CIREC monthly NEWS

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

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

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Key points from this issue:

Central European petrochemical markets

- Ethylene production in the four Central European countries amounted to 350,800 tons in the first quarter this year
- Propylene production in Central Europe amounted to 234,400 tons in the first quarter this year
- Partly due to weaker demand Hungarian TDI exports dropped in the first two months this year to 38,795 tons against 54,253 in the same two months in 2022. Average prices rose from €2499.7 per ton to €3204.9 in 2023
- MDI exports from Hungary dropped in the first two months to 25,742 tons from 40,609 tons in the same period last year. The most significant drop in sales was the US where no shipments were made in the first two months against 9,708 tons in 2022
- For imports of all forms of polypropylene, Czech inward shipments dropped from 136,714 tons in January to March 2022 to 127,319 tons in January to March this year

Regional methanol markets

- Imports of methanol into Poland totalled 162,229 tons in January to March this year versus 220,194 tons in January to March 2022
- Russia produced 953,843 tons of methanol in the first quarter in 2023 against 1,289,893 tons in the same period in 2022. All producers reported declines whilst Azot at Novomoskovsk showing the largest proportional fall from 51,390 tons to 9,320 tons
- Ukrainian gas producer Ukrgasdobycha, a member of the Naftogaz group, received 2,000 tons of methanol in April from the Norwegian company Equinor

Chemical production-trade

- Synthetic rubber production in Russia amounted to 358,000 tons in January to March 2023 against 431,000 tons in the same quarter in 2022
- The Atyrau Refinery plans to increase the production and export of aromatic hydrocarbons in 2023 to a target of 208,300 tons of paraxylene and 35,700 tons of benzene
- Russian butadiene production totalled 119,372 tons in the first quarter against 172,003 tons in the same period in 2022. The largest producers ZapSibNeftekhim and Nizhnekamskneftekhim both showed lower production as 2022 progressed
- Both Russian synthetic rubber exports to China and imports from China increased sharply in the first quarter this year due to the geographical reorientation of trade

Petrochemical projects

- Olefin 111 project at Plock underway
- The cost of construction of the jv Silleno gas chemical complex in Kazakhstan will amount to $7.6 billion, although costs could rise after the ethane pipeline has been constructed
- SIBUR plans to build an additional plant for propylene production at Tobolsk (Tyumen Region) at the ZapSibNeftekhim site

CENTRAL and SOUTH EAST EUROPE

Hungarian Crude Imports 2023		
2023 ktons		
Country	**Jan**	**Feb**
Croatia	4.345	52.094
Iraq	54.993	43.015
Kazakhstan	73.678	96.810
Russia	227.753	407.155
Total	360.769	599.073
2023 € per ton		
Country	**Jan**	**Feb**
Croatia	644.182	585.895
Iraq	420.695	411.607
Kazakhstan	540.107	584.398
Russia	325.056	319.468
Total	387.396	392.064

MOL crude purchases 2023

Russia accounted for 65.5% of MOL's crude purchases in January and February this year from the total volume of 959,842 tons, but by value the share only amounted to 54.6%. The EU price cap meant that Russian crude equated to €319.5 per ton in February against €325.1 per ton in January, which is much lower than other sources from Croatia, Iraq and Kazakhstan. Around 18% of imports into Hungary in the first two months came from Kazakhstan, priced at $541.1 per ton January and €584.4 per ton in February, whilst Iraq provided only 11% of crude in the first part of 2023 at average prices of €416.0 per ton.

Although Russia is the dominant source of imported crude into Hungary at present efforts continue to develop other sources. Other EU countries are competing for the same sources and thus whilst the EU objective is to fully diversify there is no coordinated strategy amongst the member states.

Czech Crude Imports (unit-kilo tons)		
Country	***Q1 23***	***Q1 22***
Azerbaijan	523.7	323.8
Kazakhstan	142.5	373.1
Russia	1161.1	860.4
US	0.0	91.7
Total	1827.3	1649.0
Czech Crude Import Prices (€ per ton)		
Country	***Q1 23***	***Q1 22***
Azerbaijan	628.8	589.7
Kazakhstan	650.5	571.7
Russia	341.7	573.1
US	0.0	620.3

Crude processing and sales volumes for MOL decreased by 7% and 6% respectively in the first quarter in 2023, largely due to the strong correction of the Hungarian fuel market. MOL's refining margins remained strong over the Q1 2023 period but a marked refinery margin decrease followed in April setting the trend for lower numbers this year.

Prices advantages of Russian crude into Central Europe

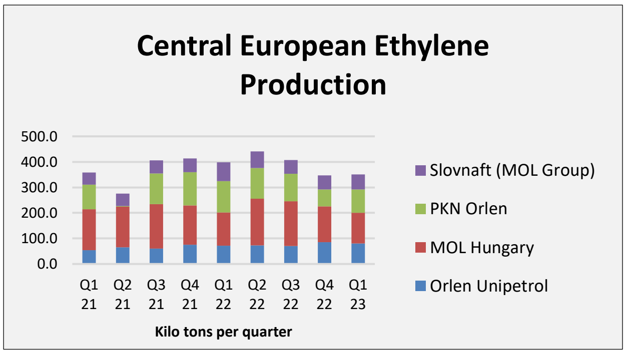
Imports of crude into the Czech refineries amounted to 1.827 million tons in the first quarter this year against 1.649 million tons in January to March 2022. Czech imports of crude oil in the first quarter this year were divided roughly between Azerbaijan, Russia and Kazakhstan.

Russia accounted for 63% of volume imports, whilst in value this translated into 49%. The reason for the lower percentage share in value than volume is due to the price cap imposed by the EU in December last year. The second largest supplier to the Czech Republic Azerbaijan provided 29% of deliveries in the first quarter this year by volume, but 40% by value. Kazakhstan supplied 8% of Czech crude in the first quarter this year by volume and 11% by value.

Polish Imports of Crude Oil Jan-Mar 2023		
Country	***Vol (million tons)***	***€ per ton***
Saudi Arabia	3.278	572.0
Lithuania	0.013	565.4
Russia	1.150	316.4
Nigeria	0.645	609.8
Norway	1.117	560.8
US	0.185	629.0
UK	0.408	604.6
Total	6.796	521.7

Poland did not purchase any crude from Russia in March. In financial terms it meant that PKN Orlen did not take advantage of the price cap. Saudi Arabia provided just under 50% of total crude imports into Poland in the first quarter, shipping 3.278 million tons for an average price of €572.0 per ton. Last year Saudi Arabia supplied 7.086 million tons of crude to Poland which is expected to double in 2023. In Lithuania Orlen Lietuva plans this year to use only oil supplied by Saudi Arabian oil company Saudi Aramco.

Central European Olefin Production & Trade



Central European ethylene production

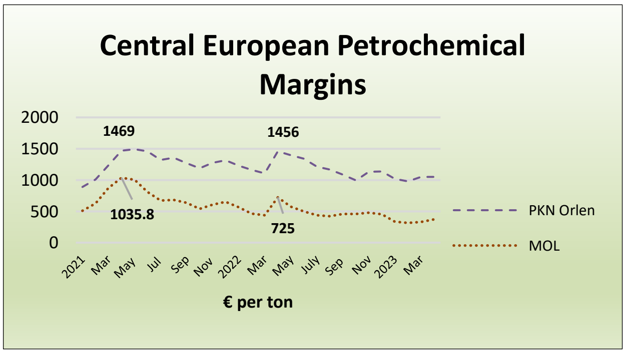
Ethylene production in the four countries that comprise the Visegrad Group region amounted to 350,800 tons in the first quarter this year. This measured against 347,100 tons in the fourth quarter in 2022 but down from 398,900 tons in the same period last year.

PKN Orlen is in the early stages of work on its Olefins III investment which overall represents a larger project than the Polimery Police project in Poland which is near completion. It is also bigger than MOL's polyol project in Hungary and Slovnaft's cracker modernisation in Slovakia. Hyundai Engineering is the main project contractor and already 1,300 workers are on site.

PKN Orlen Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Ethylene	91.8	122.8
Propylene	87.4	114.9
Butadiene	15.9	17.5
Toluene	0.4	2.1
Phenol	12.0	13.1
Polyethylene	77.3	82.9
Polypropylene	72.5	92.7
PVC	59.5	80.5

Polish petrochemical production Jan-Mar 2023

Ethylene production in Poland dropped from 41,100 tons in January to March 2022 to 31,100 tons this year whilst propylene fell from 114,900 tons to 87,400 tons. Butadiene production at Plock dropped to 15,900 tons from 17,500 tons. In the plastics sector polyethylene production dropped to 77,300 tons in January to March 2023 versus 82,900 tons in corresponding period last year and polypropylene dropped from 92,700 tons to 72,500 tons.



Central European petrochemical margins

Central European petrochemical margins have been lower this year against the same quarter last year although April data provided a slight lift for both PKN Orlen and MOL.

The peak for petrochemical margins in the past eighteen months was achieved in April 2022 when Orlen achieved €1456 per ton and MOL €725 per ton, but both these were lower than in April 2021. MOL's margin was much lower in 2022 after the calculation process was changed at the end of 2021. In April this year Orlen's petrochemical margin rose slightly to €1052 per ton against €1048 in March whilst MOL rose from €329 to €371 per ton.

Czech Imports of Propylene (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Germany	9.015	4.592
Bulgaria	2.711	0.000
Poland	0.000	1.029
Romania	1.048	1.053
Russia	0.000	1.220
Slovakia	0.066	0.993
Others	0.900	0.524
Total	13.741	9.410
Av € per ton	960.147	1247.017

Central European propylene production Jan-Mar 2023

Propylene production in the four Central European countries amounted to 234,400 tons in the first quarter this year. This measured against 247,700 tons in the fourth quarter in 2022 and 269,900 tons in the same period last year. Regarding current expansions, MOL is currently building a PDH propylene plant at Tiszaujvaros and Slovnaft increasing capacity as part of its steam cracker modernisation.

Czech propylene imports Jan-Mar 2023

Propylene imports into the Czech Republic rose from 9,410 tons in January to March 2022 to 13,761 tons this year, with main suppliers including Germany, Romania and Poland. Czech imports of butadiene amounted to 24,759 tons in January 2023, all of which was supplied by Germany and Hungary.

Polish Imports of Propylene (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Bulgaria	2.976	0.000
Germany	16.460	12.674
Russia	0.000	14.637
Ukraine	0.000	17.018
Serbia	1.917	0.000
Netherlands	4.076	3.464
Others	0.005	0.000
Total	25.435	47.794
Av € per ton	972.5	1215.5

Polish propylene & butadiene imports, Jan-Mar 2023

Poland imported 25,435 tons of propylene in January to March against 47,794 tons in January to March 2022. Market sources of propylene imports into Poland changed significantly in 2022. Imports from Ukraine dropped from 17,018 tons in January to March last year to zero this year due to idled production facilities at Kalush, whilst also imports from Russia have also disappeared from the market due to sanctions.

Average prices for propylene imports into Poland declined from €1215.5 per ton in January to March 2022 to €972.5 in the January to March 2023. Prices started falling in the latter part of the third quarter and into the fourth quarter following feedstock trends. In addition to propylene Poland imported over 3,500 tons of ethylene in March.

Butadiene import prices dropped from €955.219 per ton in January to March 2022 to €925.384 in January to March this year, with volumes declining from 8,742 tons to 6,759 tons. Synthos is constructing a new butadiene plant at Plock based on a licence from BASF. The project is being carried out for Synthos by Air Liquide Global E&C Solutions Poland as part of a comprehensive service covering design, engineering, picking of supplies and construction and supervision of the process of commissioning the new plant. The commissioning of the butadiene extraction plant and commencement of the production is scheduled for 2024 with a capacity of 120,000 tpa.

Polish Monomer Import Costs (€ per ton)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Propylene	972.5	1215.5
Butadiene	913.5	1006.4
Styrene	1198.6	1878.9

Propylene-propane supplies Polimery Police

Propylene was delivered to the Polimery Police plant in April, delivered by rail by Grupa Azoty ZAK. The propylene delivered to Police is necessary to test the polypropylene installation before acceptance of propylene from its own production from the PDH unit. For full testing the PP plant, Grupa Azoty Polyolefins estimates that it needs to purchase up to 4,000 tons of propylene. The next stage, after accepting the entire volume, will be a test launch of the PP plant on propylene purchased from an external source. The Polimery Police project is already at the stage of final tests.

MOL's Olefin Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Ethylene	178	204
Propylene	95	105
Butadiene	21	20
Raffinate	30	33

A further agreement for the purchase of propane was concluded on 27 April this year with TOTSA Total Energies Trading SA provides for the implementation of propane, covering deliveries from April 2023 to the end of November 2024, according to the agreed schedule and trading conditions.

Propane deliveries carried out under this agreement will constitute supplementary deliveries, accounting for roughly 46% of total requirements. Grupa Azoty Polyolefins announced the first propane purchase agreement at the end of 2022, under which propane supplies in over 50% of demand in 2023-2024 were secured.

Hungarian Propylene Exports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Germany	0.000	3.184
Poland	0.000	0.979
Romania	0.000	0.000
Slovakia	19.011	13.535
Others	0.000	0.000
Total	19.011	17.698
Av € per ton	1118.6	1167.9

Hungarian propylene exports Jan-Feb 2023

Exports of propylene from Hungary increased in the first two months to 19,011 tons against 17,698 tons in the same two months in 2022. Exports to Slovakia from MOL to Slovnaft rose from 13,535 tons to 19,011 tons which was the sole destination so far in 2023.

Although MOL currently produces more propylene than it consumes it is currently building a new propylene plant with a capacity of 100,000 tpa. This is part of the programme to create sufficient propylene feedstock for the new polyol project at Tiszaujvaros.

Hungarian Butadiene Exports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Czech Republic	4.075	2.000
Germany	1.995	2.029
Poland	4.055	6.182
Total	10.124	10.211
Av € per ton	869.366	939.918

The propylene plant is being constructed by the engineering company Merkbau on an area of about three hectares at the site of MOL Petrochemicals at Tiszaújváros. The new plant will fit into the existing production infrastructure, providing raw materials for the polyol plant, thus expanding the company's chemical production capacity. The polyol plant under construction at Tiszaujvaros has been subject to several delays since 2017. MOL had hoped to finish construction in mid-2022 but now the target is sometime in 2023.

