC into Ukraine, with US suppliers providing around 15%. At the same time as imports fell, increased demand from the domestic market resulted in Karpatneftekhim reducing export activity. Exports of PVC from Kalush totalled 155,300 tons against 163,300 tons in 2019.

#### Karpatneftekhim-2020

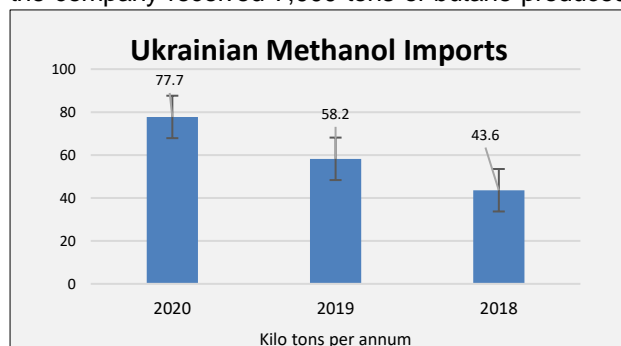
Karpatneftekhim Petrochemical Exports (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Propylene	101.0	93.1
Benzene	63.1	66.7

Karpatneftekhim exported 101,000 tons of propylene in 2020 against 93,100 tons, whilst benzene imports dropped from 66,700 tons to 63,100 tons. The largest share of propylene shipments was exported to Poland. Karpatneftekhim encountered several stoppages last year due the high cost of raw materials combined with low prices for polyethylene.

About 5,000 tons of benzene was loaded onto a tanker in January at the Ukrainian port of Chornomorsk in mid-January was delivered to Porto Marghera (Italy).

Ukrainian Plasticizer Imports 2020 (unit-tons)					
Type	Q1 20	Q2 20	Q3 20	Q4 20	Total
DOP	520.2	403.0	899.0	433.8	2256.0
DOTP	1228.6	829.0	652.0	743.4	3453.0
DINP	3497.6	2464.0	2424.0	2265.5	10651.1

Karpatneftekhim intends to increase purchases of butane in 2021 due to the rise in the price of naphtha. In January, the plant imported more than 12,000 tons of butane, up from 2,300 tons in December. In January, the company received 7,000 tons of butane produced by Lukoil's refinery at Perm. Karpatneftekhim can also buy butane from Rosneft, purchasing 3,000 tons in January.



#### Ukrainian methanol market 2020

Imports of methanol into Ukraine totalled 77,700 tons in 2020 which was up from 58,200 tons in 2019 and 43,600 tons in 2018. Whilst Russia remains the major supplier to the Ukrainian market other sources of supply include Azerbaijan and European traders. Ukgasvydobuvannya signed an agreement in January with AGTG SA (Switzerland) for the supply of 19,920 tons of methanol of worth 488.12 million hryvnia. SOCAR was the only competitor which offered methanol under auction at a slightly higher price.

Belarussian Petrochemical Production (unit-kilo tons)		
Product	Jan-Dec 20	Jan-Dec 19
Ethylene	115.6	102.1
Propylene	71.1	64.8
Benzene	103.0	115.4
Caprolactam	60.3	111.3
OX	25.0	11.3
PX	48.4	27.0
Methanol	70.6	83.6

in 2019 whilst propylene increased from 64,800 tons to 71,100 tons in 2020. Benzene production dropped from 115,400 tons to 103,300 tons in accordance with the fall in caprolactam production from 111,300 tons to 60,300 tons. Paraxylene production at the Naftan refinery increased in 2020 to 48,400 tons from 27,000 tons.

#### Belarus

#### Belarussian chemical production, Jan-Dec 2020

Ethylene production in Belarus increased in 2020 to 115,600 tons from 102,100 tons



Emphasis into investments into petrochemicals in Belarus will increase after the completion of the slow coking complex at Naftan which is expected this year. The new complex will allow the company to get rid of heavy residues generated in the process of oil processing, increase the production of light petroleum products and diesel fuel of the Euro-5 standard and reduce the production of fuel oil.

In the medium term it is planned to build an ethylene-propylene plant at the Polimir plant. Implementation of this project will increase the production of LDPE. It is planned that the capacity of the plant will be 300,000 tpa, 200,000 tons of ethylene and 100,000 tpa of propylene. Construction could begin in 2023.

<b>Belarussian Xylene Imports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
OX	17.8	13.2
PX	16.2	12.8

#### **Belarussian aromatic trade Jan-Dec 2020**

In January-December 2020 Belarus imported 16,200 tons on paraxylene and 17,800 tons of orthoxylene against 12,800 tons and 13,200 tons respectively in 2019. Imports of benzene were not required in Belarus in 2020 whilst lower caprolactam production at Grodno enabled the Naftan and Mozyr refineries to export benzene in more significant volume. Exports of benzene from Belarus increased to 51,976 tons in 2020 against 6,723 tons in 2019, with prices dropping from \$582 per ton to \$295 per ton. Shipments to Russia increased from 4,763 tons at an average price of \$599 per ton in 2019 to 19,034 tons at \$338 per ton in 2020. The Netherlands was the largest destination for Belarussian benzene exports in 2020 amounting to 32,941 tons at an average price of \$269 per ton up from 1,956 tons in 2019 at \$528 per ton.

