

CIREC

MONTHLY NEWS

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

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Key points from Issue 353

Central European petrochemical markets

- Petrochemical margins drop back in April after large increase in March
- PKN Orlen's production of ethylene amounted to 80,700 tons in Jan-Feb against 87,400 tons in 2018 whilst propylene rose from 60,000 tons to 74,400 tons
- PKN Orlen completed the main part of the investment for the construction of a Polyethylene 3 (PE3) installation at Litvinov
- Grupa Azoty Polyolefins signed the mandate letters in March with Polish and international financial institutions confirming debt financing offers for the Polimery Police project
- Due to a relatively successful 2019 Grupa Azoty is well placed to meet the financial challenges resulting from the economic effects of COVID-19

Russian chemical production

- Ethylene production in Russia rose from 515,700 tons in the first two months last year to 701,100 tons in January to February 2020, whilst propylene increased from 361,600 tons to 467,300 tons
- Polyethylene production in Russia rose 58% in the first two months in 2020 against the same period last year totalling 474,100 tons against 300,700 tons

Russian chemical trade

- Most petrochemicals have seen significant falls, with benzene dropping spectacularly in April from March numbers
- Export shipments of Russian methanol increased in the first quarter, rising to 593,800 tons against 540,000 tons in the same quarter last year
- Russian exports of synthetic rubber amounted to 140,400 tons in the first two months in 2020, down from 177,200 tons in 2019
- PTA imports into Russia totalled 41,700 tons in the first two months in 2020 against 68,900 tons in the same period last year

Russian chemical projects

- Whilst Metafrax has suspended the start of investment projects only at planning stages the AKM and paraformaldehyde projects at Gubakha which are already in process are continuing
- By the end of March more than 80% of technological equipment had arrived at Shchekinoazot for the construction of the third methanol unit
- Turkish company Gemont has been selected as the contractor for the construction of the Irkutsk Polymer Plant (INK)
- Nizhnekamskneftekhim (part of the TAIF group) and the Turkish company Gemont signed a construction contract in March for the construction project of the EP-600 olefin complex

CENTRAL & SOUTH EAST EUROPE

PKN Orlen Margins				
Category	X/wt.	Jan	Feb	Mar
Brent crude oil price	\$/b	63.5	55.4	31.8
Model downstream margin	\$/b	8.5	9.8	15.0
Model petrochemical margin	€/ton	762	812	982

margin rose from €812 per ton in February to €982 per ton in March, whilst in Hungary MOL's petrochemical margin rose from €335.5 per ton in February to €546.5 per ton in March. Overall for the first quarter, petrochemical margins for MOL averaged €383.7 per ton versus €371.9 in Q4 2019 whilst Orlen increased

MOL-Margins 2020				
Macro figures	Jan	Feb	Mar	
Brent dated (\$/bbl)	63.5	55.4	31.8	
MOL Group refinery margin (\$/bbl)	4.8	4.8	9.3	
MOL + Slovnaft refinery margin (\$/bbl)	5.6	5.4	9.8	
MOL Group petrochemicals margin (€/ton)	269.0	335.5	546.5	

highest since 2012 due to the huge drop in crude oil prices. The petrochemical margins were also huge but were quickly put into perspective by the precipitous drop in April contract prices in Europe for the major olefins and aromatics. The European ethylene contract reference price for April was down €200/ton at €720/ton, the lowest monthly contract price since June 2009. The ethylene contract essentially tracked steam cracker feedstock naphtha down, as would be expected, but has also been pressured by lower downstream demand.

PKN Orlen Production Poland (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Ethylene	80.7	87.4
Propylene	74.4	60.0
Butadiene	11.3	10.7
Toluene	1.8	2.0
Phenol	8.5	8.2
Polyethylene	57.5	66.3
PVC	49.1	49.0
Polypropylene	60.9	51.5

beginning of April, PKN Orlen launched the production of a fluid surface disinfectant at Orlen's Trzebinia plant where initial production is to amount to 3 million litres per month.

Most companies in Central Europe have adapted to social distancing in work practices whilst attempting to maintain production levels. However, it is quite possible that over-stocked inventories may eventually lead to some reductions in operating rates.

MOL has converted a windshield washer production line at its facilities at Almasfuzito into production of 50,000 litres/day of hand sanitiser. Slovnaft has also started producing its own hand and surface disinfectant product through its subsidiary VÚRUP. The product contains ethanol and isopropanol and has already been registered by the relevant authorities. Hand sanitisers demand has not kept up with demand in Europe in response to coronavirus pandemic, although many companies are producing some volumes. Isopropanol and ethanol are the two main key feedstocks for the product, with isopropanol being the most popular. As a result, European prices for isopropanol have posted record highs on the back of high demand and short supply.

PKN Orlen-Lotos

Although the focus on coronavirus is the primary concern for PKN Orlen, talks continue over the takeover of Grupa Lotos with efforts to convince the European Commission that the merger of the two companies that will not hurt competition in the wholesale and retail Polish fuel markets. The existing concessions proposed by Orlen have thus far been considered insufficient by the Commission.

Central European petrochemical margins

After margins for petrochemicals in Europe jumped dramatically in March in line with the collapse in crude pricing, April saw a rapid fall following revised contract and spot numbers. PKN Orlen's model margin rose from €812 per ton in February to €982 per ton in March, whilst in Hungary MOL's petrochemical margin rose from €335.5 per ton in February to €546.5 per ton in March. Overall for the first quarter, petrochemical margins for MOL averaged €383.7 per ton versus €371.9 in Q4 2019 whilst Orlen increased from €785 to €845. The model downstream margin of the PKN Orlen group was \$15 per barrel in March compared to \$9.8 in February and \$11.1 in March 2019.

MOL's refinery margin in March was the

Propylene has faced less downside pressure than ethylene, but still saw a drop in contract prices of €175/ton to €650/ton in April. The butadiene market was marked down 27% to €525/ton, representing a four-year low, whilst the Europe April contract price for benzene dropped by 70%.

Central European petrochemical production

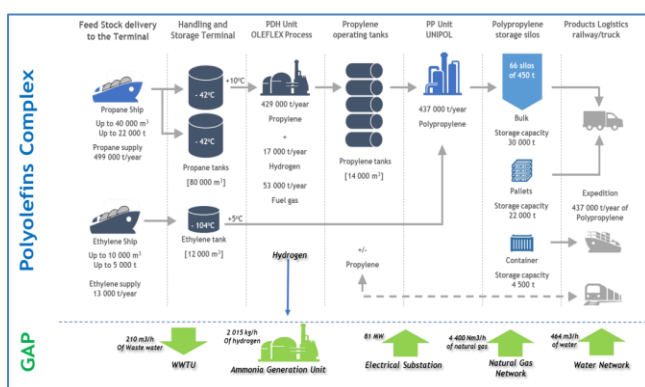
PKN Orlen's production of ethylene amounted to 80,700 tons in the first two months in 2020 against 87,400 tons in the same period last year whilst propylene rose from 60,000 tons to 74,400 tons. At the



Aside the overlap in refining Lotos is moving closer to Orlen in petrochemicals through its part interest in Polymery Police. At the end of last year Grupa Lotos and Grupa Azoty signed an initial term sheet concerning an investment of zł 500 million in the Polimery Police PDH and polypropylene project. The investment amount includes a cash contribution of up to zł 300 million to cover the increased share capital of Grupa Azoty Polyolefins and a subordinated loan of up to zł 200 million. Refining throughput in 2019 for Lotos totalled 10.7 million tons in 2019.

Polymery Police-construction

Grupa Azoty Polyolefins signed the mandate letters in March with Polish and international financial institutions confirming the submission of debt financing offers for the Polimery Police project. The company assumes that the process of securing the financing of the Polimery Police project has entered a decisive phase. The group of financing institutions participating in the project include PKO BP, Bank Pekao, Bank Gospodarstwa Krajowego, Alior Bank, PZU, Bank Ochrony Środowiska, Santander Bank Polska, BNP Paribas Bank Polska, and European Bank for Reconstruction and Development.



Approximately 40% of funds (\$720 million) is expected to be sourced from subordinated capital (equity and subordinated loans). The remaining 60% budget, i.e. \$1.075 billion will cover a long-term senior loan with recourse to the main sponsors in the Grupa Azoty. In addition, the company will be granted a loan for VAT payments during the construction period and a working capital loan to finance working capital in the operating phase.

Polymery Police-workforce for project construction

The Police project is currently scheduled to be completed in 2022, whilst Grupa Azoty estimates that for the most intensive periods of construction around 5,000 workers will be needed. The production capacity of the Polymery Police complex is being constructed to produce 429,000 tpa of propylene and 437,000 tpa of polypropylene.

The scale of investment is so large that the company cannot rely solely on the Polish workforce, and other nationalities such as Ukrainians and Koreans are playing a role. Hyundai Engineering has brought around 200 people to Poland in order to construct the PDH and polypropylene plant. In order to help against COVID-19, Hyundai Engineering has donated nearly zł 300,000 to purchase respirators for the hospital in Police. Grupa Azoty also joined the project of the first Polish VentilAid respirator, supplying key parts.

Last year, Grupa Azoty Polyolefins acquired three capital investors including the Lotos Group, Hyundai Engineering and Korea Overseas Infrastructure and Urban Development, which decided to invest in the project in the total amount of approx. zł 1 billion.

Unipetrol-polyethylene plant completion

PKN Orlen completed the main part of the investment for the construction of a Polyethylene 3 (PE3) installation at Litvinov. The production capacity of the new PE3 installation, which will replace the currently operating PE1 unit, is 270,000 tpa and will be introduced when the COVID-19 pandemic is under control.

Polyethylene 3 (PE3) installation at Litvinov. The production capacity of the new PE3 installation, which will

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Ethylene	2.7	14.0
Propylene	2.0	1.9
Benzene	1.3	8.8
Toluene	1.6	2.5
Ethylbenzene	19.5	25.4

At the same time, the PE2 polyethylene installation will be continued to operate, with a capacity of 200,000 tpa. Due to the launch of the new investment, the total production capacity of polyethylene at Litvinov will increase from 320,000 tpa to 470,000 tpa.

Czech Polyethylene Trade (unit-kilo tons)		
Imports	Jan-Feb 20	Jan-Feb 19
Category	Ktons	Ktons
LDPE	22.6	27.5
HDPE	19.8	21.6
EVA	1.9	1.7
EAO	3.5	4.0
Other	2.2	19.5
Exports	Jan-Feb 20	Jan-Feb 19
LDPE	8.7	11.6
HDPE	30.7	39.4
EVA	0.6	0.4
EAO	0.3	0.0
Other	2.0	1.9

The investment will help increase the use of olefin installations and enable deeper integration of petrochemical and refinery production not only in the Unipetrol Group itself, but also in the PKN Orlen Capital Group.