Hungarian butadiene exports amounted to 10,124 tons in the first two months in 2023 against 10,211 tons in the same period in 2022. Shipments into Poland totalled 4,055 tons in January to February 2023 against 6,182 tons in the same period in 2022. Exports to Germany dropped from 2,029 tons to 1,995 tons and to the Czech Republic rose from 2,000 tons to 4,075 tons. Average prices for Hungarian butadiene exports fell to €939.918 per ton versus €869.366 in 2023.

Polish Styrene Imports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belgium	0.096	4.058
Czech Republic	4.995	1.187
Netherlands	8.583	10.450
Germany	3.606	2.328
Others	1.942	1.897
Total	19.220	19.920
Av € per ton	1198.6	1878.9

Central European styrene trade Jan-Mar 2023

Poland imported 19,220 tons of styrene in January to March against 19,920 tons in January to March last year. The Netherlands provided 8,583 tons in the first quarter versus 10,450 tons in the same period in 2022. The Czech Republic has also been an important supplier this year. Styrene import costs dropped from €1878.9 per ton last year to €1198.6 in the first quarter in 2023.

Hungarian styrene imports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Italy	11.893	16.436
Netherlands	0.575	0.207
Others	0.151	0.229
Total	12.618	16.893
Av € per ton	1349.28	1175.8

Italy remains the dominant source of styrene imports into Hungary, supplied by Versalis to its polystyrene plant at Szazhalombatta. Imports of styrene into Hungary totalled 12,618 tons in January to February 2023, down from 16,893 tons in the same period in 2022, with supplies from Italy declining from 16,436 tons to 11,893 tons.

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Ethylene	3.306	4.239
Propylene	0.011	0.008
Benzene	0.000	18.278
Toluene	2.869	3.329
Ethylbenzene	32.986	29.259
Styrene	5.050	0.000

Czech Petrochemical Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Ethylene	9.058	11.138
Propylene	13.761	9.410
Butadiene	24.759	16.242
Benzene	10.931	18.846
Toluene	1.802	2.011
Styrene	5.924	5.569

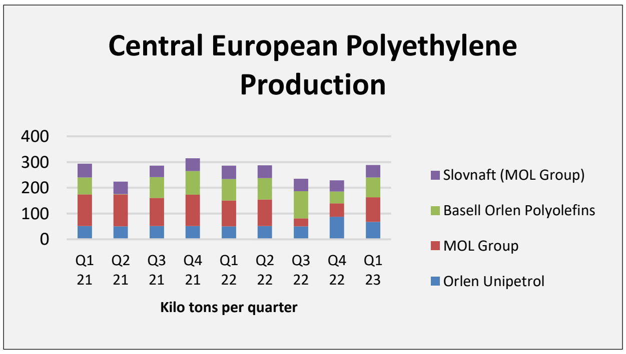
Czech petrochemical trade, Jan-Mar 2023

Ethylene exports from the Czech Republic amounted to 3,306 tons in January to March 2023 versus 4,239 tons in the same period last year. Czech imports of ethylene amounted to 9,058 tons in January to March 2023, down from 11,138 tons in January to March last year.

Propylene imports into the Czech Republic rose from 9,410 tons in January to March 2022 to 13,761 tons this year, with main suppliers including Germany, Romania and Poland. Czech imports of butadiene amounted to 24,759 tons in January 2023, all of which was supplied by Germany and Hungary.

Czech exports of ethylbenzene amounted to 32,986 tons against 29,259 tons in January to March 2022. All the ethylbenzene was shipped from Kralupy to Oswiecim, all within the structures of the Synthos Group. Imports of benzene into the Czech Republic dropped from 18,846 tons in January to March last year to 10,931 tons in January to March 2023.

Central European Polyolefin Production & Trade



Central European polyethylene production Q1 2023

First quarter production of polyethylene in Central Europe amounted to 288,300 tons against 287,400 tons in the same period in 2022. Hungarian production of polyethylene dropped in the first quarter to 143,000 tons from 157,000 tons in the same period in 2022.

LDPE production at Tiszaujvaros fell to 57,000 tons from 65,000 tons in the first quarter in 2022 whilst HDPE fell from 92,000 tons to 86,00 tons. Polish polyethylene production amounted to 77,300 tons in the first quarter against 82,900 tons in January to March 2022.

MOL Polyolefins Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
LDPE	57	65
HDPE	86	92
PP	128	137
PE Totals	143	157

Polish polyethylene trade Jan-Mar 2023

Polish trade in polyethylene was down in the first quarter for both imports and exports, both in volume and value. Economic conditions affected both demand and pricing. Polish imports of polyethylene totalled 297,491 tons in January to March this year against 373,509 tons in January to March 2022, with average prices falling from €1791.3 per ton to €1492.8 per ton. Imports of polyolefins and all types of plastics from Russia into Poland saw a progressive decline in 2022, with other suppliers from Europe taking more market share.

Polish Polyethylene Trade		
Exports	***Jan-Mar 23***	***Jan-Mar 22***
Vol (kilo tons)	297.491	373.509
Av €/ton	1492.8	1791.3
Imports	***Jan-Mar 23***	***Jan-Mar 22***
Vol (kilo tons)	72.793	96.603
Av €/ton	1483.5	1601.1

Total costs of polyethylene imports into Poland amounted to €444.084 million in the first quarter against €669.068 in January to March last year. HDPE is the largest category of imported polyethylene into Poland, amounting to 104,504 tons in January to March versus 126,134 tons in January to March 2022. Germany was the largest supplier of HDPE to the Polish market in the first quarter this year, shipping 31,847 tons for a total value of €48.111 million.

Polish PE imports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
LDPE	80.765	94.011
LLDPE	51.459	69.116
HDPE	104.504	126.134
EVA	3.586	5.003
EAC	44.978	63.681
Others	12.198	15.564
Total	297.491	373.509
Av € per ton	1492.8	1791.3

Polish polyethylene exports amounted to 72,793 tons in the first quarter in 2023 against 96,603 tons in the first quarter in 2022. Average prices for polyethylene exports from Poland declined to €1483.6 per ton against €1601.1 per ton.

Revenues from exports decreased from €154.667 million to €107.989 million in January to March 2023. In the first quarter this year exports of HDPE from Poland amounted to 49,934 tons versus 68,048 tons in January to March 2022.

Czech polyethylene exports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
LDPE	6.369	7.734
LLDPE	0.877	1.063
HDPE	84.744	95.021
EVA	0.898	0.956
Other	2.810	3.086
Total	95.697	107.860
Av € per ton	1449.5	1608.3

Czech polyethylene trade Jan-Mar 2023

Prices for both exports and imports of polyolefins were lower in the first quarter this year against the same period in 2022. Polyethylene exports amounted to 95,697 tons in the first quarter of which HDPE comprised 84,744 tons. Germany was the largest destination for Czech HDPE supplied from Litvinov this year, amounting to 36,983 tons in January to March for €47.465 million.

Czech polyethylene imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
LDPE	25.936	33.125
LLDPE	5.472	5.558
HDPE	29.382	33.617
EVA	2.411	2.037
Other	10.054	9.527
Total	73.255	83.865
Av € per ton	1727.1	1902.5

Other important markets for Czech polyethylene exports include Poland, Italy and Belgium.

For imports of all forms of polyethylene, Czech inward shipments amounted to 73,255 tons in January to March against 83,865 tons in the same period in 2022, with prices dropping from €1902.5 per ton to €1727.1. Germany was the largest source of polyethylene imports, amounting to 18,218 tons for €29.406 million, followed by Belgium with 8,592 tons for €15.320 million.

Hungarian Polyethylene Exports (unit-kilo tons)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
LLDPE	1.247	0.967
LDPE	17.226	17.952
HDPE	39.106	45.927
EAO	0.039	0.031
EVA	0.021	0.025
Other	1.409	9.762
Total	59.047	74.664
Av € per ton	1322.3	1474.0

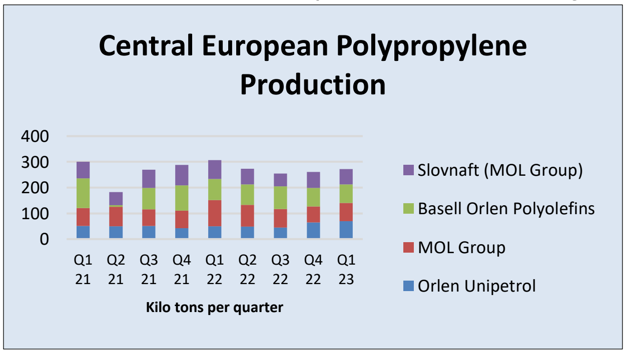
Hungarian polymer trade Jan-Feb 2023
MOL's polyethylene exports dropped from 74,664 tons in January to February 2022 to 59,047 tons in the same period this year whilst revenues fell from €110.055 million to €78.076 in 2023. Average prices dropped from €1474.0 per ton in 2022 to €1322.3 per ton in 2023. Overall, for last year Hungarian polyolefin trade in terms of volume differed only slightly by volume against 2021, but in terms of values the prices were much higher in 2022.

HDPE shipments from Hungary dropped from 45,927 tons in January to February 2022 to 39,106 tons in the same two months in 2023, whilst exports of LDPE dropped from 17,952 tons to 17,226 tons. From MOL's HDPE exports, leading destinations involved Italy and Germany.

Hungarian Polyethylene Imports (unit-kilo tons)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
LLDPE	4.145	2.913
LDPE	8.044	9.563
HDPE	12.876	14.760
EAO	0.960	1.795
EVA	0.598	1.135
Other	5.030	2.812
Total	31.654	32.978
Av € per ton	1.730	1.817

Polyethylene imports into Hungary amounted to 31,654 tons in the first two months in 2023 against 32,978 tons in the same period in 2022. HDPE imports dropped from 14,760 tons to 12.876 tons in January to February 2023, whilst LLDPE imports decreased from 9,563 tons to 8,044 tons. Imports of LDPE rose from 2,913 tons to 4,145 tons. Imports costs for polyethylene fell to €54.760 million against €59.515 million in the same period last year. Prices per ton increased from €1817 to €1730 in 2022.

Central European polypropylene production Q1 2023
Production of polypropylene in Central Europe in the first quarter amounted to 272,500 tons against 285,900 tons in the same period in 2022, although was higher than in the second and third quarters of last year.



Hungary reduced production of polypropylene in the first quarter to 128,000 tons against 137,000 tons in January to March 2022 and Poland reduced production from 92,500 tons to 72,500 tons. Slovakia produced 60,000 tons in the first quarter this year and the Czech Republic 70,000 tons.

Regional investment in PP and expansions
Linde Engineering was selected by Slovnaft in 2022 to conduct a complex large-scale revamp of the polypropylene (PP3) plant at Bratislava. The revamp will extend the plant's capacity by 18% or 33,000 tpa to 300,000 tpa of polypropylene, and the storage facility will be expanded from the current 45 silos to 61

silos. Slovnaft is investing around €63 million in the expansion and modernisation of polypropylene production.

Regarding the new plant at Polimery Police a pre-marketing project was launched on the PPL (Polypropylene Logistics Platform) sub-project in January in readiness. The plant should enable the diversification of Grupa Azoty's business activities, as well as have a positive impact on the Polish's position in the plastics segment. The new chemical complex will significantly improve the balance of polypropylene in which Poland currently import-dependent.

Polish PP Exports (unit-kilo tons)		
Category	***Jan-Mar 23***	***Jan-Mar 22***
PP homo	40.239	57.950
Polyisobutylene	0.174	0.048
Propylene copolymers	21.643	26.747
Other	0.872	0.888
Total	62.927	85.633
Av €/ton	1513.2	1750.6
Polish PP Imports (unit-kilo tons)		
Category	***Jan-Mar 23***	***Jan-Mar 22***
PP homo	128.085	183.618
Polyisobutylene	0.648	1.374
Propylene copolymers	68.568	86.953
Other	4.410	4.641
Total	201.711	276.586
Av €/ton	1547.2	1804.7

In 2022 Poland imported a total of 918,765 tons of polypropylene, comprised mostly of homo grade and copolymers. The capacity of the new plant comprises 437,000 tpa, which will add to the existing 480,000 tpa plant at Plock which is owned by Basell Orlen Polyolefins. The Plock plant was expanded by around 20% in the past couple of years following the start-up of the metathesis propylene plant operated by PKN Orlen. The overall material progress of the EPC Contract for Polimery Police, as of 4 April 2023, had achieved 99.29% of the project schedule

Polish polpropylene trade Jan-Mar 2023

Polish polypropylene imports, including homo grade and copolymers, fell in January to March 2023 to a total of 201,711 tons versus 276,586 tons in January to March 2022. Average prices per ton decreased from €1804.7 to €1547.22 per ton. Homo grade polypropylene imports dropped from 183,616 tons in the first quarter in 2022 to 128,085 tons in the same period this year whilst copolymer imports dropped from 86,953 tons to 68,568 tons. Germany supplied 21,557 tons of propylene copolymers to Poland in the first quarter followed by the Netherland with 11,247 tons for €17.845 million and Belgium supplying 10,456 tons for €17.712 million.

Regarding export activity, shipments amounted to 62,927 tons against 85,633 tons in January to March 2022. Homo polymer grades comprised the main category of Polish polypropylene exports, where Germany was the largest destination taking 10,231 tons in the first quarter for €13.736 million followed by the Czech Republic taking 7,024 tons for €9.448 million.

Czech polypropylene trade Jan-Mar 2023

For imports of all forms of polypropylene, Czech inward shipments dropped from 136,714 tons in January to March 2022 to 127,319 tons in January to March this year, with average prices dropping from €1850.8 per ton to €1693.7.

Czech polypropylene exports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
PP Homo	64.441	66.653
Propylene Copolymers	13.281	13.314
Other	1.159	0.490
Total	78.881	80.456
Av € per ton	1530.7	1675.9
Czech polypropylene imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
PP Homo	72.114	81.720
Propylene Copolymers	52.625	50.614
Other	2.579	4.379
Total	127.319	136.714
Av € per ton	1693.7	1850.8

Propylene copolymer imports increased from 50,614 tons to 52,625 tons. Copolymer imports were sourced not only from European suppliers but also South Korea which shipped 8,236 tons for €12.732 million in January to March this year.