<b>Belarussian PTA Imports (kilo tons)</b>		
<b>Country</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Turkey	0.0	1.0
China	0.0	0.0
South Korea	26.9	12.5
Portugal	8.0	7.8
Poland	30.8	35.8
Thailand	0.0	0.2
Total	65.7	57.3

#### **Belarussian PTA imports Jan-Dec 2020**

PTA imports into Belarus totalled 65,641 in 2020 against 57,272 tons in 2019. Average prices dropped from \$842 per ton to \$632 in 2020. Poland remains the largest supplier of PTA to Belarus, supplying 30,800 tons in January to December 2020 against 35,800 tons whilst South Korea increased shipments to 26,900 tons from 12,500 tons.

<b>Belarussian Organic Chemical Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Acrylonitrile	32.6	47.2
Melamine	4.2	6.1
Caprolactam	2.5	7.9
Phthalic anhydride	34.9	36.2
Methanol	16.4	35.1

#### **Belarussian organic chemical trade, Jan-Dec 2020**

Belarussian organic chemical import values dropped to \$528.741 million in 2020 from \$610.835 million in 2019, whilst exports dropped from \$263.242 million to \$164.702 million. Phthalic anhydride exports from Belarus totalled 34,847 tons in 2020 against 36,058 tons in 2019. Average export prices dropped from \$898 per ton to \$653 per ton in 2020. Belarus exported 9,734 tons of phthalic anhydride to Russia in 2020, down from 15,827 tons, whilst export shipments to Ukraine dropped from 2,526 tons to 2,114 tons. The largest EU destination in 2020 for Belarussian phthalic exports was Lithuania accounting for 7,630 tons of shipments.

<b>Belarussian Acrylonitrile Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Russia	3.4	2.5
Netherlands	4.1	13.0
Turkey	21.1	28.1
UAE	3.9	0.0
Others	0.0	3.5
Total	32.6	47.0

Acrylonitrile export volumes from Belarus dropped in 2020 to 32,560 tons against 47,467 tons in the same period in 2019. Average prices dropped from \$1317 per ton to \$953 per ton. Turkey was the main destination for Belarussian acrylonitrile amounting to 21,127 tons against 28,138 tons in the previous year.

<b>Belarussian Methanol Market (unit-kilo tons)</b>		
	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Production	70.6	83.6
Exports	16.4	34.8
Imports	93.5	50.1
Balance	147.7	98.9

Methanol exports from Belarus dropped from 34,846 tons in 2019 to 16,433 tons in 2020. Imports of methanol increased in 2020 to 93,499 tons for an average price of \$162 per ton against 50,114 tons in 2019 for \$223 per ton.

Russia is almost the only supplier of methanol to the Belarussian market.

Propylene imports from Russia to Belarus stopped in the first quarter in 2020 due to increased domestic production, dropping to 4,383 tons against 33,437 tons in 2019. Belarus uses propylene in the production of acrylonitrile.

In other areas of organic chemical trade Belarus increased imports of isopropyl alcohol in 2020 to 4,557 tons against 2,186 tons in 2019. Isobutanol imports amounted to 2,393 tons against 2,274 tons whilst ethylene glycol imports dropped from 69,466 tons in 2019 to 66,637 tons. Average prices for ethylene glycol dropped from \$741 per ton to \$564 per ton.

Acetone imports into Belarus amounted to 11,061 tons in 2020 against 14,637 tons in 2019, with average prices dropping from \$628 per ton to \$576 per ton. Belarus imports normally around 3,000 tons of acetone per quarter from Russia for further processing. In December Naftan announced a tender for the purchase of 10,000 tons of acetone intended for the period April 2021 to January 2022. Svetlogorsk Khimvolokno purchased 360 tons of acetone in January after a tender, with delivery contracted to be completed by the end of 2021.

<b>Belarussian Polymer Imports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
PVC	85.0	70.1
Polypropylene	119.8	114.1
LDPE	42.4	49.2
HDPE	59.8	70.7
Polystyrene	70.6	70.7

#### **Belarussian polymer & MDI trade, Jan-Dec 2020**

Imports of polypropylene to Belarus increased by 6% to 119,800 tons amounted to 95,500 tons. Imports of propylene copolymers dropped 11% to 31,128 tons.

polypropylene homopolymer amounted to 84,788 tons, which is 14% more than in 2019. Imports of

<b>Belarussian MDI Imports (unit-kilo tons)</b>		
<b>Country</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
Russia	2.9	2.2
Belgium	1.2	4.0
Hungary	2.8	1.7
Germany	13.3	9.9
Saudi Arabia	0.9	1.2
Others	0.8	1.9
Total	22.1	20.8

Imports of PVC into Belarus amounted to 85,000 tons in 2020 up from 70,100 tons in 2019. The key suppliers of resin during this period were producers from Russia, their share in the Belarussian market was about 85%. The second and third place in terms of supply is occupied by producers from Germany and Ukraine with a share of about 8% and 5% respectively.