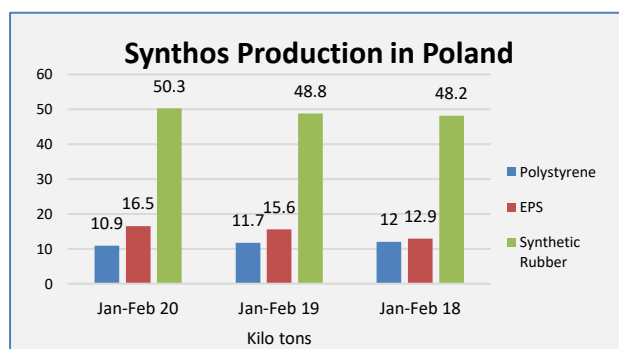
Orlen Południe-propylene glycol

The construction of the plant for propylene glycol at the Orlen Południe refinery at Trzebinia is scheduled to come onstream in 2021 which may miss the peak of demand resulting from the COVID-19 but will be helpful against future epidemiological threats. Propylene glycol, which will be produced at the Trzebinia refinery, is intended for usage for the production of antibacterial gels and soaps and other cleaning products, as well as in the food industry. The new installation at Trzebinia will produce 30,000 tpa of organic glycol. Around 5,000 tons of this grade of propylene glycol is currently imported into Poland for the production of hygiene and pharmaceutical products. At the beginning of April PKN

Orlen announced that the production of surface disinfectant will start at the Trzebinia plant.

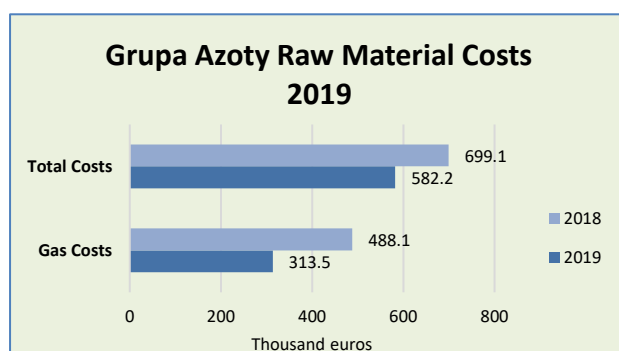
Synthos Poland

Synthos increased production in Poland for synthetic rubber and expandable polystyrene in the first two months in 2020 although there was a slight drop in general polystyrene. Synthos is not planning to suspend production either at Oswiecim or Kralupy in the Czech Republic at least for the time being. The company states that there are no reasons for closing at this stage, whilst moreover, the suspension of production at the Oswiecim plant would deprive the city's residents of heating from the municipal network. Disinfectants are being produced at the Kralupy division of Synthos.



Grupa Azoty and COVID-19

In response to the COVID-19 virus similarly to companies in the chemical and other sectors Grupa Azoty has taken immediate measures to protect its employees and business. Due to a relatively successful 2019 Grupa Azoty is well placed to meet the financial challenges resulting from the economic effects of COVID-19. The group also has additional sources of liquidity, namely cash held, which as at 31 December 2019 amounted to zł 945 million.



In the current weak market conditions, the group is able to benefit from low prices of commodities, in particular natural gas, where it witnessed a significant cost decline in 2019 to €313.5 million from €488.3 million in 2018. In 2019,

Grupa Azoty's consolidated sales revenues rose 13% to zł 11.3 billion whilst the EBITDA increased by 86% and the net result increased 50 times over 2018 to zł 407.7 million. The fertiliser part had the largest positive impact on the results of Grupa Azoty but was less successful in the plastics and

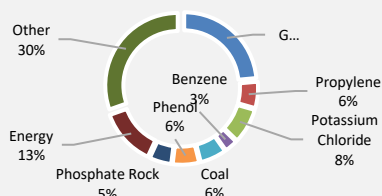
chemistry segments where the downturn is expected to be experienced mostly.

As for first quarter sales fertilisers continue to represent the main driver for Grupa Azoty with no significant drop in demand as yet. The group hopes that in the event of lower export sales to foreign customers the

market balance could be offset by lower imports and higher domestic sales. Grupa Azoty's export market share accounted for 35% of fertiliser production in 2019.

In the plastics sector customers from different industries have started to reduce their orders. The largest

Grupa Azoty Raw Material Requirements (based on 2019)



declines are expected in the automotive industry. In the chemical sector there have been initial signs of difficulties in supplying oxo alcohols and plasticisers. At present, approximately a quarter of Azoty's oxo alcohol and plasticizer output is exported to countries where the COVID-19 pandemic is particularly widespread. For melamine the group has received notifications from customers about temporary production cuts, whilst a negative impact of the situation on the pigment market in Europe has been identified.

Grupa Azoty Pulawy producing disinfectants based on hydrogen peroxide

In response to the increased demand for disinfectants Grupa Azoty Pulawy has started producing its own products based on hydrogen peroxide. The use of such a hand disinfectant is recommended by WHO in its materials regarding protection against coronavirus. The current capacity of the disinfectant is about 15,000 litres per day and the company implementing an investment which will see capacity increase to 70,000 litres per day.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Caustic Soda Liquid	63.4	59.8
Caustic Soda Solid	13.0	10.6
Caprolactam	27.8	29.1
Acetic Acid	0.8	1.4
Polystyrene	10.9	11.7
EPS	16.5	15.6
PVC	49.1	49.0
Synthetic Rubber	50.3	48.8
Ammonia (Gaseous)	242.2	468.0
Ammonia (Liquid)	17.9	17.7
Pesticides	8.8	9.7
Nitric Acid	422.0	427.0
Nitrogen Fertilisers	370.0	364.0
Phosphate Fertilisers	60.9	83.7
Potassium Fertilisers	60.5	76.7

In 2019 Grupa Azoty Pulawy increased its net profit threefold to zł 283 million due primarily to the lower raw material costs. This resulted from lower gas consumption of more than 35% which meant that the company reduced its total costs by zł 246 million. Domestic sales by almost zł 124 million (to over zł 2 billion), but export revenues dropped by a total of almost zł 94 million.

Chimcomplex to adapt production for chemicals against COVID-19

Chimcomplex in Romania launched sodium hypochlorite production on the Ramnicu Valcea and Oneşti platforms in order to provide disinfectants in response to the spread of COVID-19. The company estimates that it will initially reach a delivery capacity of 1,000 tons/county at a strength of 1.25% under the brand name Chlorovit.

Chimcomplex is the only producer of sodium hypochlorite solution with an active chlorine content of at least 12.5% in Romania, for which it holds the biocidal endorsements from the National Commission for Biocidal Products. The product is marketed as a direct disinfectant and as a raw material for other disinfectants with around 50 tons per day being delivered around Romania. The demand for disinfectants is helping to compensate for the downturn in other sectors, meaning that only around 5% of the workforce will need to be laid off. Polyol demand is severely affected by the drop in sales from the auto and furniture sectors.

For polyurethane foams, orders for April and May were 60% lower than the first quarter for Chimcomplex whilst oxo alcohol sales are also badly affected by the current

Ciech Soda Romania shuts down

Soda ash producer Ciech Soda Romania announced that it was forced to enter into a prolonged stand-by due to combined economic factors and unsuccessful negotiations for the resumption of industrial steam supply to the factory. At the same time, the company has initiated plans to build its own cogeneration plant and expects to resume production at Ramnicu Valcea within 2-3 years. The company will retain part of the employees, those responsible for the production of sodium silicate, as well as for the maintenance of the calcined soda production plant.

economic downturn.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Caustic Soda	220.0	211.0
Soda Ash	591.0	549.0
Ethylene	701.1	515.7
Propylene	467.3	361.6
Benzene	250.3	225.4
Xylenes	81.5	38.6
Styrene	110.3	133.7
Phenol	43.4	37.3
Plastics in Bulk	1,637.0	1,335.0
Polyethylene	521.0	372.0
Polystyrene	90.0	88.6
PVC	186.0	170.8
Polypropylene	326.3	209.7
Polyamide	30.4	24.9
Synthetic Rubber	266.0	264.0
Synthetic Fibres	22.8	25.0

Russian chemical production, Jan-Feb 2020

Russian chemical production in February rose by 9% over the same month in 2019, mainly due to the volumes coming from the new complex at ZapSibNeftekhim. Thus, the largest increase in production volumes in January-February stemmed from polymers in primary form.

Ethylene production in Russia rose from 515,700 tons in the first two months last year to 701,100 tons in January to February 2020, whilst propylene increased from 361,600 tons to 467,300 tons. These increases were mostly due to the production start-up at ZapSibNeftekhim.

Russian benzene production rose from 225,400 tons in the first two months in 2019 to 250,300 tons in the same period this year. Caustic soda production amounted to 107,000 tons against 113,000 tons in January bringing the total for the first two months to 220,000 tons, 4.5% more than last year.

The production of polymers in primary form rose to 819,000 tons in February against 818,000 tons in January. Overall production rose 22.2% in the first two months in 2020 to 1.677 million tons driven partly by the rises in polyethylene and polypropylene production.

Last year Russia's output of chemical products increased by 3.4% over 2018. The largest increase in production volumes came from mineral fertilisers and also polymers in primary form. Russian enterprises produced 23.588 million tons of fertilisers, 3.2% more than in 2018. For ethylene production 2.984 million tons were produced in January-December 2019, up by 0.7%. This year the rise in ethylene production is expected to be much greater.

Impact of COVID-19 on Russian petrochemical prices

Production rates for Russian petrochemical producers held up relatively well by the first part of April, exempt from the lockdown policy. However, price pressure and a shortage of volume sales could see some reductions during the second quarter. Regarding domestic chemical product prices, the trend has been mostly downward aside products that possess cleansing and hygienic properties such as isopropanol, hydrogen peroxide, glycols, etc. In the methanol market producers have been forced to reduce prices for domestic customers whilst export prices are also under pressure.

Most petrochemicals have seen significant falls, with benzene dropping spectacularly in April from March numbers. Moreover, due to the fall in the benzene contract price phenol fell significantly in April, down by

Russian Petrochemical Prices 2020 (roubles per ton)		
Product/Producer	6 March 20	10 April 20
Benzene		
Severstal	39,500	4,800
West Siberian MK	37,000-41,000	5,000
Gazprom Neft	38,600-40,000	4,600-6,000
Slavneft-YANOS	39,900	5,900
Styrene		
Angarsk Polymer Plant	54,000-58,000	52,000
Gazprom n Salavat	58,000	54,000
SIBUR-Khimprom	64,000-65,000	60,000
SIBUR EXW	68,000-71,000	60,500
Methanol		
Metafrax	18,000-20,000	16,000-18,000
Tomet	17,500-21,500	14,500-19,500
Shchekinoazot	2,0000-25,000	17,000-22,000
Ammoni	17,500-21,500	14,500-19,500
Sibmetakhim *	17,500-21,500	14,500-19,500
Azot Novomoskovsk	18,000-19,000	15,000-17,000
Phenol		
Omsk Kaucuk	66,500-67,700	29,300-33,200
Novokuibyshevsk PC	64,100-69,200	28,800-34,700
Ufaorgsintez	64,100-69,200	28,800-34,700
Acetone		
Omsk Kaucuk	18,500	38,000-39,000
Kazanorgsintez	25,200	42,000
Novokuibyshevsk PC	21,000	35,500
Ufaorgsintez	20,500	37,000

around 50% over March primarily because product supply volumes exceed demand. Demand for phthalic anhydride meanwhile continues to decline as domestic producers and traders are forced into a regime of self-isolation, thereby reducing the output of goods and logistics operations. For plasticizers, although demand for a dioctyl terephthalate (DOTP) is growing in Russia and SIBUR is gradually increasing plasticizer shipments both to domestic and export customers prices are under pressure, dropping 2,000 roubles in April to 95,000 roubles.