Exports of all forms of polypropylene from the Czech Republic amounted to 78,881 tons in January to March versus 80,456 tons in January to March 2022, with average prices dropping from €1675.9 per ton from €1530.7.

Homo-grade PP provides the main category of Czech polypropylene exports, amounting to

64,441 tons in January to March this year, with 15,640 tons sent to Germany for €22.546 million.

Hungarian Polypropylene Exports (unit-kilo tons)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
PP homo	22.690	20.765
Propylene copolymers	16.363	18.843
Others	2.280	9.435
Total	41.334	49.044
Av € per ton	1385.1	1593.2
Hungarian Polypropylene Exports (€ million)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
PP homo	31.229	34.778
Propylene copolymers	23.361	35.085
Others	2.659	8.274
Total	57.250	78.137

Hungarian polypropylene trade Jan-Feb 2023
Regarding Hungarian polypropylene exports, MOL shipped 22,690 tons of homo grade polypropylene in January to February 2023 which was up from 20,765 tons in the same period in 2022, whilst copolymer exports dropped from 18,843 tons to 16,363 tons.

The most important destinations for Hungarian polypropylene exports include Poland, Italy, Germany and the Czech Republic.

Export revenues dropped for all grades of polypropylene from €78.137 million to €57.250 million, with average prices dropping from €1593.2 per ton to €1385.1 in the first two months in 2023. Copolymer exports are distributed mostly to European destinations, of which the largest include Italy, Germany, Poland and Romania. In 2022 Hungary exported a total of 40,039 tons of polypropylene for revenues of €63.786 million.

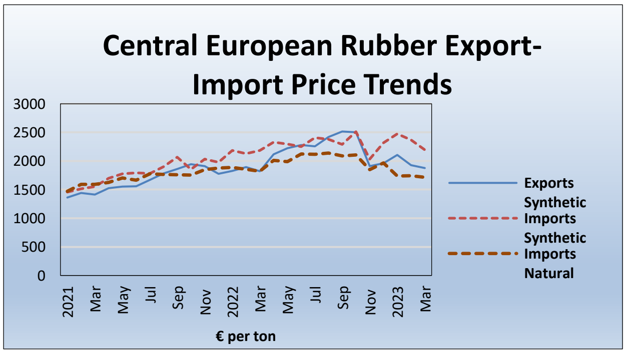
Hungarian Polypropylene Imports (€ million)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
PP homo	29.031	38.882
Propylene copolymers	13.392	21.207
Others	9.087	8.732
Total	51.511	68.821
Av € per ton	1592.7	1785.1

Polypropylene imports into Hungary amounted to 32,342 tons in the first two months in 2023 versus 34,054 tons in the same period in 2022, with costs falling in January-February 2023 to €51.511 million from €68.821 million last year. Overall average prices dropped from €1785.1 per ton to €1592.7 per ton this year, whilst copolymer prices dropped from €1847.9 to €1419.7.

Hungarian Polypropylene Imports (unit-kilo tons)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
PP homo	19.172	22.274
Propylene copolymers	9.434	11.476
Others	3.737	4.804
Total	32.342	38.554

By category homo grade imports into Hungary comprised 19,172 tons in January to February 2023 against 22,474 tons whilst copolymers fell to 9,434 tons against 11,476 tons in 2022. Costs for copolymer imports dropped to €13.392 million.

Central European Rubber Markets



Synthetic rubber prices Jan-Mar 2023
Rubber prices in Europe started dipping in October-November last year and the continued into the first quarter. Export prices dropped from €2103.9 per ton in January to €1877.9 in March whilst import prices dropped from €1931.2 per ton to €1686.6 per ton. Natural rubber prices ended the quarter facing a different range of market fundamentals. Currently the forecast for natural rubber prices indicates a mixed outlook, which is reflected also for synthetic rubber where demand has been supressed this year.

Czech Rubber Trade (unit-kilo tons)		
	Jan-Mar 23	***Jan-Mar 22***
Exports synthetic rubber	42.251	53.087
Imports synthetic rubber	32.640	37.291
Imports natural rubber	21.679	20.268

Czech synthetic rubber trade Jan-Mar 2023
Czech exports of synthetic rubber amounted to 42,251 tons in January to March this year versus 53,087 tons in the same three months in 2022. Imports declined from 37,291 tons to 32,640 tons in January to March 2023.

Natural rubber imports into the Czech Republic rose from 20,268 tons in the first quarter last year to 21,679 tons.

Czech Exports of EBSR		
	Jan-Mar 23	*Jan-Mar 22*
Kilo tons	8.894	20.813
€ million	15.720	35.917
Average price	1767.5	1725.7

Exports of ESBR from the Czech Republic dropped in the first quarter to 8,894 tons against 20,813 tons in the same quarter last year. Although average prices were higher in the first quarter at €1767.5 per ton against €1725.7 per ton in 2022, production costs have been much higher this year. Earlier in 2023 Synthos announced that it had decided to close the emulsion styrene butadiene rubber (ESBR) line at its Kralupy nad Vltavou site in the Czech Republic. Synthos explained the closure through the unsustainable rise in utility costs in Europe. The Kralupy plant includes capacities of 110,000 tpa of ESBR and its permanent closure will reduce Synthos' total ESBR capacity to 320,000 tpa. Despite the closure of the Kralupy plant, Synthos remains the largest producer of ESBR in Europe, with 190,000 tpa of ESBR capacity at its site at Oswiecim and 130,000 tpa at Schkopau.

Czech Butadiene Rubber Exports (unit-kilo tons)		
Country	*Jan-Mar 23*	*Jan-Mar 22*
France	1.504	1.504
Hungary	1.218	1.681
India	4.198	5.399
Poland	3.761	3.598
Serbia	0.696	1.187
Slovakia	3.045	2.640
South Korea	3.372	1.819
Turkey	0.935	0.000
US	0.227	2.271
Others	9.076	8.209
Total	28.031	28.309
Revenues € million	52.498	51.849
Price	1872.8	1831.5

Czech butadiene rubber trade 2022

The Czech Republic exported a total of 28,031 tons of butadiene rubber in the first quarter in 2023 against 28,309 tons in the same period in 2022. Revenues were up slightly from 51,849 tons to 52,498 tons period January to March 2023, with average prices rising from €1831.5 per ton to €1872.8 per ton. Despite the higher prices this year the trend is set for lower prices in the second quarter.

The largest destination for Czech exports of butadiene rubber is India to where 4,198 tons was shipped in 2022 against 5,399 tons in the same period in 2021. Other important markets included Poland where exports amounted to 3,761 tons in the first quarter this year against 3,598 tons in the same quarter in 2022, and South Korea rising from 1,819 tons to 3,372 tons. Synthos at Schkopau has started the process of operating the butadiene rubber plant. The recommissioning was undertaken by Synthos in reaction to increased demand due partly to sanctioning of Russian imports of butadiene rubber into the EU. The plant capacity is 30,000 tpa.

Hungarian synthetic rubber Imports (unit-kilo tons)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
Butadiene Rubber	13.112	8.715
HBR	1.575	3.385
SBR	7.247	6.493
Other	4.472	8.566
Total	26.407	27.159
Hungarian synthetic rubber Imports (€ million)		
Product	***Jan-Feb 23***	***Jan-Feb 22***
Butadiene Rubber	29.778	15.685
HBR	4.377	8.251
SBR	18.839	12.876
Other	13.553	18.658
Total	66.547	55.469
Av € per ton	2520	2042

Hungarian synthetic rubber imports Jan-Feb 2023

Hungarian imports of synthetic rubber dropped slightly by volume in the first two months this year to 26,407 tons against 27,159 tons in the same period in 2021. Overall costs of synthetic rubber imports increased on average from €2042 per to €2520 per ton.

Butadiene rubber imports rose from 8,715 tons to 13,112 tons, with costs rising from €15.685 million to €29.778 million. Indonesia supplied 7,612 tons to the Hungarian market in January-February 2023 more than offsetting the disappearance of Russian butadiene rubber.

Imports of halogenated butyl rubber have been most affected by EU sanctions, but still continue to find their way into European markets. Russia sent 11,574 tons of halogenated butyl rubber to Hungary in 2022 against 17,074 tons in 2021.

Polish Synthetic Rubber Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
ESBR	7.325	3.757
Block SBR	4.914	13.757
S-SBR	7.065	3.659
Butadiene Rubber	15.408	11.584
Butyl Rubber	1.062	1.035
HBR	3.168	3.780
NBR	1.128	3.596
Isoprene Rubber	2.403	10.396
EPDM	10.984	11.712
Others	11.315	14.831
Total	64.773	78.107
Av € per ton	2,209.0	2,371.9

Polish rubber trade Jan-Mar 2023

Poland imported 64,773 tons of synthetic rubber in January to March this year against 78,107 tons in January to March last year. Due to EU sanctions imports of synthetic rubber from Russia into Poland slowed sharply in the second half of 2022 but have been given a lifeline with the extended date for sanctions. Isoprene rubber has thus far been excluded from sanctions and this now comprises the main share of rubber export shipments from Russia to Poland.

Products such as butadiene rubber and halogenated butyl rubber had seen imports drop to very small amounts after sanctions took effect in July. It seems now that these earlier sanctions have been loosened.

Poland imported 2,424 tons of halogenated butyl rubber from Russia in January to March this year from a total of 3,168 tons. For butadiene, imports from Russia amounted to 5,325 tons in the first quarter this year from the total of 15,569 tons. This made Russia the largest supplier to the Polish market followed by Czech imports which amounted to 3,027 tons.

Polish Exports of Synthetic Rubber (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
SBR	47.662	59.798
Butadiene Rubber	12.632	10.989
HBR	1.149	1.396
Others	9.671	14.862
Total	71.114	87.045

First quarter synthetic rubber exports amounted to 71,114 tons in the first quarter against 87,045 tons in January to March 2022. Exports of butadiene rubber from Poland amounted to 12,632 tons in January to March versus 10,989 tons last year.

Synthos Production in Poland (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Polystyrene	17.4	18.4
EPS	23.5	25.7
Synthetic Rubber	59.3	72.3

Synthos-production Jan-Mar 2023

Synthetic rubber production at Oswiecim for Synthos amounted to 59,300 tons in January to March 2023 from 72,300 tons in the same period in 2022. Synthos produced 17,400 tons of general polystyrene at Oswiecim in January to March versus 18,400 tons in the first quarter last year whilst expandible polystyrene fell from 25,700 to 23,500 tons.

A primary focus of Synthos in Poland includes the development of green energies not only for the company's own usage but also wider applications in the Polish economy. Orlen Synthos Green Energy (OSGE) has recently applied to the Ministry of Climate & Environment for a fundamental decision for six NPPs with BWRX-300 small modular reactors (SMRs). The decision will formally confirm that the investment in the nuclear plants is in line with the public interest and the policies implemented by the state, including energy policy. This decision will also authorise the investor to apply for a decision to determine the location and other decisions necessary for the preparation, implementation and operation of the facilities.

In December 2021, GE Hitachi, BWXT Canada and Synthos Green Energy (SGE) signed a Letter of Intent to cooperate in deploying BWRX-300 SMRs in Poland. OSGE is a joint venture between Synthos Green Energy SGE and PKN Orlen. In July 2022 OSGE submitted an application to Poland's National Atomic Energy Agency for the assessment of GE Hitachi Nuclear Energy's BWRX-300.

Central European aromatics and derivatives

Polish Exports of Benzene (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Czech Republic	7.700	13.724
Germany	28.068	27.644
Others	1.242	5.097
Total	37.010	46.465
Av € per ton	838.777	1000.139

Polish benzene exports Jan-Mar 2023

Polish exports of benzene totalled 37,010 tons in January to March against 46,465 tons in the same period last year. Average prices dropped to €838.8 per ton against €1000.1 per ton in January to March last year. Germany purchased 28,088 tons from Poland in the first quarter and the Czech Republic 7,700 tons. Benzene exports from Poland were lower in the first quarter due to the problems for Petrochemia Blachownia in receiving coal based raw materials from Ukraine. Petrochemia Blachownia is part of the Czech Agrofert group and announced a reduced operating load in January this year due to the war.

Polish Aromatic Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Adipic Acid	3.648	3.007
Ethylbenzene	32.990	29.269
Paraxylene	0.000	13.779
Phenol	20.924	29.597
Phthalic Anhydride	6.668	7.508
PTA	1.972	0.655
Styrene	19.220	27.597
TDI	16.804	19.290
Toluene	5.648	6.188

Polish-Czech aromatic imports Jan-Mar 2023

Phenol imports into Poland amounted to 20,924 tons in January to March 2023 for €27.3 million. Russia had been one of the main suppliers of phenol to Poland in the first half of 2022 although volumes in May started to show signs of softening even before EU sanctions were introduced. In January to March this year Germany was the dominant supplier of phenol to Poland, shipping 15,700 tons for €21.3 million.

Czech Aromatic Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Benzene	10.931	18.846
Toluene	1.802	2.011
Styrene	5.924	5.569

In other product areas, styrene imports amounted to 19,220 tons in the period January to March 2023 versus 27,597 tons in the same period in 2022 whilst ethylbenzene imports rose from 29,269 tons to 32,990 tons. Nearly all of the ethylbenzene imports come from the Czech Republic. Czech benzene imports dropped in the first quarter to 10,931 tons against 18,846 tons in the same period in 2022, whilst toluene imports dropped to 1,802 tons and styrene rose to 5,924 tons.

Spolana Caprolactam Exports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belgium	0.840	1.696
Germany	0.173	3.072
Italy	2.796	4.209
Slovenia	0.525	2.071
Switzerland	0.709	0.660
Others	0.067	0.026
Total	5.109	11.733
Av € per ton	1962.834	2277.897

Central European caprolactam market

Grupa Azoty Zakłady Azotowe Puławy decided to suspend caprolactam production from 10 March, together with the operation of the Melamine III unit. High costs were cited as the main factor behind the stoppage which will stay in place until further notice. In the first quarter Poland produced 27,300 tons of caprolactam against 43,400 tons in January to March last year.

The Czech Republic exported 2,407 tons of caprolactam in January for €4.969 million. All of the exports were shipped to European countries. Italy was the largest destination for Spolana's exports in 2022.