MDI imports into Belarus totalled 22,148 tons in 2020 versus 20,763 tons in 2019, with average prices dropping slightly from

\$1595 per ton to \$1551. Germany was the leading supplier to the Belarussian market, increasing deliveries in 2020 to 13,328 tons from 9,873 tons in 2019.

<b>Belarussian Polymer Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Dec 20</b>	<b>Jan-Dec 19</b>
PET	25.8	35.0
LDPE	86.9	96.4
HDPE	9.4	20.6
Polypropylene	1.5	2.5
Polyamide	30.4	60.3

Regarding polymer export activity polyamide shipments from Belarus almost halved in 2020 to 30,416 tons from 60,223 tons in 2019. Average prices dropped from \$1706 per ton to \$1505 per ton. PET and polyethylene exports also dropped in 2020. Polycarbonate exports dropped to 1,945 tons from 5,000 tons in 2019.

### **Central Asia/Caucasus**

#### **Azerbaijan chemical production Jan-Dec 2020**

Azerbaijan's chemical plants increased production by 20.5% in 2020 compared to 2019. Propylene production in Azerbaijan totalled 103,300 tons (growth by 17.3%), polyethylene totalled 132,300 tons (growth by 38.5%), and other organic solvents and diluents 33,154 tons (growth by 16%). The decline in the production of nitrogen by 1.5% to 22,338 cubic metres, iodine by 3.9% to 182.8 tons, ethylene by 12.9% to 102,100 tons, paint materials by 44.4% to 14,289 tons.

SOCAR Methanol produced a total of 476,600 tons of methanol in 2020, which is 24.4% higher than in 2019. In 2020, \$51.2 million worth of methanol was exported from Azerbaijan which is \$13.4 million, or 20.7% less than in 2019. Azerbaijan exported polypropylene for a total value of \$64.5 million, a drop of \$1.2 million or 1.82% from 2019. SOCAR Polymer became the largest exporter of polypropylene to Russia in 2020, rising

58% over 2019 to 132,500 tons. The SOCAR Polymer project includes plants for the production of polypropylene with a capacity of 184,000 tpa and HDPE production with a capacity of 120,000 tpa. The main export markets for polymer products produced in Azerbaijan are Russia, Turkey and China.

#### **Versalis provides licence for Uzbek polyethylene project**

Versalis S.p.A. has won a contract to provide Enter Engineering in Uzbekistan licenses for a low-density polyethylene/ethyl vinyl acetate (LDPE/EVA) swing unit. The plant is to be built as part of a new gas chemical complex based on MTO-Methanol to Olefins technology to be located in the Karakul area in the Bukhara region of the Republic of Uzbekistan.



Enter Engineering will act as licensee on behalf of the Uzbek Company Jizzakh Petroleum which will own and operate the LDPE/EVA unit and the entire gas-chemical complex. The unit will be designed for a maximum production of EVA equivalent to 180,000 tpa.

The contract has been acquired by Versalis in cooperation with ECI Group, a US based plant-lifecycle specialist providing services in design, engineering, procurement, construction, technology and consultancy particularly focused on polyolefins plants. ECI Group comprises Engineers and Constructors International (US), Simon Carves Engineering Ltd. (UK) and International Technical

Excellence Center (US). Three agreements have been signed with Chemtex, Scientific Design, Grace, two with European companies Haldor Topsoe and Versalis, as well as one agreement with the Chinese company Sinopec. Having completed site selection just last year, the Uzbek Ministry of Industry is delighted that discussions with Jizzakh Petroleum have so quickly led to this series of agreements with major international licensors.

#### **Kazakh polymer trade Jan-Dec 2020**

In 2020 imports of polypropylene into Kazakhstan totalled 33,300 tons against 31,000 tons in 2019. Imports of PP-homo and propylene copolymers totalled 26,300 tons and 7,024 tons respectively against 24,500 tons and 6,500 tons a year earlier. In 2020 19,800 tons of polypropylene from Kazakhstan were shipped for export, compared to 21,000 tons in January to December 2019. In 2020 imports of polyethylene to Kazakhstan increased by 14% to 154,000 tons against 135,100 tons. HDPE imports rose 21% to 127,300 tons, LDPE imports dropped 17% to 15,800 tons and LLDPE imports rose 4% to 10,800 tons.

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