Russian petrochemical projects

Irkutsk Oil Company-polyethylene project

Turkish company Gemont has been selected as the contractor for the construction of the Irkutsk Polymer Plant (INK). The agreement involves the construction of a complex at Ust-Kut on a turnkey basis. The duration of the work is estimated at 36 months; with completion of construction and installation work of the complex is expected closer to the end of 2022 although delays are evidently possible in the current climate.

Irkutsk Oil Company signed a contract with Toyo Engineering Corporation in February 2019 for the construction of a plant for the production of ethylene and also polyethylene with a capacity of 650,000 tpa. The plant is being located at Ust-Kut, with Lummus chosen as the steam cracker licensor. In order to support feedstock delivery Irkutsk Oil Company is aiming to increase the pipeline capacity from the Yarakta condensate field to Ust-Kut. This would increase gas volumes from 161,000 tpa to 837,800 tpa providing the raw material for gas processing and polymer production.

Irkutsk Polymer Plant was registered on 28 March 2017. The sole founder is Irkutsk Oil Company which was established on 27 November 2000. The other shareholders include the European Bank for Reconstruction and Development (EBRD), Goldman Sax International, as well as Russian legal entities.

Nizhnekamskneftekhim-ethylene cracker update

Nizhnekamskneftekhim (part of the TAIF group) and the Turkish company Gemont signed a construction contract in March for the construction project of the EP-600 olefin complex. The planned completion date for construction and installation works has been set for 2023. During the peak period of construction and installation work, 6,000 workers will be mobilized at the site at Nizhnekamsk. Gemont is one of Turkey's leading contracting organisations for the construction of industrial facilities.

In 2017 Nizhnekamskneftekhim signed a contract for the design, supply of equipment, the provision of services and the commissioning of the first phase of the olefin complex with Linde AG. In May 2018, Nizhnekamskneftekhim entered into a long-term loan agreement with Deutsche Bank AG regarding finance supported by the export credit agency Euler Hermes, designed for €807 million and will be valid until 2032. The complex will have an ethylene capacity of 600,000 tpa, 200,000 tpa of propylene, and 248,000 tpa of benzene.

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Angarsk Polymer Plant	39.3	35.5
Kazanorgsintez	109.2	109.4
Stavrolen	57.5	49.4
Nizhnekamskneftekhim	108.0	106.4
Novokuibyshevsk Petrochemical	11.2	11.5
Gazprom n Salavat	64.1	62.2
SIBUR-Kstovo	74.5	67.4
SIBUR-Khimprom	9.5	8.5
Tomskneftekhim	45.9	44.5
Ufaorgsintez	22.2	21.1
ZapSibNeftekhim	159.7	0.0
Total	701.1	515.7

production to 701,100 tons in the first two months this year against 515,700 tons in 2019. Elsewhere, Kazanorgsintez produced 109,200 tons in January to February 2020 against 19,400 tons in the same period last year whilst Nizhnekamskneftekhim increased production from 106,400 tons to 108,000 tons.

Russian petrochemical markets

Russian ethylene production, Jan-Feb 2020

The key factor in the Russian ethylene market this year involves the start-up of the ZapSibNeftekhim petrochemical complex at Tobolsk where capacity has been designed to produce 1.5 million tpa.

At full capacity the complex could produce 125,000 tons of ethylene per month whilst having the advantage of possessing the cheapest feedstock base in Russia. In February this year ZapSibNeftekhim produced 84,300 tons which was 12% more than in January, thus raising the total for the first two months to 159,700 tons. This new complex increased total Russian ethylene

Russian Propylene Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 19
Angarsk Polymer Plant	21.5	19.4
Kazanorgsintez	8.4	8.1
Lukoil-NNOS	40.3	46.9
Stavrolen	21.3	19.5
Nizhnekamskneftekhim	53.9	53.2
Novokuibyshevsk Petrochemical	7.7	7.7
Omsk Kaucuk	8.1	7.1
Polyom	30.6	29.5
Gazprom n Salavat	27.9	28.2
SIBUR Kstovo	32.5	30.0
SIBUR-Khimprom	12.0	10.7
Tomskneftekhim	26.6	24.3
SIBUR Tobolsk	75.0	46.0
Ufaorgsintez	33.2	31.3
ZapSibNeftekhim	68.0	0.0
Total	467.3	361.6

plant at SIBUR-Tobolsk where volumes rose from 46,000 tons to 75,000 tons in the first two months in 2020.

Russian Propylene Domestic Sales (unit-kilo tons)		
Company	Jan-Feb 20	Jan-Feb 19
Angarsk Polymer Plant	15.2	13.5
SIBUR-Kstovo	29.1	22.4
Kazanorgsintez	0.3	0.0
Lukoil-NNOS	37.8	36.8
Gazprom neftekhim Salavat	0.0	2.5
SIBUR Tobolsk	0.1	0.3
Total	82.4	75.1

merchant market amounted to 82,400 tons in the first two months in 2020 against 75,100 tons last year. Although production was started at ZapSibNeftekhim all volumes were consumed internally in the

Russian Propylene Exports (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 19
Lukoil-NNOS	6.8	11.0
SIBUR-Kstovo	3.4	4.0
Stavrolen	1.2	4.2
Total	11.4	19.1

production of polypropylene. The largest supplier to the domestic market in the first two months was Lukoil-NNOS, shipping 37,800 tons against 36,800 tons followed by SIBUR-Kstovo which increased from 22,400 tons to 29,100 tons.

In April, propylene supply volumes in Russia started to exceed demand and there may be difficulties with the export shipments of monomer to Europe. Domestic propylene prices saw an average drop from 37,000 roubles to 29,000 roubles per ton. Market pressures come from reduced export opportunities; in Belarus for example Naftan stopped the production of acrylonitrile for repairs in April which reduced the volume of purchases of propylene.

Repair work on the Lukoil-NNOS propylene production may be postponed due to delays in the supply of necessary equipment, meaning that the plant has kept operating, whilst Kazanorgsintez also wanted to supply around 500 tons of propylene to the Russian market, all adding pressure on price levels. Saratovorgsintez has delayed its acrylonitrile plant outage until later in the year which helped to provide some market relief at least for April. Saratovorgsintez is the largest merchant consumer of propylene on the domestic market, buying around 15,000 tons per month. Russian propylene exports amounted to 8,100 tons in the first two months in 2020 versus 19,100 tons in the same period in 2019.

Other important ethylene producers included SIBUR-Kstovo which produced 74,500 tons versus 67,400 tons and Gazprom neftekhim Salavat which produced 64,100 tons against 62,200 tons. Kazanorgsintez continues to purchase other hydrocarbons to support ethane-based olefin production. 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-Feb 2020

Russian propylene production amounted to 467,300 tons in the first two months in 2020 against 361,600 tons in the same period in 2019. The increase was due largely to the start-up of the plant at ZapSibNeftekhim at Tobolsk where production amounted to 68,000 tons in the first two months. This new output was combined with an increase in propylene production at the existing

Nizhnekamskneftekhim increased propylene production slightly in the first two months from 53,200 tons to 53,900 tons, whilst Lukoil-NNOS at the Kstovo refinery reduced output from 46,900 tons to 40,300 tons. For 2020 Russian propylene production was forecast to rise over 2019 due to start-up of the ZapSibNeftekhim complex at Tobolsk, although may be lower than expected due to the economic effects of COVID-19.

Russian sales of propylene on the domestic

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Nizhnekamskneftekhim	52.7	51.8
Angarsk Polymer Plant	6.7	5.8
SIBUR-Khimprom	22.5	23.7
Gazprom n Salavat	20.3	44.3
Plastik, Uzlovaya	8.2	8.0
Total	110.3	133.7

increased production from 51,800 tons to 52,700 tons. Gazprom neftekhim Salavat reduced production from 44,300 tons to 20,300 tons due to maintenance in January, whilst SIBUR-Khimprom at Perm reduced from 23,700 tons to 22,500 tons. In terms of raw materials, four of the five producers are

Russian Styrene Domestic Sales (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Angarsk Polymer Plant	3.9	3.0
Plastik	0.8	0.1
Gazprom n Salavat	8.2	7.3
SIBUR-Khimprom	4.2	6.4
Nizhnekamskneftekhim	0.0	0.5
Total	17.1	14.3

SIBUR-Khimprom reducing shipments from 6,400 tons to 4,200 tons. Revenues from the export of styrene from Russia totalled \$109.5 million.

The main destinations for Russian propylene exports included Belarus and Poland. The main reason for the decline in export activity in the first two months this year was due to the demand for propylene from the SIBUR complex at Tobolsk.

Russian styrene production & sales, Jan-Feb 2020

Russia produced 110,300 tons of styrene in the first two months in 2020 versus 133,700 tons in the same period in 2019. The largest producer Nizhnekamskneftekhim integrated back into ethylbenzene with the exception being Plastik at Uzlovaya, which takes its ethylbenzene under a long-term contract from SIBUR-Khimprom at Perm.

Styrene sales on the Russian domestic merchant market totalled 17,100 tons in January to February 2020 against 14,300 tons in the same period in 2019, with Gazprom neftekhim Salavat increasing shipments from 7,300 tons to 8,200 tons and

Bulk Polymers

Russian HDPE-LLDPE production Jan-Feb 2020

Polyethylene production in Russia rose 58% in the first two months in 2020 against the same period last year totalling 474,100 tons against 300,700 tons. Five producers increased their production of

Russian HDPE Imports (unit-kilo tons)		
Producer	Jan Feb 20	Jan Feb 19
Extrusion	8.1	5.3
Film	18.1	16.2
Blow	12.7	8.1
Injection	10.1	8.3
Others	7.6	7.2
Total	56.6	45.1

polyethylene, although the main reason for the sharp rise was due to the start-up of ZapSibNeftekhim. HDPE production rose 77% in the first two months to 278,300 tons whilst LLDPE production rose to 83,600 tons against 34,100 tons and LDPE rose 2% to 112,200 tons.