Polish PTA Exports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Germany	45.836	93.572
Lithuania	0.000	11.113
Switzerland	2.560	1.858
Turkey	1.518	0.440
Others	2.401	2.156
Total	53.011	109.138
Av Price €	898.276	848.333

Polish PTA exports Jan-Mar 2023

PTA exports from Poland amounted to 53,011 tons in January to March this year against 109,138 tons in January to March 2022, with average prices rising from €848.3 per ton to €898.3 per ton. The key factor this year behind the lower purchases was that Germany reduced purchases from 93,572 tons to 53,011 tons. Switzerland was the second largest destination for PTA export shipments, taking 2,560 tons.

Central European isocyanates & polyols

Hungarian TDI Exports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Belgium	7.684	8.144
Germany	1.321	2.585
Italy	5.474	7.084
Poland	5.012	6.512
Portugal	2.740	2.265
Romania	2.089	2.675
Spain	2.039	2.236
Turkey	5.093	7.411
Others	7.343	15.341
Total	38.795	54.253
Av € per ton	3204.9	2499.7

Hungarian MDI Exports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Czech Republic	1.143	1.473
Germany	3.154	3.402
Italy	1.575	0.875
France	1.640	1.377
UK	1.034	1.233
Poland	6.428	7.814
Romania	3.414	4.442
US	0.000	9.708
Others	7.354	10.285
Total	25.742	40.609
Av € per ton	2268.5	2465.6

Czech MDI imports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belgium	2.394	3.060
Germany	1.266	2.850
Hungary	3.256	1.352
Netherlands	1.169	0.921
Others	0.976	0..830
Total	9.062	9.014
Av Price € per ton	2601.8	2321.2

Polish MDI Imports (€ million)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Germany	23.243	30.620
Netherlands	10.035	10.752
Hungary	22.172	28.506
Belgium	12.125	19.724
South Korea	2.605	0.685
Others	5.673	5.409
Total	75.853	95.698
Ktons delivered	31.847	40.624
Av € per ton	2381.8	2355.7

Hungarian TDI-MDI exports Jan-Feb 2023

Hungarian TDI exports dropped in the first two months this year to 38,795 tons against 54,253 in the same two months in 2022. Average prices rose from €2499.7 per ton to €3204.9 in 2023. Higher prices helped meant that from €140.187 million to €124.341 million. Price rises were driven largely by feedstock costs, particularly for toluene where prices rose from €650.5 per ton in 2021 to €1088.5 in 2022.

Exports of TDI from Hungary are delivered to throughout Europe, with the largest destinations in Central Europe led by Poland and Romania. In West Europe Italy and Belgium are major markets whilst in Asia minor Turkey is a major recipient. Exports to Poland amounted to 31,663 tons in 2022 for €97.492 million, whilst volumes to Turkey amounted to 32,917 tons for €92.494 million.

Exports to Belgium dropped from 8,144 tons in the first two months last year to 7,684 tons in January to February 2023 whilst volumes to Italy fell from 7,084 tons to 5,474 tons. Shipments to Poland fell from 6,512 tons to 5,012 tons and Romania from 2,675 tons to 2,089 tons.

MDI exports from Hungary dropped in the first two months to 25,742 tons from 40,609 tons in the same period last year. The most significant drop in sales was the US where no shipments were made in the first two months against 9,708 tons in 2022. In contrast to higher TDI prices, MDI export prices dropped from €2465.6 per ton in January to February 2022 to €2268.5 per ton this year.

Poland was the largest destination for Hungarian MDI exports, shipping 6,428 tons in the first two months in 2023 versus 7,814 tons in the first same period in 2022. Romania is the second largest market in Central and South East Europe, taking 20,311 tons in the whole of 2022 versus 22,540 tons in 2021. In the first two months this year exports to Romania dropped from 4,442 tons to 3,414 tons.

MDI imports into the Czech Republic totalled 9,062 tons in January to March 2023 against 9,014 tons in the same period in 2022. Average prices rose from €2321.2 per ton to €2601.8. The leading supplier was Hungary which shipped 3,256 tons in the first quarter against 1,352 tons in the same period last year. TDI imports into the Czech Republic imports into the Czech Republic amounted to 1,718 tons in January to March this year versus 2,000 tons in January to March 2022.

MDI imports into Poland totalled 31,847 tons in January to March 2023 against 40,624 tons in January to March last year. Due to lower volumes overall costs for MDI imports into Poland dropped from €95.698 million to €75.853 million, with average prices rising slightly from €2355.7 per ton to €2381.8 in January to March 2023. Germany reduced shipments to €23.243 million by value down from €30.620 million last year, whilst imports from Hungary dropped from €28.506 million to €22.172 million.

Czech Polyol Imports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belgium	3.690	2.599
Germany	2.268	2.357
France	2.185	1.562
Netherlands	1.315	1.097
Romania	0.376	0.753
Slovakia	1.192	1.255
Others	1.325	1.130
Total	12.351	10.752
Av € per ton	2746.7	2682.7

TDI imports into Poland amounted to 16,804 tons in January to March against 20,747 tons in the same period in January to March 2022. Values in January amounted to €54.845 million, equating to €3263.8 per ton, against €53.709 million in total last year at a price of €2588.7 per ton. The cost of toluene was one of the factors behind the rise in TDI prices.

Czech polyol imports Jan-Mar 2023

Czech polyol imports increased in the first quarter to 12,351 tons against 10,752 tons in the same period in 2022, with average prices rising from €2682.7 per ton last year to €2746.7 in the first quarter in 2023. The leading supplier to the Czech market was Belgium which shipped 3,690 tons in the period January to March 2023 against 2,599 tons last year, followed by Germany which exported 2,268 tons down from 2,357 tons.

Polish Polyol Imports (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belgium	4.332	8.803
China	2.096	0.130
France	1.626	0.000
Germany	8.427	8.687
Netherlands	6.646	3.837
Romania	3.352	7.401
Saudi Arabia	1.422	0.000
South Korea	3.185	9.358
Others	2.600	4.250
Total	33.687	42.466
Price	2230.6	2574.8

Polish polyol trade Jan-Mar 2023

Polish polyol imports amounted to 33,547 tons in the first three months in 2023 against 42,466 tons in the same period in 2022. The major sources of imports came from Belgium, Germany and the Netherlands. Polyol import costs dropped in the first three months to €75.142 million from €109.344 million in January to March 2022 with average prices dropping from €2574.9 per ton to €2230.6 per ton. The largest source of imports came from Germany in the first three months, amounting to 8,427 tons against 8,687 tons in the same period in 2022.

Exports of polyols from Poland in the first quarter amounted to 14,992 tons against 13,986 tons in the same period in 2022. Destinations for deliveries were focused mostly on Europe, led by Italy taking 1,864 tons in the first quarter followed by Hungary with 1,672 tons and Germany 1,255 tons. Due to lower prices this year export revenues dropped from €41.773 million to €34.976 million.

PCC Rokita Product Sales (unit-kilo tons)		
Product Group	***Jan-Mar 23***	***Jan-Mar 22***
Polyurethanes	22.9	24.6
Chloralkalis	95.2	102
Chemical	5.9	7.1
PCC Rokita's sales (€ million)		
Product Group	***Jan-Mar 23***	***Jan-Mar 22***
Polyurethanes	61.1	73.0
Chloralkalis	79.7	52.7
Chemical	11.7	13.3
PCC Rokita's Prices (€ per ton)		
Product Group	***Jan-Mar 23***	***Jan-Mar 22***
Polyurethanes	2668.9	2968.3
Chloralkalis	837.4	516.9
Chemical	1977.6	1869.7

PCC Rokita Q1 2023

From its production structure PCC Rokita's chlorine division was the most successful in the first quarter. The chlorine segment's EBITDA rose to zl 202.379 million against zl 107.505 million in the same period in 2022. Despite lower numbers than in the third and fourth quarter last year pricing in the first quarter was still good enough to drive up revenues in the first quarter. In the first quarter of 2023, the prices of soda lye were still 128% higher than in the previous quarter.

By contrast to the chlorine division PCC Rokita's polyurethane segment recorded further declines in the first quarter. The EBITDA result dropped from zl 64.417 million in the first quarter last year to €17.738 in the first three months in in 2022.

European polyol market

There is currently a significant oversupply of polyols on the market, reinforced by the arrival of products from Asia supplied by Chinese producers or large chemical corporations with factories in Asia. The weak demand combined with extra supply has led to keen price competition in recent months resulting in lower profitability for European polyol producers. Polyester polyols intended to a large extent for the production of rigid foams recorded declines. This situation has resulted from the slowdown in construction.

Chimcomplex Financial Performance (€ million)		
	Jan-Mar 23	*Jan-Mar 22*
Revenues	85.074	121.052
Costs	77.448	105.146
Operating Profit	0.567	15.195
Net Profit	-1.659	11.995

The chemical industry in Poland as with elsewhere in Europe is struggling with persisting high electricity prices due to the prices of basic fuels, including gas and coal and an increase in the prices of CO2 emission allowances. These factors helped to suppress profitability for PCC Rokita in the first quarter.

Chimcomplex Q1 2023

Chimcomplex's turnover fell by 29.69% in the first quarter compared to the first quarter in 2022. This caused directly by the decrease in the quantities sold by the company due to lower demand in the European market. The operating result in the first quarter this year fell to €0.567 million compared to €15.195 million in the first quarter in 2022, mainly due to high costs for raw materials and utilities. However, the fall in revenues was faster than the reduction in the costs of raw materials and utilities, thus affecting the operational profitability.

Chimcomplex Sales (€ million)		
Product	*Jan-Mar 23*	*Jan-Mar 22*
Polyols	37.702	64.779
Chlor-alkali	44.135	41.092
Oxo alcohols	0.020	3.200
Others	3.217	11.981
Total	85.074	121.052

In the first quarter in 2023 polyols accounted for 44% of total sales where revenues dropped from €64.8 million in the first quarter last year to €37.7 million. Chloralkalis accounted for 51% of sales with revenues rising from €41.1 million to €44.135 million. Caustic soda prices accounted for the higher share of chloralkalis in total sales.

Investments by Chimcomplex in the first quarter were directed to the modernisation and increase of capacity of the chlorine plant, which already uses membrane cells, leading to the production of green hydrogen. Other investments included the modernisation and increase of capacity equipment of special polyols and oxo-alcohols, whilst improving the DOTP plant.

Central European organic chemical trade

Hungarian maleic anhydride exports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Austria	0.609	0.540
Germany	0.330	0.330
Italy	0.706	0.697
Poland	0.523	1.043
Slovenia	0.328	0.415
Others	0.653	1.005
Total	3.149	4.030
Av € per ton	1317.7	2192.7

Hungarian maleic anhydride exports Jan-Feb 2023

Hungary exported 3,149 tons of maleic anhydride in the first two months this year against 4,030 tons in the same period in 2022, with average prices dropping from €2192.7 per ton to €1317.7. Italy was the largest destination of exports in the first two months in 2023 followed by Austria and Poland.

MOL's maleic anhydride plant at Szazhalombatta possesses a capacity of 22,000 tpa, and the company is considering expansion. Due to the technical complications of transporting liquid maleic over large distances product sales are mostly limited to destinations no more than two days from the plant.

Hungarian imports of acrylonitrile (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Belarus	0.000	2.724
Germany	1.500	0.000
France	6.384	0.856
Netherlands	2.426	3.853
Russia	0.000	1.488
Others	1.366	0.090
Total	5.293	6.288
Av € per ton	2120.1	2205.6

Hungarian acrylonitrile imports Jan-Feb 2023

Hungary imported 5,293 tons of acrylonitrile in the first two months in 2023 against 6,288 tons last year. The Netherlands was the main source of imports in both years, shipping 2,426 tons in January to February 2023 versus 3,853 tons in 2022. Acrylonitrile prices dropped on average from €2205.6 per ton in the first two months last year to €2120.1 per ton in 2023.

Hungarian aniline imports Jan-Feb 2023

Aniline imports into Hungary increased from 18,854 tons in the first two months in 2022 to 27,541 tons in the same period in 2023. Inward shipments from China amounted to 7,251 tons which were delivered mostly in January.

Hungarian aniline imports (unit-kilo tons)		
Country	***Jan-Feb 23***	***Jan-Feb 22***
Belgium	8.713	0.000
China	7.251	0.000
Czech Republic	11.576	18.850
Others	0.000	0.004
Total	27.541	18.854
Av € per ton	1450.1	1629.5

Belgium supplied 8,713 tons in the first two months this year. BorsodChem-MCHZ supplied 11,576 tons from the Ostrava plant against 18,850 tons in the same period in 2022. Cost prices of aniline imports dropped from €1629.5 per ton to €1450.1 in 2023.

Polish organic chemical trade Jan-Mar 2023

The main feature of Polish organic chemical trade in the first quarter was the lower volumes compared to January to March 2022. Exports of organic chemicals fell from 439,200 tons in January to March last year to 314,400 tons, whilst imports into Poland dropped from 823,700 tons to 660,800 tons. High energy prices played a key role in driving up values last year which although have since come off the peak are still impacting on production and trade.

Polish Organic Chemical Trade		
Exports	***Jan-Mar 23***	***Jan-Mar 22***
Vol (kilo tons)	314.4	439.2
Value (€ million)	412.7	608.2
Imports	***Jan-Mar 23***	***Jan-Mar 22***
Vol (kilo tons)	660.8	823.7
Value (€ million)	1063.5	1344.3

Ethylene oxide imports into Poland totalled 4,304 tons in January to March versus 4,710 tons in January to March 2022. Poland stopped importing ethylene oxide from Russia in May last year. Regarding traditional trading partners imports of propylene and phenol from Russia have been sanctioned out of the Polish market and are not expected to restart in 2023 and for the foreseeable future.

Polish EO/PO Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
DEG	1.961	1.950
Ethylene Glycol	24.841	12.822
Ethylene Oxide	4.304	4.710
Propylene Glycol	5.365	5.200
Propylene Oxide	0.000	0.452

Methanol imports into Poland totalled 162,219 tons in January to March this year against 220,119 tons in the same period in 2022. Although Russia reduced supplies from 166,466 to 107,130 tons it still remained the largest source of imports. Already in December Poland had started to reduce shipments from Russia ahead of EU sanctions on Russian methanol which took effect from 8 January 2023. Contracts signed prior to 7 October have been allocated grace of up to 18 June for completion, but no new business was permitted.