Polyethylene exports from Russia totalled 72,300 tons in the first two months in 2020 against 48,700 tons in January to February 2019. Revenues rose from \$57.1 million to \$68 million, whilst exports were up both for LDPE and HDPE. Exports from Tatarstan are still the regional leader but SIBUR is catching up quickly since the start-up of ZapSibNeftekhim.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Ufaorgsintez	21.1	22.3
Stavrolen	18.4	15.1
Neftekhimya	23.9	23.6
Nizhnekamskneftekhim	36.1	35.3
Polyom	33.6	33.9
Tomskneftekhim	24.6	21.2
SIBUR-Tobolsk	89.7	58.3
ZapSibNeftekhim	78.9	0.0
Total	326.3	209.7

HDPE imports into Russia grew by 25% in the first two months in 2020 to 56,600 tons compared to 45,200 tons in the same period in 2019. Uz-Kor Gas Chemical has become the largest supplier to the Russian market followed by the Kiyany Petrochemical Complex in Turkmenistan, Borealis and Shurtan Gas Chemical Complex.

Imports of HDPE film into Russia amounted to 18,100 tons in January to February 2020, which is 12% higher than last year whilst blow moulding imports rose 56% to 12,700 tons. The imports of HDPE for injection moulding amounted to 10,100 tons, which is 21% more than a year earlier. The total volume of imports of other types of HDPE in January-February 2020

amounted to 7,600 tons against 7,200 tons a year earlier.

Russian polypropylene, Jan-Feb 2020

Polypropylene production in Russia increased by 53% in the first two months in 2020 to 326,300 tons against 212,700 tons in January to February 2019. The main increase in production volumes was provided by SIBUR Tobolsk and ZapSibNeftekhim. SIBUR Tobolsk in February maintained a high level of capacity utilisation, producing 44,200 tons against 45,500 tons in January. In the first two months polypropylene production rose 54% over the same period in 2019 to 89,700 tons.

The second Tobolsk producer ZapSibNeftekhim produced about 38,000 tons in February against 40,900 tons in January bringing the total for the new complex for the first two months to 78,900 tons. ZapSibNeftekhim has started using polypropylene for the production of medical masks to combat COVID-19

Polymatiz-polypropylene increases for medical masks

Tatarstan producer Polymatiz has increased the production of polypropylene non-woven material by ten times more than normal in order to meet the demand for medical masks in the fight against COVID-19. In March Polymatiz bought 67.4 tons of polypropylene from Nizhnekamskneftekhim to produce non-woven material which increased up to 600 tons in April.

The plant's capacities are enough to produce polypropylene products in an hour, which is enough for 500,000 masks. Polimatiz is located in the special economic zone Alabuga in Tatarstan. The plant is a subsidiary of Nizhnekamskneftekhim which supplies polypropylene for the production of nonwoven materials.

Elsewhere Polyom at Omsk produced 33,600 tons in January and February this year which is 1% less than in the first two months in 2019. Nizhnekamskneftekhim produced 36,100 tons compared to 35,300 tons in 2019, whilst Tomskneftekhim increased by 2% to 24,600 tons. Ufaorgsintez reduced production by 5% to 21,100 tons whilst Neftekhimya in the Moscow area increased from 23,600 tons to 23,900 tons. Stavrolen at Budyennovsk increased production to 18,400 tons against 15,100 tons.

Russian exports of polypropylene rose sharply in the first two months to 88,700 tons against 28,900 tons in the same period last year. In value terms, exports jumped from \$38.5 million to \$89.5 million. The major markets for Russian shipments included Belarus, China and Turkey.

Despite the increase in export activity Russian imports of polypropylene grew by 36% in the first two months and amounted to 32,100 tons versus 23,500 tons. In the first two months, the total volume of PP-homo imports amounted to 12,600 tons against 7,000 tons whilst imports of PP-block amounted to 9,500 tons against 6,600 tons. Imports of stat copolymers amounted to 4,900 tons against 4,400 tons a year earlier. External supplies of other propylene polymers for the period under review amounted to 5,100 tons against 5,500 tons a year earlier.

Russian PVC production & trade, Jan-Feb 2020

Russian PVC production rose 5% in the first two months to 177,100 tons against 169,500 tons a year earlier. RusVinyl produced about 29,900 tons of PVC in February, with emulsion PVC accounting for 2,500 tons compared to 32,400 tons in January. Total PVC production at RusVinyl increased to 62,300 tons in the first two months of this year, compared to 58,000 tons in the same period in 2019.

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Bashkir Soda	45.5	44.0
Kaustik	15.4	14.2
RusVinyl	62.3	58.0
Sayanskkhimplast	54.7	52.8
Total	177.9	169.0

Sayanskkhimplast produced 26,500 tons of PVC in February against 28,200 tons in January. The Sayansk plant produced 54,800 tons of PVC in January-February, compared to 52,800 tons a year earlier. Baskhir Soda Company produced 21,900 tons in February, bringing the total to 45,500 tons in the first two months compared to 44,400 tons in the same period in 2019.

Kaustik at Volgograd produced 7,100 tons of PVC in February, compared with 7,500 tons in January. The plant's overall production of PVC amounted to 14,600 tons in the first two months versus 14,200 tons in the same period in 2019. PVC demand in Russia is expected by Sayanskkhimplast to drop by around 10% this year. At present the company has low inventory due customers buying large volumes in the first quarter as they were aware of possible price rise in Q2. However due to the virtual instant downturn an excess of PVC may occur in the near future and prices are now more likely to come down.

Paraxylene-PTA-PET

Russian Paraxylene Exports (unit-kilo tons)

Producer	Jan-Feb 20	Jan-Feb 19
Gazprom Neft	7.5	5.3
Kirishinefteorgsintez	0.0	0.0
Ufaneftekhim	4.0	0.0
Total	11.4	5.3

Russian paraxylene exports, Jan-Feb 2020

Paraxylene exports from Russia increased to 11,400 tons in the first two months in 2020 against 5,300 tons in the same period in 2019. Exports in February totalled only 1,430 tons which was due to the demand from Polief at Blagoveshchensk. Following the process of modernisation, the intention is for Polief to increase the consumption of Russian paraxylene by to around 230-

235,000 tpa. In 2019 paraxylene purchases made by SIBUR for Polief amounted to only 96,100 tons against 176,400 tons in 2018.

Kirishinefteorgsintez did not export in the first two months this year as the plant was down for extended maintenance. Paraxylene shipments were mostly sent to the Oiltanking complex at the Finnish port Kotka, whilst Liepaja in Latvia was used for small volumes. In the second half of March, the production of xylenes was resumed at Kirishinefteorgsintez. At the exchange, the orthoxylene Kirishi plant was offered at 55,020 roubles per ton, including VAT, and paraxylene at 51,000 roubles per ton, including VAT. At the plant, xylene production facilities were damaged during the fire that occurred on 23 September 2019, and production was suspended.

Russian PTA Imports by Country (unit-kilo tons)

Country	Jan-Feb 20	Jan-Feb 19
Belgium	1.0	2.0
India	0.0	1.0
China	37.7	48.9
South Korea	3.0	14.0
Thailand	0.0	3.0
Total	41.7	68.9

Russian PTA imports, Jan-Feb 2020

PTA imports into Russia totalled 41,700 tons in the first two months in 2020 against 68,900 tons in the same period last year. China reduced shipments from 48,900 tons to 37,700 tons whilst the only other suppliers this year included South Korea and Belgium. Average prices for PTA imports amounted to \$801 per ton in 2019, dropping steadily throughout the year and continuing into 2020. Prices in January averaged \$672 per ton and

rose to \$685 in February.

Russian PTA Imports by Region (unit-kilo tons)

Location	Jan-Feb 20	Jan-Feb 19
Kaliningrad	15.8	54.3
Moscow	22.5	9.5
Others	3.4	5.1
Total	41.7	68.9

Ekopet at Kaliningrad accounted for 64.7% of imports (\$348 million in value) over the two years of 2018 and 2019. However, Ekopet's share dropped in the first two months in 2020 due to plant maintenance, amounting to only 15,800 tons against 54,300 tons in January to February 2019. By contrast Senezh in the Moscow area accounted for 22,500 tons versus 9,500 tons last year.

PTA imports from China may be made more difficult this year owing to the problems in the Chinese supply chain. China is at the very heart of the global polyester chain. It is the world's biggest importer of paraxylene and ethylene glycols, and is the world's biggest producer of PTA. The production of PTA may be reduced due to huge problems in the textile industry and the impact on polyester demand. High inventory levels in cloth, polyester fibre have hampered stocking demand for petrochemical raw materials like PTA.

Russian PET imports, Jan-Feb 2020

import deliveries of PET-granulate to Russia decreased by 2% in the first two months in 2020 to 18,300 tons against 18,700 tons last year. In February import deliveries to the Russian market fell by 42% to 6,700 tons against 11,600 tons in January and 9,800 tons in February 2019. Imports from China dropped 26% in the first two months to 12,900 tons against 17,400 tons. Chinese suppliers in the first two months this year consisted of Yisheng (4,900 tons), Jiangsu 2,900 tons, Sinopec 2,600 tons, Indorama 1,700 tons, and Wankai 500 tons. The share of Lithuanian PET produced by Neo Group in January-February this year increased by 24% (4,400 tons).

Aromatics

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Angarsk Polymer Plant	15.7	13.7
Gazprom Neft	14.3	14.0
LUKoil-Neftekhim	12.9	0.0
LUKoil-Permnefteorgsintez	10.1	9.5
Magnitogorsk MK	8.4	9.4
Nizhnekamskneftekhim	50.7	46.5
Novolipetsk MK	0.3	1.8
Gazprom n Salavat	37.4	27.9
Severstal	6.1	6.2
SIBUR-Holding	18.1	14.5
Slavneft-Yaroslavlorgsintez	11.1	11.7
Surgutneftegaz	8.9	13.8
Ryazan RN Holding	7.1	7.1
Ufaneftekhim	16.1	15.6
Ural Steel	2.2	1.6
Uralorgsintez	15.6	14.6
Zapsib	12.1	12.9
Novokuibyshevsk PC	3.3	4.6
Total	250.4	225.3

cut purchases by 20% due to impact of the pandemic on the caprolactam market. Shchekinoazot may also reduce benzene purchases, as the company has accumulated sufficient reserves in the period from December to March, whilst Azot at Kemerovo could reduce capacity utilisation by up to 50%.

Russian Benzene Purchases (unit-kilo tons)		
Consumer	Jan-Feb 20	Jan-Feb 19
Kuibyshevazot	36.3	30.2
Azot Kemerovo	23.2	23.8
Shchekinoazot	19.1	11.9
Kazanorgsintez	12.9	11.7
Omsk Kaucuk	8.9	1.6
Novokuibyshevsk Petrochemical	9.9	0.6
Zapsib	10.1	7.4
SIBUR-Khimprom	17.1	11.0
Ufaorgsintez	1.4	0.0
Uralorgsintez	15.2	4.8
Others	1.2	28.9
Total	155.3	131.9

19,100 tons against 11,900 tons. For the production of cumene Kazanorgsintez purchased 12,900 tons of benzene in January to February 2020, up from 11,700 tons in 2019, whilst Omsk Kaucuk purchased 8,900 tons against 1,600 tons. The rise in demand from Omsk Kaucuk was due to the start-up of the modernised phenol facilities.

The three largest suppliers to the domestic market included SIBUR-Kstovo, Uralorgsintez and Gazprom Neft at the Omsk refinery. Of the consumers Kuibyshevazot bought benzene from seven different suppliers

Russian benzene price falls

Benzene prices in the Russian market dropped dramatically in April following declines in Europe under the influence of low oil prices and the economic consequences of COVID-19. Contract prices for benzene in Europe fell by €424 per ton, down to €171 per ton whilst the numbers in Russia were much lower.

The drop in demand for benzene in the Russian market is due largely to the weak Asian caprolactam market. Price levels in April are mostly unprofitable for Russian benzene producers, whilst market participants hope that the market will change in the third quarter. Maintenance outages and planned downtime are expected to reduce some of the large inventories held by producers.

In April, Uralorgsintez stopped for scheduled repairs whilst also scheduled maintenance was planned for Stavrolen before the end of the month. Further ahead, repair work on the SIBUR-Kstovo plant is scheduled for July. The problem faced by merchant sellers is the largest consumer Kuibyshevazot may

In the first two months this year Russian benzene production rose from 225,300 tons to 250,400 tons. Nizhnekamskneftekhim increased production from 46,500 tons to 50,700 tons, whilst Gazprom neftekhim Salavat increased production from 27,900 tons to 37,400 tons. Rosneft's three benzene plants at Angarsk, Novokuibyshevsk and Ryazan produced a combined total of 42,200 tons against 41,000 tons in 2018, whilst Gazprom Neft at Omsk increased benzene production from 14,000 tons to 14,300 tons.

Benzene sales on the Russian domestic merchant market amounted to 155,300 tons in the first two months in 2020 against 131,900 tons in January to February 2019. Kuibyshevazot remains the largest merchant buyer, purchasing 36,300 tons in against 30,300 tons in the first two months last year, whilst Azot at Kemerovo bought 23,200 tons versus 23,800 tons and Shchekinoazot purchased

which is by far the widest range of sources. Kazanorgsintez bought benzene from the expanded production at Nizhnekamskneftekhim whilst Omsk Kaucuk divided its purchases between Gazprom Neft and the Angarsk Petrochemical Company.

Russian Caprolactam Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Kuibyshevazot	35.8	29.8
Shchekinoazot	9.5	9.1
SDS Azot	21.9	19.1
Total	67.2	58.0

intention to reduce capacity utilisation due to unfavourable conditions in the Asian market. The impact of COVID-19 on demand is already having a much greater impact than could be envisaged at the end of last year and declines are expected in 2020.

Russian Phenol Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Ufaorgsintez	10.8	12.4
Kazanorgsintez	12.9	12.5
Novokuibyshevsk Petrochemical	12.9	12.5
Omsk Kaucuk, Omsk	6.9	0.0
Total	43.4	37.3

Omsk Kaucuk which produced 6,900 tons.

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Omsk Kaucuk	4.0	0
Novokuibyshevsk Petrochemical	9.7	8.4
Kazanorgsintez	0.1	1.0
Ufaorgsintez	6.2	9.6
Borealis	0.0	0.4
Total	19.9	19.5

Kaucuk was quoting a range of 29,200-33,000 roubles per ton for phenol on the domestic market which was almost half the range quoted in March. By contrast acetone prices have gone the other way, rising from 30,000 roubles to 38,000 roubles driven by the demand for sanitiser. Omsk Kaucuk is aiming to bring on stream its new 30,000 tpa plant for isopropanol in July, which could be a very timely start-up.

Omsk Kaucuk exported 1,904 tons of phenol in March taking the total to 3,019 tons since January.

Omsk Kaucuk-phenol exports

Omsk Kaucuk has expanded the geography of phenol exports due to a surplus of the product on the domestic market. For the first time, the product was shipped to Belarus after a 56-ton batch of phenol produced at Omsk was acquired by Kronochem (Mogilev). Kronochem uses the product in the production of synthetic resins and chipboards. In February, Omsk Kaucuk began shipping phenol to Latvia and Poland from the new plant of 90,000 tpa capacity combined with acetone up to 55,800 tpa. Both products are available at 99.5% purity.

Russian caprolactam production, Jan-Feb 2020

Russian caprolactam production amounted to 67,200 tons in January to February 2020 against 58,000 tons in 2018. Kuibyshevazot increased production from 29,800 tons to 35,800 tons whilst SDS Azot at Kemerovo rose to 19,100 tons from 21,900 tons.

At the end of 2019 caprolactam producers signalled

Russian phenol market, Jan-Feb 2020

Russian phenol production rose from 37,300 tons in the first two months in 2019 to 43,400 tons in the same period in 2020. Novokuibyshevsk Petrochemical increased production from 12,500 tons to 12,900 tons whilst Ufaorgsintez reduced production from 12,400 tons to 10,800 tons. Kazanorgsintez also produced 12,900 tons versus 12,500 tons. The significant change came from

Sales of phenol on the Russian domestic market amounted to 19,900 tons in the first two months in 2020, up from 19,500 tons. Omsk Kaucuk supplied nearly 4,000 tons of phenol to the domestic market, compensating for lower sales from Ufaorgsintez and Kazanorgsintez.

The European phenol industry is braced for the impact from little activity in the automotive and other application sectors, and this should affect both Russian domestic and export sales. In April Omsk

Ufaorgsintez exported 8,350 tons, but Kazanorgsintez did not ship either to the domestic or export market. The Novokuibyshevsk Petrochemical Plant exported only 464 tons of phenol in the first three months but did ship 14,381 tons to the domestic market. Omsk Kaucuk sold 6,192 tons to domestic customers in January to March.

Omsk Kaucuk, cumene and isopropanol expansion

At the end of March, the Titan Group confirmed its continuing construction of projects for the production of isopropanol and cumene at Omsk Kaucuk. A feature of the reconstruction includes the transfer of cumene production to a more modern process of

alkylation on a zeolite catalyst, which eliminates the formation of effluents and complies with the principles of the best available technologies. The launch of cumene production after modernisation will take place approximately in September-October 2020, after overhaul throughout the entire site. Omsk Kaucuk had previously stated that the isopropanol plant was to start on 1 July 2020, but it will depend on the progress for the cumene project. The Titan Group could not answer recent questions from the press whether it intended to try and bring the isopropanol project forward, probably in an effort to avoid false hopes.

Synthetic rubber

Russian C4 Purchases (unit-kilo tons)		
Consumer	Jan-Feb 20	Jan-Feb 19
Omsk Kaucuk	17.7	7.9
Nizhnekamskneftekhim	15.4	32.1
Togliattikaucuk	43.6	33.2
Others	2.7	0.0
Total	79.4	73.2

Russian C4s, Jan-Feb 2020

C4 sales on the domestic market in Russia totalled 79,400 tons in the first two months in 2020 against 73,200 tons in the same period in 2019. Togliattikaucuk increased merchant purchases of C4s from 33,200 tons to 43,800 tons, whilst Nizhnekamskneftekhim reduced purchases from 32,100 tons to 15,400 tons and Omsk Kaucuk rose from 7,900 tons to 17,700 tons.

Russian Synthetic & Natural Rubber Market (unit-kilo tons)		
	Jan-Feb 20	Jan-Feb 19
Production	266.0	264.0
Exports	140.4	177.2
Imports	30.6	35.0
Supply/Demand Balance	156.2	121.8

Russian rubber production and market balance 2020

Synthetic rubber production in Russia increased marginally in the first two months in 2020 from 264,000 tons to 266,000 tons, whilst domestic consumption rose by much greater volumes amounting to 156,200 tons up from 121,800 tons. The higher performance in the first two months is largely due to the redirection of production from Togliattikaucuk away from exports to the new owners Tatneft's tyre plants in Tatarstan. In 2019 the

Kama Tyre plant at Naberezhnye Chelny was forced to reduce output due to the lack of rubber supplies from Nizhnekamskneftekhim which itself is as the result of a price dispute.

Production at Togliatti in early 2019 was managed by SIBUR, which was mostly export-oriented, but since the takeover by Tatneft in late 2019 there has been a shift in sales to the domestic market. The trend is not expected to continue though as both export and domestic markets are expected to experience lower demand for rubber this year; car sales worldwide are already drastically down for instance.

Pirelli forecasts that the global passenger tyre market will drop by 19% this year which seems to represent a plausible estimate, but with so many unknown factors all market projections are provisional at best. Natural rubber sales fell 20% in the first quarter and synthetic rubber is expected to follow this

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
E-SBR	7.1	8.6
Block	5.8	4.4
SSBR	0.5	2.5
SBR	12.1	13.1
Polybutadiene	36.7	40.3
Butyl rubber	17.9	22.2
Halogenated butyl	22.0	24.3
NBR	3.0	6.7
Isoprene	34.7	49.6
Others	0.6	5.4
Total	140.4	177.2

trend until countries can find answers to managing COVID-19.

Russian synthetic rubber exports, Jan-Feb 2020

Russian exports of synthetic rubber amounted to 140,400 tons in the first two months in 2020, down from 177,200 tons in 2019 whilst average prices dropped from \$1589 per ton to \$1511. Revenues from synthetic rubber exports dropped from \$282 million to \$212 million in January to February 2020.

Regarding shipment destinations China represented the largest market for Russian exporters 2019, accounting for 13.2% of sales. This

was followed by Poland with 11.4%, after which came India with 8.1% and Hungary with 8.0%. Sales to China dropped in the first two months to 19,900 tons against 26,000 tons in the same period last year.

Togliattikaucuk-reduced rubber exports

Exports of synthetic rubber from the Togliatti plant in the Samara region dropped from 23,700 tons in January and February 2019 to 4,300 tons in the same period this year. The switch of ownership from SIBUR to

Togliattikaucuk Rubber Exports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Isoprene Rubber	0.9	4.2
Butyl Rubber	2.0	10.6
SBR	1.4	8.9
Others	0.0	0.0
Total	4.3	23.7

Tatneft has impacted heavily on sales distribution which has largely amounted to replacing exports with domestic shipments. Currently, all brands of rubbers produced at the Togliatti industrial site are being homologated or tested in the tyre production facilities belonging to Tatneft. Butyl rubber exports from Togliatti dropped from 10,600 tons to 2,000 tons in the first two months as Togliattikaucuk supplied Kama plant in Tatarstan. Togliattikaucuk is attempting to modify butyl rubber for other tyre applications that could

compete effectively against natural rubber.

Nizhnekamskneftekhim rubber exports (unit-kilo tons)		
Category	Jan-Feb 20	Jan-Feb 19
Isoprene Rubber	28.5	41.5
Butyl Rubber	11.8	11.6
HBR	23.5	24.7
Polybutadiene	25.7	30.1
Others	0.3	0.1
Total	89.5	107.9

Nizhnekamskneftekhim rubber exports Jan-Feb 2020

Nizhnekamskneftekhim's exports of synthetic rubbers fell in the first two months to 89,500 tons against 107,900 tons in the same period in 2019. Isoprene rubber exports amounted to 28,500 tons against 41,500 tons last year whilst exports of halogenated butyl rubber fell slightly from 24,700 tons to 23,500 tons.