Polish Organic Chemical Imports (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Acetic Acid	10.229	12.167
Acetone	1.406	1.894
Butadiene	17.846	23.900
DINP/DOP	4.526	7.561
Ethyl Acetate	5.355	4.071
Isopropanol	2.575	2.942
Lysine	11.448	15.841
Maleic Anhydride	3.349	3.411
Methanol	162.219	220.119
Propylene	25.436	49.799
VAM	4.376	5.284

For other organic chemical imports Poland imported 10,229 tons of acetic acid in January to March against 12,167 tons in January 2022. The US was the leading supplier in January to March, shipping 5,093 tons followed by the UK with 1,868 tons. Ethyl acetate imports into Poland amounted to 5,355 tons in January to March this year against 4,071 tons in January to March 2022. Belgium provided the largest share of imports.

Polish Imports of Acetic Acid (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Austria	0.360	0.403
China	1.179	0.598
Germany	0.459	0.488
Norway	0.325	0.195
UK	1.868	3.192
US	5.093	3.007
Others	0.943	0.000
Total	10.229	7.883

Regarding export activity in organic chemicals shipments of monochloroacetic acid (MCAA) rose sharply in the first quarter to 10,220 tons against only a few hundred tons in the same period in 2022. MCAA production is undertaken by the PCC Group at Brzeg Dolny. Other organic chemical exports include acetone where shipments amounted to 3,993 tons in the first quarter this year vs 2,600 tons in January to March 2022.

Central European methanol markets

Czech Methanol Imports (unit-kilo tons)		
Country	*Jan-Mar 23*	*Jan-Mar 22*
Germany	2.039	2.026
Norway	0.793	0.264
Russia	2.923	9.348
Poland	13.311	8.869
Others	0.973	0.347
Total	20.039	20.855
Av € per ton	382.165	423.162

Poland Methanol Exports to Central Europe		
Country	*Jan-Mar 23*	*Jan-Mar 22*
Austria	16.067	20.033
Czech	16.788	19.521
Germany	22.461	27.483
Romania	7.344	3.522
Slovakia	11.468	6.507
Ukraine	7.364	0.253
Hungary	4.889	5.815
Others	0.102	2.528
Total	86.483	85.662
Av € per ton	389.985	413.951

Polish Methanol Imports (unit-kilo tons)		
Country	*Jan-Mar 23*	*Jan-Mar 22*
Azerbaijan	4.981	0.000
Belgium	8.363	0.000
Finland	0.000	17.184
Germany	11.979	27.967
Netherlands	2.222	0.000
Norway	14.752	7.989
Russia	107.130	166.466
Venezuela	12.706	0.000
Others	0.097	0.587
Total	162.229	220.194
€ price per ton	304.840	347.799

Hungarian Methanol Imports (unit-kilo tons)		
Country	*Jan-Feb 23*	*Jan-Feb 22*
Austria	0.255	0.173
Germany	4.393	1.237
Netherlands	3.232	0.991
Poland	1.231	0.048
Russia	0.000	5.895
Slovakia	2.621	2.204
Others	1.130	0.217
Total	12.861	10.766
Av € per ton	437.4	488.0

Central European methanol trade Jan-Mar 2023

Czech imports of methanol amounted to 20,039 tons in the first quarter this year against 20,855 tons in the same quarter in 2022. Russia accounted for 2,293 tons against 9,348 tons in January to March last year whilst imports from Poland increased from 8,869 tons to 13,311 tons. Prices per ton for methanol imports into the Czech Republic dropped from €423.162 in the first quarter last year to €382.165 in January to March 2023.

Imports of methanol into Poland totalled 162,229 tons in January to March this year versus 220,194 tons in January to March 2022 with Russia reducing shipments from 166,466 tons to 107,130 tons. Average prices amounted to €304.840 per ton against €347.799 per ton last year. Poland has been seeking alternative sources to Russian before the full embargo takes effect; Venezuela supplied 12,706 tons in March and Belgium 8,363 tons.

Exports of methanol from Poland amounted to 86,483 tons in January to March against 85,662 tons in January to March 2022. Revenues from Polish exports of methanol rose from €10.004 million in the first quarter this year to €11.569 million in January to March 2023, with export prices dropping from €413.951 per ton to €389.985 per ton. Ukraine imported 7,364 tons of methanol from Poland in the first three months.

Methanol imports into Hungary increased from 10,766 tons in the first two months in 2022 to 12,861 tons in same period in 2023. Imports from Russia dropped from 5,895 tons to zero and from Slovakia increased from 2,204 tons to 2,621 tons. The largest suppliers to the Hungarian market this year included Germany which provided 4,393 tons in January to February and the Netherlands which supplied 3,232 tons.

Ukrainian methanol deliveries March 2023

In addition to buying methanol from Poland Ukrainian gas producer Ukrgasdobycha, received 2,000 tons of methanol in April from the Norwegian company Equinor.

Earlier this year Ukrgasdobycha received 6,000 tons of methanol from USAID. The company plans to increase gas production by 1 billion cubic metres this year in order to completely abandon the purchase of gas abroad.

Since the beginning of the war, Ukrgazvydobuvannya has switched to the purchase of methanol from European suppliers. Assistance from USAID will create an additional reserve of strategic reserves and ensure an uninterrupted production process until the end of the heating season.

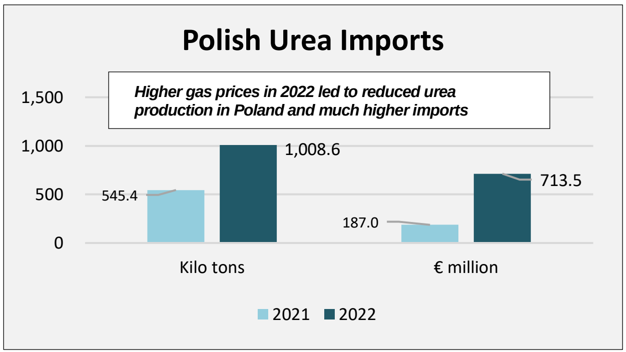
Central European chemical production

Polish Chemical Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Caustic Soda Liquid	97.1	111.2
Caustic Soda Solid	20.0	21.8
Caprolactam	27.3	43.4
Acetic Acid	0.5	0.6
Ammonia (Gaseous)	472.0	620.0
Ammonia (Liquid)	22.3	29.8
Pesticides	15.3	19.4
Nitric Acid	499.0	595.0
Nitrogen Fertilisers	421.0	510.0
Phosphate Fertilisers	56.6	80.7
Potassium Fertilisers	56.3	71.7

Azoty Pulawy-caprolactam & melamine shutdowns

Production of base chemicals in Poland was largely down in the first quarter as raw material costs affected profitability levels. Grupa Azoty claims that the EU's climate policy has upset the supply-demand balance on the European chemical market driving down production in numerous sectors.

Natural gas in the EU is currently significantly more expensive than in the Middle East or the US. In February this year, BASF announced the liquidation of production installations in Ludwigshafen, significantly reducing the production of ammonia and liquidating the production of caprolactam.



Indicative of the impact of natural gas prices on production costs and trade, Polish imports of urea increased from 545,400 tons in 2021 to 1.009 million tons in 2022. Costs increased from €187.0 million against €713.5 million in 2022 with prices rising from €343 per ton to €707. The largest sources of imports in 2022 came from Oman, Russia and Algeria.

Grupa Azoty production April 2023

Grupa Azoty produced 43.6% less nitrogen fertilisers in April 2023 than in April 2022, whilst Grupa Azoty Puławy reduced production by 52.3%.

Grupa Azoty Production (unit-kilo tons)		
Product	***Mar-Apr 23***	***Mar-Apr 22***
Nitrogen Fertilisers	469	788
Compound Fertilisers	76	117
Speciality Fertilisers	26	25
Pigments	4	3
Urea	101	258
Oxo alcohols	5	9
Polyamide	21	32

Urea production takes place at the Pulawy and Police plants in the Azoty group, and production for both plants dropped from 143,000 tons to 48,000 tons.

Oxo alcohol production at Kedzierzyn dropped from 4,000 tons in April 2023 to 2,000 tons whilst polyamide production at Tarnow dropped from 15,000 tons to 10,000 tons. On 9 March Grupa Azoty Puławy decided to suspend the production of caprolactam and the operation of the Melamine III unit from 10 March until further notice. Production on the remaining installations (Melamine I and Melamine II) was suspended in the summer of 2022.

Duslo-renewables and high profits in 2022

Due to high energy costs Agrofert's Slovak subsidiary Duslo is focusing heavily on the development of renewables including the construction of its own wind farm and a possible solar collector park. Duslo is Slovakia's largest consumer of natural gas, which is used for ammonia production. Duslo's sales rose by more than three-quarters to €1.02 billion last year due to the hikes in energy prices. Last year's substantial rise in energy costs did not stop Duslo from increasing its net profit to €107.790 million from €5 million in 2021. The company was helped by previous investments in a modern and less energy-intensive ammonia plant.

Slovakia new gas import routes

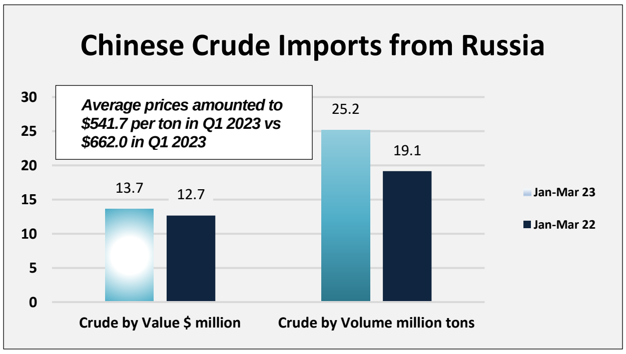
Slovakia wants to create a new corridor for natural gas imports to Europe to provide alternatives to Russian supplies via the Yamal pipeline.

In cooperation with countries such as Romania and Bulgaria with the aim of creating a new corridor from Azerbaijan to Central and East Europe.

RUSSIA

New markets for Russian naphtha and hydrocarbon exports to China

The EU embargo on oil and oil products has forced Russia to seek out alternative destinations for naphtha sales. Deliveries to Brazil, Tunisia and commercial centres in the Middle East are reported to have risen and traders expect this trend to continue. Singapore tripled imports of Russian naphtha in the first quarter of 2023, receiving 741,000 tons for this period against 261,000 tons in the fourth quarter last year. Singapore re-exports naphtha to South Korea, China, Taiwan and Japan. Singapore is not a party to the EU embargo on the supply of petroleum products from Russia, but the country's authorities urge companies to exercise caution in working with Russian oil and oil products.



Regarding hydrocarbon exports to China, Russian crude shipments totalled €13.7 billion in the first quarter this year versus $12.7 billion in the same period in 2022. Due to lower prices China's imports by volume increased by 32% to 25.2 million tons. Russia's share of Chinese crude imports increased marginally this year, rising from 15.2% in 2022 to 17.0% in 2023.

Prices of China's crude imports from Russia averaged $541.7 per ton which was down from $662.0 per ton in the first quarter in 2022. China increased imports of Russian gas by pipeline in the first quarter by 2.2 times, to $1.76 billion. LNG supplies increased by 67.7% to 1.62 million tons. Overall oil and gas exports accounted for 56% of total export shipments to China in the period January to March 2023.

Compared to 2021, the price of logistics services for Russian chemical producers has almost tripled. In 2021 for example, delivery costs to China amounted to about $200 per ton, whilst today it is around $700 per ton

The cost of container transportation from Russia to Turkey and vice versa is $500 per ton. From China to Turkey, it is 2.5 times cheaper. At the same time, the distance between Russia and Turkey is less than between China and Turkey.

Logistics for Russian chemical companies

Russian chemical companies faced a number of new logistical problems in the first quarter in 2023 including the closure of the ports in the Azov basin partly due to the war in Ukraine and partly due to a decrease in the availability of vehicles for transportation. Tariffs also increased in addition to an increase in the number of customs inspections of imported goods, whilst also facing an increase in restrictions on the shipment of dangerous goods through the Far East.

Despite new challenges, the number of container trains in the direction of the Far East was increased in the first quarter. Moreover, preferential tariffs were allocated for the transportation of containers and the development of services for export through St. Petersburg.

One of the main problems for shipments through the Far East is still the high congestion of railways and port infrastructure. Chemical companies complain about the inability to predict the timing of deliveries in this way of both products sent for export and imported goods. Moreover, in view of the rising number of sabotage attacks on Russian railways security has become a new concern particularly considering the lack of protection.

Russian base chemical and fertiliser production Q1 2023

The price index for Russian chemicals and chemical products showed a 17% fall in the first quarter this year compared to the first quarter of 2022. Prices for rubber and plastic products were less affected and even rose very slightly by 0.2%. Overall, the price index for manufacturing industries decreased by 4% in the first quarter.

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Caustic Soda	299.0	327.0
Soda Ash	905.0	919.0
Ammonia	4,400.0	4,900.0
Nitrogen Fertilisers	3,196.0	3,056.0
Phosphate Fertilisers	1,120.0	1,076.0
Potash Fertilisers	1,684.0	2,437.0

Regarding base chemical production, Russian ammonia production totalled 4.4 million tons in January to March 2023 against 4.9 million tons in the same period in 2022 whilst caustic soda dropped from 327,000 tons to 299,000 tons.

Potash fertiliser production in Russia dropped in the first quarter from 2.437 million tons last year to 1.684 million tons in the same period in 2022, whilst the production of nitrogen fertilisers rose from 3.056 tons to 3.196 million tons in the same period in 2023. In the area of plant protection agents, the production of insecticides amounted to 2,200 tons which was 36% up in January last year, fungicide production increased by 31.4% to 4,100 tons and herbicides increased by 31,200 tons to 11,200 tons.

Russian Petrochemical Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Ethylene	1,178.2	1,161.8
Propylene	739.1	769.4
Benzene	337.0	361.0
Butanols	73.0	62.5
Methanol	953.8	1,289.8
Acetone	37.1	75.1

Russian petrochemical production Jan-Mar 2023

Russian ethylene production rose slightly in January to March 2023 to 1.178 million tons against 1.162 million tons in the first quarter in 2022. Propylene production dropped from 769,400 tons to 739,100 tons and benzene fell from 361,000 tons to 337,000 tons.