Nizhnekamskneftekhim has recently completed modernisation of individual sections and production units of the isoprene rubber plant in order to improve the quality of products. This has involved

improvements in the purification of isopentane-isoprene fractions, butadiene, styrene, and the preparation of the charge and catalyst.

Nizhnekamskneftekhim maintains plans to launch production of divinyl styrene synthetic rubber (DSSK) in 2020. Currently, the installation of metal structures is underway at the site based on Japanese technology. The production capacity will be 60,000 tpa of DSSK, whilst the new installation will also produce thermoplastic elastomers (TEP, SBS) with a capacity of up to 10,000 tpa.

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Shchekinoazot	168.3	159.3
Sibmetakhim	159.4	166.0
Metafrax	206.0	199.8
Akron	18.0	17.7
Azot, Novomoskovsk	50.6	47.9
Angarsk Petrochemical	11.0	3.9
Azot, Nevinnomyssk	22.0	22.8
Tomet	157.5	134.8
Ammoni	19.8	26.9
Totals	812.6	779.1

Methanol**Russian methanol production Jan-Feb 2020**

Russia produced 812,600 tons of methanol in the first two months in 2020 against 779,100 tons against the same period in 2019. Metafrax produced 206,000 tons against 199,800 tons in January-February 2019 whilst Sibmetakhim at Tomsk reduced production from 166,000 tons to 159,400 tons. Tomet at Togliatti increased production to 157,500 tons from 134,800 tons. Shchekinoazot increased from 159,300 tons to 168,300 tons.

In order to try and cope with the lack of demand for most of this year producers may seek to undertake extended shutdowns where possible. Overall producers in Russia expect this year's production to be lower than in 2019. In the international marketplace Methanex has already suspended the construction of a third plant at Geismar in Louisiana and other projects due to the uncertain economic situation. As for Russian methanol projects insignificant delays could be seen at Shchekinoazot and Nizhnekamskneftekhim where two 500,000 tpa plants are under construction. More significant questions must be raised over the future of some of the grassroot methanol projects of which there are many, and none are so advanced that they could not be shelved, delayed or cancelled. Much depends on the level of interest from investors.

Russian Methanol Exports 2013-2019			
Year	Kilo tons	\$ mil	\$/ton
2013	1366.651	495.075	362.3
2014	1511.170	563.861	373.1
2015	1262.396	331.477	262.6
2016	1486.556	249.530	167.9
2017	1684.030	454.549	269.9
2018	1841.385	606.876	329.6
2019	2108.484	517.513	245.4

encounter a drop in 2020.

Russian Methanol Exports (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 19
Azot Novomoskovsk	14.3	12.6
Akron	2.9	1.7
Metafrax	83.8	80.9
Sibmetakhim	81.4	71.2
Tomet	66.0	52.9
Shchekinoazot	130.3	117.8
Ammoni	0.0	7.6
Total	378.7	344.8

Russian Methanol Consumption (unit-kilo tons)		
Consumer	Jan-Feb 20	Jan-Feb 19
Nizhnekamskneftekhim	38.9	39.7
Togliattikaucuk	26.9	31.8
Uralorgsintez	12.9	13.3
SIBUR-Khimprom	3.3	8.0
SIBUR Tobolsk	7.9	2.9
Ektos-Volga	10.3	10.9
Omsk Kaucuk	16.1	14.8
Novokuibyshevsk NPZ	7.8	7.7
Uralkhimplast	3.1	4.3
Slavneft-Yanos	1.9	3.0
Metadynea	13.9	11.4
Kronospan	16.7	14.2
Gazprom	30.9	12.4
Khimsintez	2.0	2.5
Volzhsky Orgsintez	2.3	2.3
Others	85.3	66.4
Total	280.0	245.7

2018 to 156,500 tons in 2019. The main supplier to Nizhnekamskneftekhim last year was the Ammoni plant at Mendelevsk, shipping 96,900 tons over the relatively short distance, followed by Metafrax with 54,900 tons and Shchekinoazot with 43,400 tons.

Metafrax Q1 2020 profits drop and dividends not being paid for 2019

Metafrax reduced its first quarter net profit in 2020 by several times to less than 100 million roubles. At the same time, the company's revenue decreased by 20% dropping to 6.458 billion roubles. Metafrax estimates that the methanol market fell by 40% in the first quarter in revenue terms and for some processing products by 60%. Metafrax is starting to reduce shipments to Nizhnekamskneftekhim due to lower demand and in line

Russian methanol export sales, Q1 2020

Export shipments of Russian methanol increased in the first quarter, rising to 593,800 tons against 540,000 tons in the same quarter last year. In April, however, external supplies started to see falls due to limited demand for the product in global markets. In the period January-March, methanol shipments to Finnish ports increased by 57,000 tons amounting to 362,700 tons in total. Even if volumes have increased this year prices have been under pressure averaging just under \$200 per ton. This compares against \$245.4 per ton in 2019 and \$329.6 per ton in 2018. Export volumes have increased steadily in the past five years but may

Metafrax states that not only are exports affected by the current crisis but delivery of imported raw materials and materials needed by the company has encountered transportation restrictions imposed in Russia and countries of departure. All this creates an additional burden on the cost of the entire product chain.

The main destination for Russian methanol exports remains Finland where volumes totalled 895,100 tons in 2019 against 763,700 tons in 2018. Poland increased purchases from Russia to 364,500 tons in 2019 against 261,100 tons in 2018, whilst Slovakia increased volumes from 108,500 tons to 154,000 tons.

Russian methanol domestic sales, Jan-Feb 2020

Domestic sales of methanol on the Russian market rose in the first two months in 2020 to 280,000 tons against 245,700 tons in January-February 2019. Nizhnekamskneftekhim purchased 38,900 tons against 39,700 tons last year, but one of its main suppliers Metafrax has seen lower orders in April as demand from the isoprene chain has fallen.

A slowdown started to appear in April with prices coming down for not only methanol but also derivatives such as MTBE where demand has dropped in line with lower gasoline consumption. In 2019 Russian plants increased the production of MTBE by 2% to 1.22 million tons but producers expect lower output in 2020.

Of the main domestic consumers, Nizhnekamskneftekhim purchased 250,800 tons in 2019 against 244,600 tons in 2018 whilst Togliattikaucuk (formerly SIBUR-Togliatti) increased purchases from 126,800 tons in January to December

with lower export possibilities production may need to be reduced at some stage. Significantly Metafrax has decided not to pay dividends to shareholders based on the results of 2019 in order to cover the challenges ahead posed by the economic effects of COVID-19.

Nizhnekamskneftekhim-methanol project update

Russia's State Ecological Expertise has provided an approval for the design documentation regarding the new methanol production unit under planning at Nizhnekamskneftekhim. Modifications have been made to the original plans helping to reduce the emissions from the plant and water consumption. The new methanol plant is being built by Nizhnekamskneftekhim in order to increase efficiency whilst reducing costs for the production of isoprene rubber. The main area of methanol use in by the company is in the production of formaldehyde. Haldor Topsoe has licensed the technology and will provide engineering services for the project. Nizhnekamskneftekhim's methanol purchases for 2019 are shown below. Ammoni at Mendeleevsk in Tatarstan supplied 96,900 tons to Nizhnekamskneftekhim last year followed by 54,900 tons from Metafrax and 43,400 tons from Shchekinoazot. Producers in Russia are concerned that when the 500,000 tpa methanol plant comes onstream for Nizhnekamskneftekhim it will create a major gap in the domestic market.

Nizhnekamskneftekhim Methanol Purchases 2019 (unit-kilo tons)													
Producer	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Total
Azot Novomoskovsk	0.0	5.9	3.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.0	2.0	15.3
Metafrax	0.0	5.5	5.7	5.7	5.7	0.0	3.6	1.5	4.2	7.7	7.7	7.5	54.9
Shchekinoazot	1.0	1.0	2.8	2.4	5.2	5.7	4.8	4.8	4.8	4.8	3.1	3.0	43.4
Tommet	5.0	0.0	2.5	0.0	0.0	4.8	3.0	5.0	5.0	5.0	5.0	5.1	40.4
Ammoni	4.0	7.4	7.5	7.4	12.4	12.4	4.7	7.7	11.1	7.4	7.4	7.4	96.9
Total	9.9	19.8	21.5	15.5	23.3	22.9	17.7	19.1	25.1	24.9	26.2	25.0	250.8

Shchekinoazot-M500 project

By the end of March more than 80% of technological equipment had arrived at Shchekinoazot for the construction of the third methanol unit. The installation of methanol tanks has already been completed and hydrotesting been carried out. International company Ferro supplied about 650 tons of metal structures to the site in the early part of 2020 which may allow much of the construction to be undertaken without being affected by COVID-19. The launch of the complex is scheduled for the end of 2021, although that date may be conditional on other factors. With the commissioning of the M-500 plant, the total annual production of methanol at Shchekinoazot will increase to 1.5 million tpa.

Metafrax AKM project continuing with precaution

Whilst Metafrax has suspended the start of investment projects which are not already underway these measures have not affected projects such as the AKM and paraformaldehyde projects at Gubakha which are already in process.

At the construction site of the Ammonia-Urea-Melamine complex, all newly arrived workers are issued a pass only if they have a medical certificate. Representatives of construction organisations that previously worked on other projects in Russia are required to stay in quarantine for 14 days under the supervision of medical personnel.

It should be noted that the Ministry of Construction permits to perform work at the facilities only if all antiviral measures are followed, including daily medical monitoring of workers. Transport to the facility is organised, and the workers must be provided with hot meals at the expense of the employer. At the same time, each company is obliged to draw up an accurate list of workers who will go to the facilities and transfer it to the Ministry of Construction.

In February Metafrax and the Russian Industrial Development Fund (EDF) in Moscow signed an agreement on allocation of preferential loans to support the construction of the paraformaldehyde plant. By attracting an FRP loan, Metafrax is being helped in launching production of paraformaldehyde at Gubakha where the plant capacity will stand at 30,000 tpa. In addition, the investment project involves the construction of a formalin production plant with a capacity of 180,000 tpa. Assuming that the COVID-19 restrictions can be managed in accordance with the regulations Metafrax plans to complete the construction in the second half of 2021. GEA Process Engineering is responsible for the development of the basic and detailed design, as well as the supply of technological equipment. The licensor of formalin production technology is Dynea AS (Norway).

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
	Jan-Feb 20	Jan-Feb 20
Angarsk Petrochemical Company	4.3	4.4
Azot, Nevinnomyssk	3.0	2.7
Gazprom neftekhim Salavat	10.9	10.8
SIBUR-Khimprom, Perm	6.1	6.9
Total	24.3	24.8
Russian Isobutanols Production (unit-kilo tons)		
	Jan-Feb 20	Jan-Feb 20
Angarsk Petrochemical Company	2.3	2.6
Gazprom neftekhim Salavat	6.2	6.0
SIBUR-Khimprom, Perm	8.9	9.5
Total	17.4	16.9

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Gazprom n Salavat	1.5	0.6
SIBUR-Khimprom	5.9	4.6
Angarsk Polymer Plant	5.1	3.0
Azot Nevinnomyssk	0.5	0.1
Totals	13.0	8.3

contracts to the Dmitrievsky Chemical Plant.

Russian butanol merchant sales in January to February 2020 amounted to 13,000 tons against 8,300 tons

Russian Organic Chemical Exports Jan-Feb 2020		
Product	Kilo tons	\$ mil
2-EH	1.2	0.9
Acetone	9.0	3.5
Acrylonitrile	28.9	28.7
Caprolactam	41.1	52.6
DOP	0.3	0.5
DOTP	4.4	3.8
Ethylene glycol	21.1	11.5
Ethylene oxide	4.2	4.0
Formaldehyde	2.7	0.6
Glycerol	0.2	0.2
Isobutanol	2.8	1.5
Isopropanol	0.2	0.2
Melamine	3.3	3.0
Normal butanol	6.6	3.5
Pentaerythritol	1.8	2.4
Phenol	5.6	4.6
Phthalic anhydride	13.8	10.6
Propylene	11.1	7.3

production of raw materials for the superabsorbents, acrylic dispersions and acrylic paints.

Russian butanol production Jan-Feb 2020

Russian normal butanol production totalled 24,300 tons in January to February 2020, against 24,800 tons in the same period in 2019. Gazprom neftekhim Salavat as normal was the largest Russian producer, producing 18,100 tons up from 16,800 tons in January to February. 2019. Isobutanol production in Russia rose from 16,900 tons to 17,400 tons in the first two months this year during which Gazprom neftekhim Salavat increased production to 6,200 tons from 6,000 tons, and SIBUR-Khimprom reduced from 9,500 tons from 8,900 tons.

Russian domestic butanol sales, Jan-Feb 2020

Butanol demand in Russia dropped In April in line with other organic chemical markets adding pressure to pricing. SIBUR-Khimprom had scheduled a maintenance shutdown this month but is considering a delay for a few weeks. N-butanol prices for the Siberian region from Angarsk Petrochemical fell by 18% in April or by 9,000 roubles from 41,000 roubles in March per ton. For the Volga region, Gazprom neftekhim Salavat continued to offer n-butanol at 73,500 roubles and isobutanol at 72,500 roubles as in March, mainly as the plant does not need to sell product in order to maintain production levels. Most of the company's n-butanol is used in the production of butyl acrylate and is also shipped under

contracts to the Dmitrievsky Chemical Plant. Whilst Gazprom neftekhim Salavat reduced butanol sales from 9,100 tons to 6,300 tons, SIBUR-Khimprom increased shipments from 4,600 tons to 5,900 tons and Angarsk Petrochemical increased from 3,000 tons to 5,100 tons. N-butanol availability in the Russian market is affected by processing by both Gazprom neftekhim Salavat and SIBUR-Khimprom. As mentioned above, Gazprom neftekhim Salavat uses a significant part of its own n-butanol to produce butyl acrylate, whilst SIBUR uses it also for internal processing. Angarsk Petrochemical is the only Russian producer where there is no internal processing and depends solely on the domestic market.

Gazprom neftekhim Salavat scheduled a maintenance outage for acrylate production on 20 April, lasting until 30 May. The acrylate complex includes the production of acrylic acid with a capacity of 80,000 tpa, butyl acrylate (ether of acrylic acid and butanol) with a capacity of 80,000 tpa and glacial acrylic acid with a capacity of 35,000 tpa. The acrylate complex allows the

Russian DOTP market 2020

The consumption of phthalate-free plasticizers in the Russian market was estimated at 41,000 tons in 2019 from a total of plasticizer consumption at 168,000 tons, which represents an increase of 2% overall against 2018. DOTP sales from the new SIBUR-Khimprom plant at Perm amounted to about 40,000 tons which replaced phthalic based plasticizers. At the start of 2020 SIBUR foresaw a significant rise in demand for DOTP as the homologation process for most large customers will be completed, but new and difficult economic conditions may slow growth this year. SIBUR sought homologation or product approval in various application segments, including for the construction industry, medical products, food packaging, and children's toys. The product is also registered in accordance with the requirements of the EU-REACH regulation, which allows deliveries to EU countries.

Russian DOTP Exports 2019		
Country	Ktons	\$ mil
Belarus	449.8	0.4
Belgium	525.5	0.5
Czech Republic	315.5	0.3
Lithuania	217.8	0.2
Netherlands	12,604.4	12.6
Poland	1157.5	1.2
Serbia	267.8	0.3
Ukraine	1,183.3	1.2
Uzbekistan	2,504.7	2.5
Others	265.4	0.3
Total	19,607.9	19.6

DOTP production for SIBUR amounted to 57,738 tons in 2019 after the plant started in the first and second quarters in 2019. Sales of DOTP totalled 54,746 tons of which 37,010 tons were directed to the Russian domestic market and the remainder to exports. Shipments abroad totalled 19,608 tons yielding total revenues of \$19.6 million.

Russian Acrylonitrile Exports Jan-Feb 2020		
Country	Kilo tons	\$ mil
Hungary	1.0	1.0
Turkey	27.9	27.7
Total	28.9	28.7

Acrylonitrile stoppage for maintenance 2020

Saratovorgsintez has revised plans for plant maintenance from April to the summer and autumn. Currently, the company is looking for a contractor for construction and repair work at the facilities. Preparatory measures for work should begin in July

2020, whilst the repair itself is planned to be completed in October.

Russian Organic Chemical Imports Jan-Feb 2020		
Product	Kilo tons	\$ mil
2-EH	1.1	1.0
Acrylonitrile	0.3	0.5
DOTP	1.0	1.1
Ethylene glycol	5.4	3.1
Isopropanol	3.0	2.8
Lysine	7.9	9.3
Melamine	3.2	2.7
Methionine	6.0	10.9
Phthalic anhydride	3.8	3.3

The last maintenance outage was carried out in September 2019. Saratovorgsintez operates the acrylonitrile plant with a capacity of 170,000 tpa and a sodium cyanide plant with a capacity of 30,000 tpa. In 2020, the opening of the production of acrylamide and polyacrylamide facilities under a JV between Lukoil and the French company SNF should take place at the Saratovorgsintez site. The project has been delayed on a number of occasions, but completion is now considered to be very close.

Russian acetone production & exports, Jan-Feb 2020

Russian acetone production increased in the first two months in 2020 to 27,000 tons against 20,300 tons in the same period in 2019. Omsk Kaucuk produced 4,100 tons of acetone from the

modernised plant which started up in late 2019.

Russian Acetone Production (unit-kilo tons)		
Producer	Jan-Feb 20	Jan-Feb 20
Ufaorgsintez	6.8	7.8
Kazanorgsintez	8.1	8.1
Samaraorgsintez	8.1	4.4
Omsk Kaucuk	4.1	0.0
Total	27.0	20.3

Russian isopropanol market

The global demand for isopropanol has risen dramatically in response to hand sanitiser and antiseptic product demand. Thus, prices have risen accordingly, whilst most other chemical values have been falling due to a mixture of low oil prices and economic disruptions.

In mid-March, isopropanol still cost €800 per ton on the European market but rose to €3100 in spot transactions by the end of March. About 35% the compound is used by the cosmetics and cleaning industry. The pharmaceutical industry consumes almost the same amount. Wholesale prices for isopropanol in Russia increased from 90 roubles per kg on 6 March to 350 roubles on 25 March. At present only two plants

produce isopropanol production in Russia, Khimprom at Novocheboksarsk and Synthetic Alcohol Plant at Orsk which was declared bankrupt in 2019.



Khimprom at Novocheboksarsk is working in normal mode but cannot produce more than 9,000 tpa. At the end of March, Moscow-based Impexneftekhim resumed production of isopropanol at the bankrupt Synthetic Alcohol Plant at Orsk. The decision to resume work was made after a meeting in the government despite having been declared bankrupt last year.

Isopropanol is being used by several producers in Russia to produce substances to help protect against the spread of COVID-19. The

Novocherkassk Lubricant Plant has completed the development of a gel using isopropanol and glycerine, with the aim to produce 300 tons per month. The Orsk Synthetic Alcohol Plant may enter into a processing agreement with the Novocherkassk Lubricants Plant to supply isopropanol.

Russian Isopropanol Imports		
Year	Ktons	\$ mil
2013	23.6	36
2014	19.1	29.7
2015	15.2	15.6
2016	13.3	12.4
2017	17.8	22.1
2018	17.9	22
2019	26.7	25.9

Tatneft has organised the production of antiseptics at the Taneko refinery based on isopropanol which it intends to supply at its own enterprises and the social services of the company's regions of activity. If the Titan Group can complete its isopropanol project at Omsk by the middle of the year as originally planned demand and prices are likely to far outweigh any pre-project expectations prior to construction starting in 2019.

Russian Imports of MDI (unit-kilo tons)		
Country	Jan-Feb 20	Jan-Feb 19
Belgium	0.6	2.6
China	3.7	2.9
Germany	3.0	2.4
Hungary	0.7	0.8
Japan	0.2	0.2
Netherlands	2.7	5.1
Saudi Arabia	5.2	5.5
South Korea	0.1	0.3
Others	0.8	0.0
Total	16.2	19.8

Russian TDI-MDI imports, Jan-Feb 2020

Russian TDI imports dropped to 7,500 tons in the first two months in 2020 against 13,000 tons in the same period last year whilst MDI imports dropped from 19,800 tons to 16,200 tons. Further declines are expected in the short term probably at least for the duration of the second quarter.

Production of polyurethanes in Russia was more or less normal until mid-March but has drastically reduced since then. Since late March Russia has been under lockdown except for the medical sector and plants producing on a continuous basis such as the chemical sector. Demand for polyurethanes is expected to be hit significantly in the coming months. On the other hand, there may be some new applications emerging from the crisis that might compensate partially for the downturn in traditional outlets.

Ukraine

Ukrainian polymer imports & production, Jan-Feb 2020

In the first two months imports of PVC into Ukraine grew by 6% to 8,300 tons against 7,300 tons in the same period in 2019. The key suppliers of resin to the Ukrainian market come largely from Europe, accounting for about 75% of import shipments. The high level of capacity utilisation at Kalush and good demand from India and Turkey allowed Karpatneftekhim to seriously increase export sales. In the first two months of 2020, about 42,300 tons of PVC were shipped for export compared to 21,000 tons in the same period in 2019.

Polypropylene imports to the Ukrainian market amounted to 20,400 tons in the first two months in 2020,

which is 4% more than in 2019 when the total was 19,600 tons. Imports of PP-homo amounted to 16,500 tons against 14,900 tons, whilst block copolymers dropped from 2,200 tons to 1,600 tons.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
PVC	8.3	7.9
PET	12.4	9.1
EPS	3.9	3.6
LDPE	18.5	12.9
LLDPE	9.5	13.1
HDPE	15.9	13.8
Ethylene Vinyl Acetate	1.2	2.3
PP	20.4	19.5

Polyethylene imports into the Ukrainian market decreased in the first two months by 5% to 39,900 tons against 41,800 tons. HDPE imports rose from 13,600 tons to 15,900 tons, whilst LDPE imports dropped from 12,800 tons to 12,500 tons. LLDPE imports dropped from 13,200 tons to 9,500 tons.