Russian butanol production rose from 62,500 tons in January to March last year to 73,000 tons in January to March 2023. Butanols was one of the few product areas which saw domestic growth in 2022. Of all the organic chemicals sanctions have had the greatest impact on methanol with production dropping 1.290 million tons in the first three months in 2022 to 953,800 tons in the same period this year. All producers reported declines in the first quarter.

Russian Polymer Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Plastics in Bulk	2,660.0	2,772.0
Polyethylene	936.0	915.0
Polystyrene	142.2	149.3
PVC	228.5	275.0
Polyamide	34.2	50.2
Synthetic Rubber	357.0	431.0
Synthetic Fibres	46.0	50.1

Of the Russian methanol producers Shchekinoazot reduced production from 390,788 tons to 321,284 tons whilst Metafrax reduced production from 323,823 tons to 280,100 tons, and Gazprom Methanol reduced production to 193,770 tons from 228,260 tons.

Russian rubber & polymer production Jan-Mar 2023

Russian production of synthetic rubbers in primary forms amounted to 357,000 tons in January to March 2023 compared to 431,000 tons in January to March 2022. Those rubber producers affected by sanctions, are trying to diversify their supplies so as not to depend so much on the domestic tyre market. The decline in tyre manufacturing of 21.4% in 2022 provided the main factor behind the reduction in synthetic rubber production, although other areas of consumption helped to offset the decline. The domestic industry produced 10.0 million tyres in the first quarter of 2023, 37% less than in 2022.

The production of plastics totalled 2.660 million tons in the first quarter this year against 2.772 million tons in the same period last year. The production of polyethylene rose from 915,00 tons to 936,000 tons in the first quarter in 2023. Polystyrene production amounted to 142,200 tons in January to March against 149,300 tons in the same period in 2022. Although lower than in 2022 the market is showing resistance. The production of finished polymer products related to construction is still growing at a high rate which is attributed to an increase in the volume of housing commissioning.

The production of synthetic fibres decreased in January to March 2023 to 46,000 tons compared to 50,100 tons in the same period in January to March 2022. The production of polymers in Russia in January to March amounted to 1.684 million tons versus 2.437 million tons in the same period last year. Of the bulk polymers PVC declined from 275,000 tons in the first quarter in 2022 to 228,500 tons.

Russian petrochemical projects

Amur Gas Chemical Complex-higher costs

The Amur Gas Chemical Complex is now estimated by SIBUR to cost significantly more than the original plan after the exit of Western partners, although specific details have not been given. The target start-up of 2026 is provisional and may need delaying further depending on the reconfiguration of technologies.

The launch of the Amur Gas Chemical Complex was originally scheduled for 2024-25 but sanctions have meant that technology suppliers such as Linde and Tecnimont have had to be replaced. Construction began in 2020 and its original cost was estimated at $10 billion.

The Amur Gas Chemical Complex and the Amur Gas Processing Plant (GPP) are the two largest projects within the framework of a single gas chemical cluster for gas processing, being built near Svobodny in the Amur Region.

SIBUR started construction of hexene plant at Nizhnekamsk

SIBUR's construction of a hexene plant with a capacity of 50,202 tpa has started at the site of Nizhnekamskneftekhim. Production is scheduled to be commissioned in the second half of 2024. The EP contractor for the project is the Russian engineering company NIPIGas.

SIBUR's own technology developed at Tomsk will be used for hexene which is required for HDPE and LDPE production.

The new production facility at Nizhnekamskneftekhim will be integrated into the ethylene consumption chain, using ethylene from the EP-600 complex under construction as a raw material. The launch of the project will strengthen technological independence in the polymer production cycle. The hexene plant project provides for a closed flare system with minimal emissions from the flare into the atmosphere and a closed-type water cycle.

Nizhnekamskneftekhim EP-600 olefin complex to be completed in 2024

Construction of Nizhnekamskneftekhim's EP-600 olefin complex is currently scheduled to be completed in the second half of 2024. Besides the construction of ethylene and propylene the complex also includes plants for ethylbenzene and styrene with respective capacities of 400,000 tpa and 350,000 tpa.

SIBUR planning propylene expansion at Tobolsk

SIBUR plans to build an additional plant for propylene production at Tobolsk in the Tyumen Region at the ZapSibNeftekhim site. The project involves the construction of a propane dehydrogenation unit and the production of polypropylene, making use of the existing energy and raw material infrastructure of the Tobolsk site. ZapSibNeftekhim is the largest petrochemical complex in Russia, with a total capacity of 2.5 million tpa of base polymers (1.5 million tpa of polyethylene and 1 million tpa of polypropylene). The company is located 10 km east of Tobolsk.

A government incentive for building petrochemical plants means that SIBUR will receive a reverse excise tax on raw materials from the propane dehydrogenation unit at Tobolsk. In order for a company to obtain the right to a reverse excise tax on petrochemical raw materials, according to the requirements of the law, it must invest at least 110 billion roubles in the modernisation of production in Tobolsk.

Gazprom Neft-polyolefin feasibility study at Omsk refinery

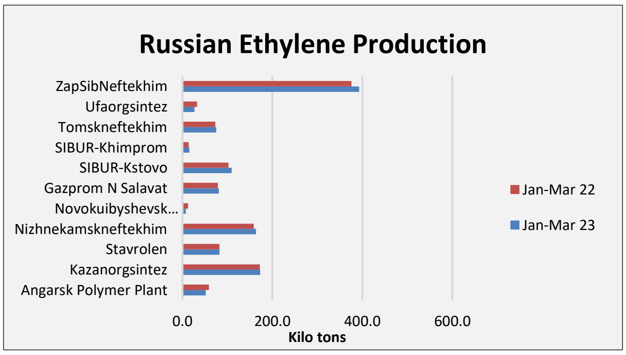
Gazprom Neft intends to complete a feasibility study on the creation of polyethylene and polypropylene production facilities at the Omsk oil refinery site by the end of the year. The company is also considering the production of polyols, isocyanates and other products at the Omsk refinery. Ideas for petrochemical investments have been put forward before for Omsk and the aim now is to try and decide whether to proceed with investment plans. Particularly the question of licenses poses the most difficult challenge to the project feasibility study and if resolved this year would allow Gazprom Neft to proceed to the design stage.

Russian petrochemical markets

Russian Ethylene Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Angarsk Polymer Plant	51.8	59.1
Kazanorgsintez	172.6	171.8
Stavrolen	82.1	82.7
Nizhnekamskneftekhim	163.2	158.5
Novokuibyshevsk Petrochemical	7.5	12.6
Gazprom n Salavat	81.1	78.8
SIBUR-Kstovo	109.3	102.6
SIBUR-Khimprom	15.5	14.3
Tomskneftekhim	75.2	72.8
Ufaorgsintez	26.8	32.5
ZapSibNeftekhim	393.0	375.8
Total	1178.2	1161.8

Russian ethylene production, Jan-Mar 2023
Russian ethylene production totalled 1.178 million tons in the first quarter in 2023 against 1.162 million tons in January to March 2022.

Regarding individual producers ZapSibNeftekhim at Tobolsk produced 393,000 tons, up from 375,800 tons from January to March 2022. Nizhnekamskneftekhim produced 163,200 tons of ethylene in January to March against 158,500 tons, whilst Kazanorgsintez increased production from 171,800 tons to 172,600 tons. Providing Kazanorgsintez with ethane is one of the key issues for increasing production volumes, either from the main source from the Orenburg Gas Processing Plant in the south Urals or the Tatar source from the Minnibayevo Gas Processing Plant. At the end of March this year an accident occurred on the pipeline linking the Minnibayevo plant with Kazanorgsintez. This was attributed to the poor condition of the pipeline.



To operate at full capacity ethane requirements for Kazanorgsintez comprise about 780,000 tpa. In 2022, about 580,000 tons of ethane fraction was received, whilst in 2023 550,000 tons has been set as the target, taking into account the condition of both pipelines linking Orenburg and Minnibayevo to Kazanorgsintez.

Other important ethylene producers included SIBUR-Kstovo in the Nizhniy Novgorod region which produced 109,300 tons versus 102,600 tons. SIBUR-Kstovo does not consume ethylene internally but sells to RusVinyl for PVC production and SIBUR-Neftekhim for PVC production. For RusVinyl Solvay reached agreement to sell its stake to SIBUR in March for $433 million.

Russian Propylene Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Angarsk Polymer Plant	26.9	33.3
Kazanorgsintez	13.9	14.2
Lukoil-NNOS	64.4	80.5
Stavrolen	33.0	32.5
Nizhnekamskneftekhim	82.6	82.3
Novokuibyshevsk	8.3	9.5
Omsk Kaucuk	15.7	13.7
Polyom	39.1	49.7
Gazprom n Salavat	36.2	35.6
SIBUR Kstovo	37.8	46.5
SIBUR-Khimprom	24.4	22.1
Tomskneftekhim	40.7	39.7
Ufaorgsintez	38.1	44.2
ZapSibNeftekhim	277.9	265.6
Total	739.1	769.4

In Bashkortostan Gazprom neftekhim Salavat produced 81,100 against 78,800 tons, whilst Ufaorgsintez reduced production from 32,500 tons to 26,800 tons. Stavrolen at Budyennovsk produced 82,100 tons of ethylene which was down slightly from 82,700 tons from last January to March 2022.

Russian propylene production, Jan-Mar 2023
Russian propylene production amounted to 739,100 tons in January to March 2023 against 769,400 tons in the same quarter last year. ZapSibNeftekhim produced 277,900 tons in January to March this year up from 265,600 tons. In Tatarstan Nizhnekamskneftekhim produced 82,600 tons of propylene against 82,300 tons in Q1 2022 whilst Kazanorgsintez produced 13,900 tons against 14,200 tons.

In Bashkortostan Gazprom neftekhim Salavat produced 36,200 tons of propylene in January to March 2023 versus 35,600 tons, whilst Ufaorgsintez reduced production from 44,200 tons to 38,100 tons. In the Nizhny Novgorod region SIBUR-Kstovo reduced production of propylene from 46,500 tons to 37,800 tons. Lukoil-NNOS at Kstovo reduced production from 80,500 tons to 64,400 tons which was lower due to some maintenance undertaken.

Russian Propylene Exports (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Lukoil-NNOS	3.0	25.5
SIBUR-Kstovo	0.0	8.4
Angarsk Polymer Plant	0.0	5.1
Stavrolen	7.5	6.6
Total	10.5	45.6

Russian propylene exports & sales Jan-Mar 2023

Propylene exports from Russia amounted to 10,500 tons in the first quarter in 2023 against 45,600 tons in January to March 2022. Due to the loss of European business Lukoil-NNOS reduced export shipments from 25,500 tons to 3,000 tons in January to March this year whilst SIBUR-Kstovo reduced shipments from 8,400 tons 2022 to zero. While European markets have been gradually closed for Russian exporters and China has become the main market for Russian exports.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Angarsk Polymer Plant	6.3	4.6
SIBUR-Kstovo	33.4	41.5
Akrilat	4.3	6.9
LUKoil-NNOS	56.0	48.0
Stavrolen	3.3	5.6
Others	6.1	5.5
Total	106.2	107.1

Russian sales of propylene on the domestic merchant market amounted to 106,200 tons in the first quarter against 107,100 tons in the same quarter last year. The largest propylene supplier to the domestic market was Lukoil-NNOS, shipping 56,000 tons against 48,000 tons in January to March 2022 followed by SIBUR-Kstovo which reduced from 41,500 tons to 33,400 tons.

ZapSibNeftekhim purchased 14,533 tons of merchant propylene in January to March this year versus 30,996 tons in the same period in 2022, sourced mostly from other SIBUR plants.

Russian Propylene Domestic Purchases (unit-kilo tons)		
Consumer	***Jan-Mar 23***	***Jan-Mar 22***
Saratovorgsintez	48.831	45.651
Volzhskiy Orgsintez	2.586	3.039
Akrilat	7.183	11.499
SIBUR-Khimprom	8.864	8.295
Omsk-Kaucuk	14.291	3.603
ZapSibNeftekhim	14.533	30.996
Moscow Refinery	2.453	0.613
Ufaorgsintez	4.489	3.459
Khimprom Kemerovo	0.491	2.050
Plant of Synthetic Alcohol	0.252	0.294
Others	1.496	0.504
Total	105.469	110.809

Saratovorgsintez increased purchases of merchant propylene in the first quarter to 48,831 tons from 45,651 tons in January to March 2022, mostly supplied by Lukoil from its Kstovo refinery and the remainder from Stavrolen.

Other consumers of merchant propylene in Russia include Akrilat which reduced purchases from 11,499 tons in the first quarter last year against 7,183 tons in the same period in 2022. Akrilat uses propylene in the production of acrylic acid and acrylates. SIBUR-Khimprom increased purchases in January to March 2023 to 8,864 tons from 8,295 tons last year. Propylene is used by SIBUR-Khimprom in the production of oxo alcohols.

Russian Butadiene Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
ZapSibNeftekhim	50.307	80.593
Nizhnekamskneftekhim	38.555	61.545
Togliattikaucuk	12.510	12.560
Sterlitamak Petrochemical Plant	6.495	8.690
Omsk Kaucuk	11.505	8.615
Total	119.372	172.003

Russian butadiene production Jan-Mar 2023

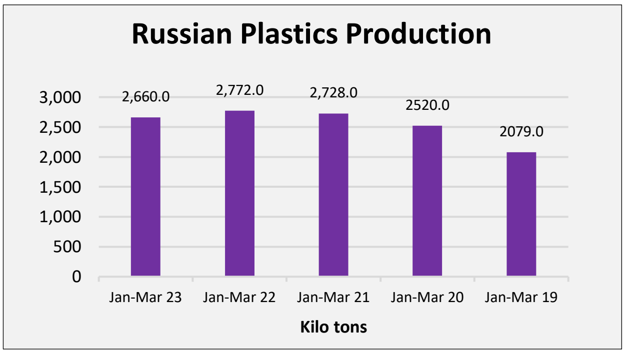
Russian butadiene production totalled 119,372 tons in the first quarter against 172,003 tons in the same period in 2022. The largest producers ZapSibNeftekhim and Nizhnekamskneftekhim both showed lower production as 2022 progressed.

ZapSibNeftekhim produces butadiene only for merchant market sales whilst Nizhnekamskneftekhim processes most of its butadiene into rubber SKD-N and SKD-L are butadiene rubbers based on neodymium and lithium catalysts.