Imports of general-purpose polystyrene (GPPS) and high-impact polystyrene (HIPS) produced by Nizhnekamskneftekhim to Ukraine grew by 14% in the first two months of this year and amounted to 1,800 tons against 1,580 tons. The share of Nizhnekamsk material in the overall structure of imports to the

Ukrainian market increased to 57% compared to 40%. Imports totalled 3,140 tons in January to February against 3,950 tons in 2019.

Karpatneftekhim, Jan-Feb 2020

Karpatneftekhim resumed production of HDPE in late March after prolonged downtime. The stoppage of production of polyethylene was undertaken in early January due to the high cost of raw materials combined with low prices for polyethylene. It is not clear yet if the economic effects of CIVID-19 will force another

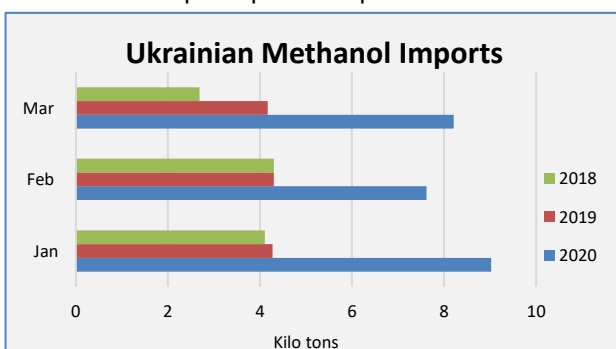
Karpatneftekhim Petrochemical Exports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 20
Propylene	15.5	13.1
Benzene	5.9	11.2

stoppage at Karpatneftekhim. Based on feedstocks alone production should be able to continue but polyethylene prices may fall to levels that render output unprofitable. In 2019 the production of HDPE at Karpatneftekhim totalled 93,000 tons, 4% more than in 2018. Karpatneftekhim exported 90,200 tons of propylene in 2019 against 81,700 tons in 2018. Benzene exports rose from 59,300

tons to 66,700 tons.

Karpatneftekhim restarted the import of Russian naphtha by rail in November 2019 after reaching agreement with Russian Railways supply 50,000 tpa of naphtha from the Volgograd refinery. Regarding other feedstocks, Ukraine is seeking alternative gas and LPG supplies for 2020 and is considering deliveries from Qatar either through the Trans-Balkan gas pipeline or by ship through the Straits of Bosphorus and Dardanelles. At the moment Russia remains the largest supplier of LPG to the Ukrainian market, accounting for 66,000 tons in March. In total, in January-March, Ukraine imported 357,400 tons of LPG.

Karpatneftekhim is pressuring the Ukrainian government to introduce import duties on polyethylene and PVC but is facing opposition particularly from the larger consumers. Karpatneftekhim argues that although it holds a monopolist producer position from its western Ukrainian location, the market situation is currently



developing in such a way that without state intervention the plant is not able to operate normally. The investigation into duties is moving at an extremely accelerated pace to exclude bureaucratic delays on the part of competitors.

Ukrainian methanol imports, Q1 2020

Ukrainian methanol imports increased in the first quarter to 25,000 tons measured against 58,233 tons in 2019. Consumption is gradually rising from levels of 43,600 tons in 2018 and 34,324 tons in 2017. Most of the methanol imports came

from Russia last year. The largest consumer of methanol in Ukraine is the hydrocarbon producer UkrGasDobycha.

Azot Severodonetsk-restart of industrial gas production

Azot at Severodonetsk resumed production of industrial gases in April including argon, nitrogen and oxygen. The restoration of the full cycle of production of ammonia, urea and ammonium nitrate at the enterprise has facilitated the production of argon, oxygen of medical quality and nitrogen. In the first quarter this year Azot produced 141,610 tons of ammonium nitrate, 32,030 tons of urea, and 2,810 tons of industrial ammonia.

Belarus**Belarusian petrochemicals 2020**

Belarus has taken advantage of lower global oil prices to renegotiate with Russia for supplies at vastly reduced numbers against those that were being quoted at the end of last year. As the market favours buyers rather than sellers, Belarus can effectively choose which Russian oil companies it might want to buy from whilst also arguing for extremely low prices.

Belarusian Chemical Production (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Ethylene	12.5	12.9
Propylene	7.4	8.0
Benzene	13.0	21.5
Caprolactam	14.2	22.3
Methanol	14.5	16.0

In the first quarter Belarus bought oil from Norway and Azerbaijan after being unable to reach agreement with Russia at the end of 2019. It takes about 9 million tpa to fully load the Naftan refinery, and about 10 million tpa for Mozyr refinery.

Ethylene production in Belarus amounted to 12,500 tons in the first two months against 12,900 tons in 2019. Propylene amounted to 7,400 tons versus 8,000 tons in January to February 2020 whilst benzene production at Belarusian refineries decreased by 40% to 12,950 tons. Propylene imports from Russia dropped from 5,934 tons to 2,583 tons in January to February. The main reason for the reduction in benzene output this year is due to a decrease in oil refining volumes. Belarusian production of orthoxylene and paraxylene in the two months of 2020 fell respectively by 39% and 20% to 3,000 tons and 9,000 tons.

Belarusian Organic Chemical Exports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Acrylonitrile	4.2	6.5
Melamine	0.9	0.4
Caprolactam	2.3	3.8
Phthalic anhydride	5.6	7.0
Methanol	6.9	4.2

Belarusian chemical trade Jan-Feb 2020

In the first two months in 2020 Belarusian acrylonitrile exports amounted to 4,200 tons against 6,500 tons last year, whilst methanol exports increased from 4,200 tons to 6,900 tons. Caprolactam exports dropped from 3,800 tons to 2,300 tons, with average prices dropping from \$1499 per ton to \$1220 per ton. Benzene exports amounted to 959 tons in the first two months, all delivered to the Netherlands at an average price of \$629 per ton.

Belarusian Aromatic Imports (unit-kilo tons)		
Product	Jan-Feb 20	Jan-Feb 19
Orthoxylene	2.2	4.0
Paraxylene	1.9	4.5

Benzene imports into Belarus were not required in the first two months in 2020 against 3,044 tons in the same period last year. The absence of benzene imports was due to lower caprolactam production at Grodno.

Toluene imports amounted to 333 tons against 321 tons. Orthoxylene imports dropped from 3,149 tons to 2,218 tons whilst paraxylene imports from 4,516 tons to 1,920 tons. Paraxylene prices dropped from \$1025 per ton to \$774 per ton.

Belarusian PTA Imports (kilo tons)		
Country	Jan-Feb 20	Jan-Feb 19
South Korea	3.0	3.3
Poland	8.3	3.5
Total	11.3	8.7

Methanol imports into Belarus rose to 14,855 tons from 10,151 tons but despite the increase costs dropped from \$3.152 million to \$1.590 million, with average prices dropping from \$311 per ton to \$107 per ton.

PTA imports rose from 8,735 tons to 11,341 tons, with average prices dropping from \$961 to \$739 per ton. Imports were divided between Poland, which shipped 8,341 tons in January to February 2020 at a price of \$738 per ton, and South Korea which shipped 3,000 tons at \$742 per ton. MDI imports into Belarus dropped to 2,226 tons in the first two months in 2020 against 2,622 tons with average prices dropping from \$1595 to \$1384 per ton.

Central Asia/Caucasus

Azerbaijan Methanol Production (unit-kilo tons)

Product	Jan-Dec 19	Jan-Dec 18
Methanol	345.5	128.1

in 2020 Azerbaijan exported a total of 99,000 tons of chemical products for a total value of \$13.896 million which was up by 10.3% over 2019. SOCAR Methanol predicts 480,000 tpa of methanol production in 2020.

SOCAR methanol production Jan-Feb 2020

Azerbaijan exported 72,579 tons of methanol worth \$7.2 million in January-February, accounting for 2.45% of the country's non-oil exports. In the first two months

SOCAR-modernisation of ethylene-polyethylene plant

Azerbaijan exported 38,448 tons of polyolefins for \$28 million in January-February this year. This included polyethylene exports of 19,177.58 tons for \$13 million and 17,465.52 tons for \$14.453 million. In Azerbaijan,

Azerkhimya Olefin Expansion (unit-kilo tons)		
Product	Existing	Post project
Ethylene	120.0	192.0
Propylene	90.0	187.0

polypropylene is produced at the SOCAR Polymer plant, commissioned in July 2018 with a capacity of 184,000 tpa. In February 2019, the company put into operation a plant for the production of HDPE with a capacity of 120,000 tpa. Azerbaijan also produces LDPE at the Ethylene-Polyethylene plant of the SOCAR's Azerkimiya

production association in with a capacity of 60,000 tpa.

SOCAR hopes to complete the modernisation of the Ethylene-Polyethylene plant at Sumgait, either in the second or third quarter of 2020. This will increase the ethylene capacity from 100-120,000 tpa to 192,000 tpa, and propylene from 80,000-90,000 tpa to 187,000 tpa. From the 192,000 tpa of ethylene and 187,000 tpa of propylene, around 120,000 tpa of ethylene and 140,000 tpa of propylene is intended to be sent to SOCAR Polymer plants. The remaining volume of ethylene will be used for the production of LDPE at the Ethylene-Polyethylene plant.

Kazakh petrochemical project at Atyrau held up by equipment delays

The Atyrau polypropylene project was rated 62% completed by the end of March and now faces the challenges of completion under restricted conditions. This not only involves overcoming difficulties of deliveries of imported equipment from China but also finding enough skilled workers to work on the project. Due to measures introduced by the Chinese authorities to prevent the spread of coronavirus, it has meant that the delivery of equipment to the gas chemical complex under construction at Atyrau has been held up.

Kazakh benzene exports redirected from Russian market

Benzene and paraxylene produced at the Atyrau refinery have passed REACH certification for export to European Union countries. Registration of the REACH certificate was carried out in several stages, during which all the necessary documentation was prepared to obtain a registration number.

In early April a benzene batch from the Atyrau refinery was shipped from the Georgian port of Kulevi to a European customer. This is the first such delivery from Kulevi and was due to a decrease in demand from Russian caprolactam producers, particularly Kuibyshevazot. Previously only paraxylene produced by the Atyrau refinery had been shipped via the Georgian port of Kulevi. Benzene supplies from the Atyrau refinery to the Russian market fell in March to 425 tons from 2,900 tons in February.

Over 60 trucks with metal structures, heat exchange and tank equipment, pipe products, which should be delivered to the gas chemical complex delayed due to the suspension of the customs post on the border with China. This has not stopped progress as due to the components supplied at the end of 2019 some work can carry on, but it is at a slower pace. The construction of a polypropylene plant with a capacity of 500,000 tpa was planned to be completed in 2021 but Kazakhstan Petrochemical Industries (KPI) understands that this may not be possible.

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