Russian bulk polymers

Russian plastics production Jan-Mar 2023
Russian bulk plastics production amounted to 2.660 million tons in January to March this year which was 4% down against the same period in 2022. Production was still higher than in 2020.

Start-up of the ZapSibNeftekhim complex at Tobolsk in 2019 increased production volumes significantly after 2020 until slowing down in the second half of 2022 due to sanctions and economic isolation from the Western markets. In the first quarter this year the domestic market appears to have stabilised with polymer production amounting to 931,000 tons in March against 914,000 tons in the same month last year.



At the start of the second quarter prices for the main brands of basic polymers polyethylene and polypropylene have seen some acceleration. By mid-April, the cost of some types of basic plastics had increased by 10-15% compared to the beginning of the year. The most significant increase in prices in March was in the segment of HDPE, averaging 4.5% higher compared to February. Most significantly, HDPE pipe grades rose in price by 10 roubles per 1 kg (up to about 130,000 roubles per ton) against the background of a shortage. Since the beginning of the year, the cost of polyethylene for pipes has increased by an average of 8%, to 125-144,000 roubles.

The cost of LLDPE also increased (by an average of 2.3%). Despite sufficient supply, polypropylene also rose in price by an average of 3.8% against the backdrop of an increase in purchasing activity. The exception among the basic polymers was LDPE which fell in price against the backdrop of weak demand,

Producers call the price increase a "logical correction" after a prolonged fall last year. Among the reasons are demand against the background of the beginning of the construction season, as well as the weakening of the rouble. Polymer processors expect that the exchange will be able to restrain the rise in price.

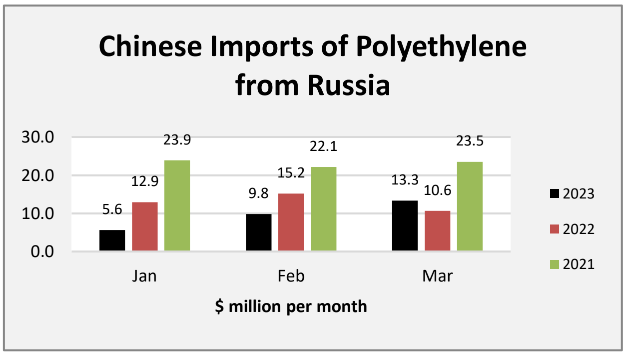
Despite neutralising the effects of sanctions Russia still lacks speciality polymers for certain sectors such as medical and automotive. SIBUR is attempting to fill parts of the market which previously depended on Western imports. Despite the opportunities for Russian companies to develop its own production to replace imported products sanctions provide major hurdles to long term growth.

Russian Plastics Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Pipes, tubes and hoses and their fittings	250.7	209.7
Plates, sheets, film and strips of polymer	376	373.5
Other plates, sheets, film plastic porous	100.4	110.2
Other plates, sheets, plastic non-porous	123.3	110.3

Russian polyethylene pipe production Jan-Mar 2023
Russian plastic pipe production amounted to 250,700 tons in the first quarter against 209,700 tons in the same period in 2022. The reasons for strong growth in the pipe sector are partly due to the construction of utility pipelines in the territories captured from Ukraine. Around two thirds of the total volume of pipe polymers is occupied by polyethylene grades PE100. In 2022, 548,000 tons of this polymer were processed which was up 30% over 2021 from 422,000 tons. Another 20% growth is forecast for 2023, raising the total amount to 650,000 tpa. Besides polymer pipes other types of plastics production either grew slightly or maintained the levels of last year.

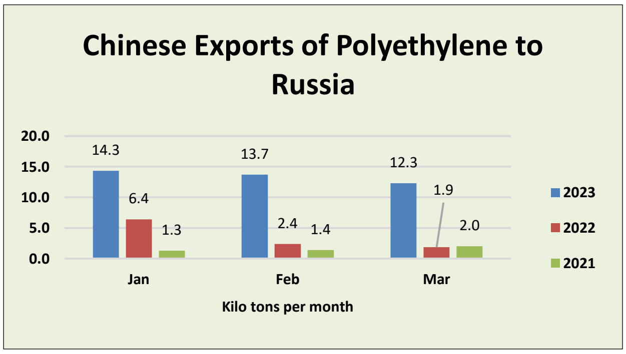
Russian polyethylene trade Jan-Mar 2023
The total losses of the Russian economy from the cessation of foreign trade in polymers with countries that have imposed sanctions has been estimated to run into many billions of dollars taking into account

the impact on businesses. Rough estimates have analysed direct losses from lower imports and exports of polymers to and from Russia at around 0.5% of GDP.



China is often cited as the market where Russia can replace its lost European trade. Imports of polyethylene grades from China have shown significant growth in response to international sanctions, but Russian producers have not responded so much with export activity.

In fact, Russian exports of polyethylene to China dropped in the first quarter this year to $42.2 million versus $63.3 million in the same period in 2022 and $112.3 million in the same period in 2021.

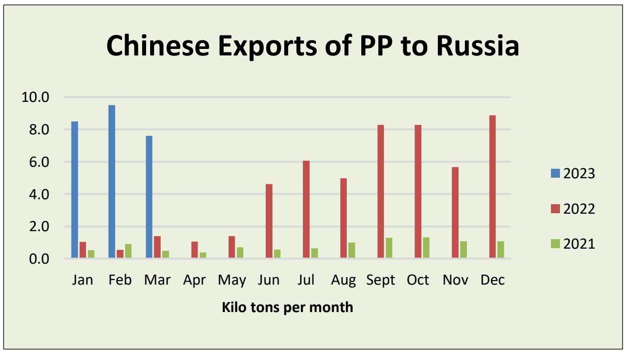


By volume this meant that Russian export of all grades of polyethylene dropped from 69,500 tons in the first quarter in 2021 to 38,800 tons in the same period in 2022 and 28,700 tons in the first three months in 2023. It is not clear if Russian exports to China this year have been affected by availability.

By contrast inward shipments of polyethylene from China into Russia increased in the first quarter to 40,300 tons versus 10,700 tons in 2022 and 4,700 tons in 2021. The largest category of polyethylene imports this year has consisted of copolymers.

Logistics for Russian polymer exporters

One of the most difficult challenges facing Russian polymer exports in reorientating business towards China and other markets involves the question of logistics. Exports to Europe comprised transportation costs at favourable rates that allowed the businesses to grow relatively quickly.

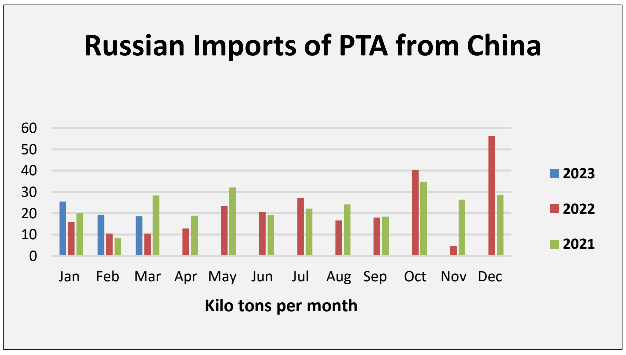


As producers are now reorienting themselves to Turkey, the Middle East and Asia, transportation costs are several times higher. In some cases, transport costs do not allow Russian producers to compete in these markets without state support or some form of subsidisation. This may become more difficult in time as the state budgets priority of supporting the military in Ukraine takes its toll. Russian Railways has already raised prices this year, and thus costs of selling into China erodes much of the product profit margin. Overall SIBUR Holding plans to export up to 500,000 tons of polyolefins to China and Turkey in 2023, against 300,000 tons in 2022.

Russian-Chinese polypropylene trade Jan-Mar 2023

Both exports and imports of polypropylene from Russia to China increased in the first quarter this year as Russian producers secured new customers to replace those lost from the EU. Imports from Russia into China amounted to 40,600 tons in the first quarter in 2023 against 2,200 tons in the same period in 2022 with import values rising from $3.6 million to $57.1 million. Exports of polypropylene, mainly copolymers, amounted to 23,900 tons in the first three months in 2023 against 2,900 tons in the same period in 2022, with values rising to $36.1 million from $5.0 million.

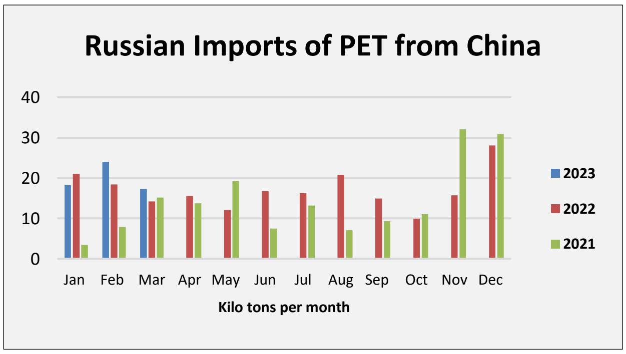
Paraxylene-PTA-PET



Russian PTA imports Jan-Mar 2023
Russian PTA imports from China increased in the first quarter to 63,368 tons versus 36,691 tons in the same period last year. Last year lower imports from China were recorded against 2021 when in the first quarter import shipments totalled 56,885 tons. This year values of imports amounted to $50.156 million in the first quarter this against $29.7 million in the same period in 2022 and $34.7 million in 2021. Nearly all of the PTA imports from China were shipped to Ekopet at Kaliningrad.

Russian PET trade Jan-Mar 2023
In the first quarter Russian import values of PET from China January this year amounted to $78.444 million against $75.343 million in January to March 2022. By volume imports rose from 53,766 tons to 59,506 tons. In the first quarter 2021 imports totalled 26,548 tons and the increase since then has been required to meet Russian demand.

Imports of PET are required to meet growth in the Russian market. A number of new greenfield projects have been cancelled in recent years, which has meant that production has lagged behind consumption trends. The only tangible new investment involves the construction of a PET plant at Pskov by Titan-Polymer.



Polief increased revenue in 2022 by 20%
Polief's revenue amounted to 7.8 billion roubles in 2022 which is around $100 million at the current exchange rate, up from 6.5 billion roubles ($84 million) in 2021. Due to higher costs the company's net profit more than halved from 501.4 million roubles (46.468 million) in 2021 to 230.1 million roubles ($2.968 million) in 2022.

Polief spent 359 million roubles in 2022 versus 287.2 million roubles in 2021 before, whilst other expenses decreased by 29.6% from 658.8 million to 463.6 million roubles. The main focus of investment has been on using recycled PET granules. The new technologies launched in September last year make it possible to produce almost 145,000 tpa of granules which contain 25% recycled plastic. The first batch of bottled water in packaging made from Polief raw materials with recycled plastic was produced in April 2023 by the Russian mineral water manufacturer Krasny Klyuch.

Polief Bashkortostan
- PTA capacity 367,000 tpa
- PET capacity 264,000 tpa

Vivilen is a brand that combines several types of products rPET, rPE, rPP, which include secondary raw materials derived from consumer plastic waste. Polief can now produce PET granules for food packaging with the involvement of around 25% secondary material. This will allow to involve up to 1.7 billion plastic bottles per annum used in the re-production.

Recycled PET dropped by 5% in Russia in 2022
Despite the measures taken to support the development of PET recycling consumption of recycled PET in Russia in 2022 decreased by 5% against 2021 to 199,600 tons. The production of PET flakes also decreased to 177,300 tons. Almost 100% of imports are directed to the production of polyester fibre and PET sheet.

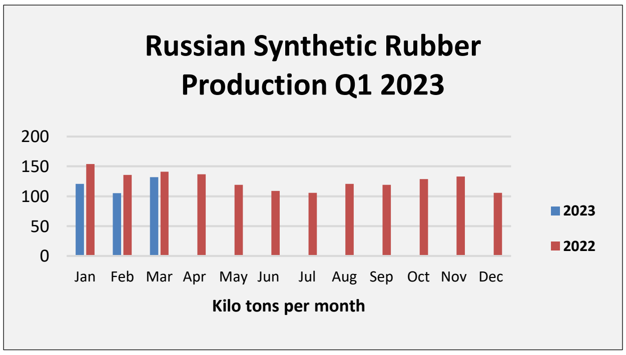
Synthetic rubber

Russian C4 Purchases (unit-kilo tons)		
Consumer	***Jan-Mar 23***	***Jan-Mar 22***
Omsk Kaucuk	32.0	17.0
Nizhnekamskneftekhim	34.9	36.5
Togliattikaucuk	38.3	37.7
Sterlitamak Petrochemical Plant	1.0	5.4
Total	106.2	96.6

Russian rubber feedstocks Jan-Mar 2023

C4 purchases made by Russian synthetic rubber producers amounted to 106,200 tons in the first quarter in 2023 against 96,600 tons in the same period in 2022. The largest fall in merchant purchases made for the whole of 2022 took place at Nizhnekamskneftekhim, falling from 208,600 tons to 90,700 tons. The reduction was partly due to increased production of C4s by Nizhnekamskneftekhim and reduced synthetic rubber production.

Russian butadiene production totalled 119,372 tons in the first quarter against 172,003 tons in the same period in 2022. The largest producers ZapSibNeftekhim and Nizhnekamskneftekhim both showed lower production as 2022 progressed. ZapSibNeftekhim produces butadiene only for merchant market sales whilst Nizhnekamskneftekhim processes most of its butadiene into rubber SKD-N and SKD-L are butadiene rubbers based on neodymium and lithium catalysts.



Russian synthetic rubber production Jan-Mar 2023

Synthetic rubber production in Russia amounted to 358,000 tons in January to March 2023 against 431,000 tons in the same quarter in 2022. Regarding the domestic rubber market in Russia, tyre output started 2023 as it finished 2022 with plants running at lower than full capacity. The share of domestic consumption of rubbers in the Russian market decreased from 63.7% (at the end of 2021) to 50.3% (at the end of 2022). By volume tyre production in Russia amounted to 65,800 tons in the first quarter against 105,600 tons in the same period in 2022.

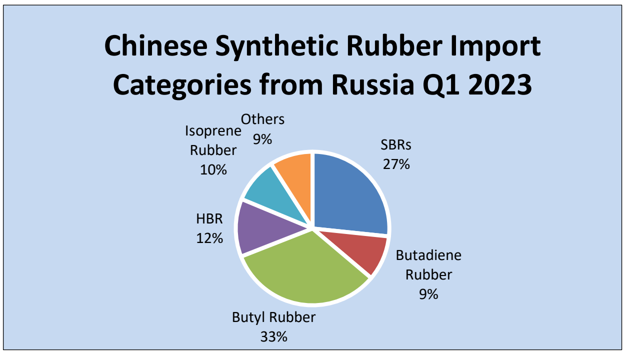
Russian Tyre Production (unit-kilo tons)		
Product	***Jan-Mar 23***	***Jan-Mar 22***
Car Tyres	51.6	92.1
Lorry tyres	12.5	10.1
Agricultural tyres	1.7	3.5
Total	65.8	105.6

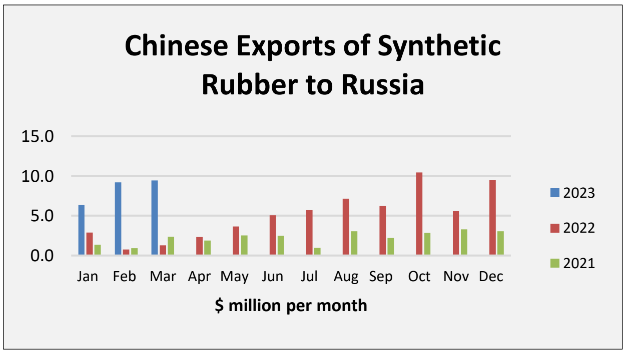
Nizhnekamskneftekhim reduced the production of synthetic rubber in the first quarter by 37% over the same period in 2022. This was attributed to the decline of the automotive industry in Russia and the sanctions imposed on European tyre manufacturers from buying rubber from Russia. Other factors include the difficulties in the production of rubbers due to dependence on foreign components, whilst the fire that occurred in the isoprene monomer plant in December restricted output.

Russian government provides incentive for rubber producers

The Russian government has approved a bill to provide reverse excise tax to synthetic rubber producers from 1 January 2024 when they conclude an agreement with the Ministry of Energy. The excise tax will depend on the exchange prices of natural rubber in the Singapore market, as well as butane and butadiene in the Rotterdam market. With unfavourable exchange prices, producers will receive a reverse excise tax on synthetic rubber from the budget.

The aim of excise tax is to minimize the impact of fluctuations in global rubber prices, including both natural and synthetic. The maximum amount of compensation to producers is set at 9,150 roubles per ton (€105.6) of rubber produced.





The deadline for the producers to conclude an agreement with the Ministry of Energy of Russia is by the end of 2023. By signing the agreement, companies will undertake to return the previously reimbursed excise tax if it is terminated or expires. For the first time, the Ministry of Finance announced the initiative to introduce a reverse excise tax on synthetic rubber in April 2021.

Russian Chinese rubber trade Jan-Mar 2023

Both Russian synthetic rubber exports to China and imports from China increased sharply in the first quarter this year due to the geographical reorientation of trade. Sales markets for rubber producers have changed dramatically since last year. In 2021 Germany was the main buyer of Russian rubbers (20% of Russian exports), but in 2022 China took the leading position with 21% of Russian exports.

Despite the rise in Chinese trade the positive news for the Russian synthetic producers involves the reprieve in that the full EU sanctions on synthetic rubber do not take full effect until 30 June 2024.

Exports to China totalled 64,829 tons by volume in the first quarter, against 33,700 tons in the same period last year, with values jumping from $74.800 million to $149.339 million. The largest category of exports was butyl rubber accounting for 33% of shipments.

Imports of synthetic rubber increased by value from $24.987 million in the first three months in 2023 from $4.918 million in the same period in 2022. By volume imports from China amounted to 10,847 tons against 2,240 tons. Overall Russia reduced exports of rubbers, rubber and products by 32.4% in 2022 over 2021 in value terms to $2.4 billion, whilst imports of all rubbers dropped by 11.4% to $4.29 billion.

Sterlitamak Petrochemical Plant to expand isoprene rubber plant

Sterlitamak Petrochemical Plant (SPP) has outlined investment plans to increase the production of neodymium polyisoprene at its Sintez-Kaucuk division. Currently Sintez-Kaucuk can produce up to 28,400 tpa of neodymium polyisoprene, but the planned phased increase in capacity will make it possible to obtain 40,000 tpa in the first phase and up to 96,500 tpa with the full completion of the project.

Sintez-Kaucuk is the only Russian manufacturer of isoprene rubber on a neodymium catalytic system. The company produces neodymium polyisoprene grades: SKI for the production of tyres and rubber goods, as well as SKI-PM developed for the manufacture of food and medical products, which is characterized by environmental cleanliness.

Russian Hydrogen-Sterlitamak

Russian Hydrogen took over the management of the Sterlitamak Petrochemical Plant at the start of 2023. Russian Hydrogen has been striving to consolidate various chemical enterprises since 2021 in order to create a basis for hydrogen production and consumption.

The portfolio already includes Crimean Titan and the Crimean Soda Plant, although if Ukraine takes back Crimea from Russia this ownership rights may be questioned. Russian Hydrogen is controlled by Rotenberg and thus possesses direct ties to the Kremlin.

Russian synthetic rubber exports to the EU and sanctions

Russian quotas have been established for imports of synthetic rubber into the EU area consisting of a total of 562,973 tons to be completed by 30 June 2024 in addition to 752,475 tons of carbon black. These volumes extended over a 16-month period exceed the annual import figures that were imported from Russia prior to the war. The extension not only gives Western tyre manufacturers opportunity to adapt to alternative raw material suppliers, but also allows Russian producers more than a year to redirect its exports to other regions. Producers have already increased sales to China which they can build upon whilst at the same time having access to the EU market to mid-2024.

Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Shchekinoazot	321.284	390.788
Gazprom Methanol	193.770	228.260
Metafrax Chemicals	280.100	323.823
Akron	20.015	27.665
Azot Novomoskovsk	9.320	51.390
Angarsk Petrochemical	8.963	8.667
Azot Nevinnomyssk	21.763	32.056
Tomet	83.179	200.592
Ammoni	15.449	26.652
Totals	953.843	1289.893

Russian methanol production Jan-Mar 2023

Russia produced 953,843 tons of methanol in the first quarter in 2023 against 1,289,893 tons in the same period in 2022. All producers reported declines whilst Azot at Novomoskovsk showing the largest proportional fall from 51,390 tons to 9,320 tons.

Shchekinoazot reduced production from 390,788 tons to 321,284 tons whilst Metafrax reduced production from 323,823 tons to 280,100 tons. Gazprom Methanol reduced production to 193,770 tons from 228,260 tons.

Tomet produced 83,179 tons of methanol in January to March 2023 versus 200,592 tons last year whilst Ammoni in Tatarstan reduced methanol production from 26,652 tons to 15,449 tons.

Russian Methanol Balance (unit-kilo tons)		
	Jan-Mar 23	***Jan-Mar 22***
Production	953.846	1289.893
Exports	447.168	586.201
Domestic Sales	373.797	434.256
Captive/Inventory	132.881	269.436

Russian methanol market balance Jan-Mar 2023

Lower exports combined with lower domestic merchant sales and internal processing all impacted on the Russian methanol market in the first quarter in 2023. The main sector affected in the domestic market was in demand for formaldehyde and resins. Only gas processing showed some slight increase.

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Azot Novomoskovsk	17.3	10.1
Akron	0.0	4.3
Metafrax Chemicals	123.8	125.0
Gazprom Methanol	97.9	91.1
Tomet	21.2	79.9
Shchekinoazot	187.0	275.8
Total	447.2	586.2

Russian methanol exports & market overview Jan-Mar 2023

Russian methanol exports amounted to 447,168 tons in the first quarter in 2023 versus 586,201 tons in the same period in 2022. Shchekinoazot reduced exports from 275,800 tons to 187,000 tons whilst Metafrax Chemicals reduced shipments from 125,000 tons to 123,800 tons this year.

Russian methanol exports to Belarus increased to 64,175 tons in January to March 2023 against 53,051 tons in January to March 2022. Exports to Kazakhstan in the first quarter in 2023 dropped to 7,242 tons from 9,917 tons last year whilst more significantly shipments to Poland dropped from 106,359 tons to 67,225 tons.

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	***Jan-Mar 23***	***Jan-Mar 22***
Belarus	64.175	53.051
China	156.470	0.000
Finland	74.800	222.911
Kazakhstan	7.242	9.917
Latvia	1.230	3.413
Lithuania	2.134	27.014
Netherlands	20.814	63.452
Poland	67.225	106.359
Romania	0.000	26.488
Slovakia	0.000	49.035
Turkey	50.962	6.600
Ukraine	0.000	11.916
Others	0.000	8.945
Total	447.587	589.763

After the Russian invasion Poland became the conduit for Russian shipments to South-East Europe but has fallen since the first sanction date for methanol was announced from 7 October last year. Romania and Slovakia have not been able to receive methanol from Russia since the end of February and thus imports fell to zero in both cases. In the fourth quarter last year Metafrax Chemicals started to supply the Chinese market through the Nakhodka-Vostochny terminal to compensate the loss of European business. However, rail distances make this activity much less profitable than through the Hamina-Kotka terminal.

Tomet exported only 21,200 tons in the first three months versus 79,900 tons in the same period last year. In addition to the external sanctions which affect methanol exports, Tomet is also under legal investigation inside Russia over alleged embezzlement by the former owners. Tomet has since been auctioned but with no successful outcomes.

Gazprom Methanol increased exports slightly in the first three months from 91,100 tons to 97,900 tons. The largest destination for Russian methanol exports in the first quarter was China, taking 156,470 tons. In addition to China deliveries to Turkey have increased in the past year as producers strive to reduce dependency on the European market. A total of 50,962 tons was supplied to Turkey in the first quarter which was transported through the ports of Kavkaz and Temyruk.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Azot Nevinnomyssk	0.806	7.633
Azot Novomoskovsk	0.000	35.023
Metafrax Chemicals	101.026	92.750
Gazprom Methanol	86.201	106.181
Tomet	77.726	111.373
Shchekinoazot	100.225	67.986
Ammoni (Mendeleevsk)	7.913	13.310
Total	373.897	434.256

Russian methanol domestic sales, Jan-Mar 2023

Merchant sales of methanol on the Russian domestic market amounted to 373,897 tons in January to March this year versus 434,256 tons in January to March 2022.

Domestic demand has held up on the surface despite the declines seen mainly in formaldehyde processing. Even at the highest level of consumption including internal processing and merchant sales it does not provide a substitute for export activity. Domestic consumption dropped in 2022 over 2021 due in part to the decline in formaldehyde production.

Tomet supplied 25,720 tons to the domestic merchant market in January to March against 39,591 tons in the same period in 2022. The largest consumer for Tomet is Togliattiazot where methanol is used for the production of urea-formaldehyde concentrate.

Russian Formaldehyde Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar 22***
Pigment	8.865	9.094
Shchekinoazot	7.388	8.661
Akron	31.153	38.496
Metafrax	71.096	94.692
Sverdlov Plant	2.125	4.764
Khimsintez	9.324	14.454
Uralkhimplast	10.717	11.307
Nizhnekamskneftekhim	41.367	18.915
Gazprom Methanol	0.000	0.000
Metadynea	9.396	13.359
Total	191.431	213.741

Gazprom Methanol reduced domestic shipments of methanol from 106,181 tons in January to March last year to 86,201 tons in January 2023. Previously formaldehyde was produced by Gazprom Methanol, but the assets were sold in 2021.

Shchekinoazot increased domestic sales from 67,896 tons in the first quarter in 2022t to 100,225 tons in January to March 2023. Metafrax Chemicals increased merchant shipments from 92,750 tons to 101,026 tons.

Metafrax Chemicals-strategy to end of 2024

The Board of Directors of the Metafrax Group Management Company has approved a strategy for adapting the business to new conditions for the period until the end of 2024. The strategy defines the general lines of the adaptation system, the first of which includes the development of a new geography of sales and the corresponding logistics in foreign markets in the face of high inter-country competition and sanctions pressure. Methanol is still one of the main businesses of Metafrax, but the company intends to expand its presence in the Russian market in various products such as melamine and paraformaldehyde.

Formaldehyde production amounted to 191,431 tons in January to March 2023 versus 213,741 tons in the same three months in 2022. Metafrax reduced production from 94,692 tons to 71,096 tons whilst Akron reduced production from 38,496 tons to 31,153 tons.

At the end of the first quarter the market showed signs of better performance and production of 71,659 tons in March was the highest number since May last year. Nizhnekamskneftekhim was the second largest producer in the first quarter, producing 41,367 tons against 18,915 tons in January to March 2022.

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar***
Angarsk Petrochemical company	8.265	9.532
Azot Nevinnomyssk	4.937	4.232
Gazprom neftekhim Salavat	21.598	15.485
SIBUR-Khimprom, Perm	7.361	7.063
Total	42.161	36.312

Russian Isobutanol Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar***
Angarsk Petrochemical Company	5.233	6.770
Gazprom neftekhim Salavat	12.578	7.972
SIBUR-Khimprom, Perm	13.049	14.212
Total	30.860	28.954

Russian Butanol Exports (unit-kilo tons)		
N-Butanol	***Jan-Mar 23***	***Jan-Mar 22***
Gazprom neftekhim Salavat	5.8	1.0
SIBUR-Khimprom	0.0	0.4
Angarsk Petrochemical	2.8	0.8
Azot Nevinnomyssk	0.4	1.0
Dmitrievsky Chemical Plant	0.0	0.0
Total	9.0	3.2
Isobutanols	***Jan-Mar 23***	***Jan-Mar 22***
Gazprom Neftekhim Salavat	3.5	9.1
SIBUR-Khimprom	1.5	6.6
Angarsk Petrochemical	0.0	0.0
Dmitrievsky Chemical Plant	0.1	0.5
Total	5.0	16.1

Russian Acetone Production (unit-kilo tons)		
Producer	***Jan-Mar 23***	***Jan-Mar***
Ufaorgsintez	8.1	10.6
Kazanorgsintez	14.2	13.8
Novokuibyshevsk Petrochemical	8.7	10.3
Omsk Kaucuk	6.1	12.0
Total	37.1	46.7

Russian Plasticizer Trade 2023 (unit-kilo tons)		
Exports		
	Q1 23	***Q1 22***
DOTP	2.133	3.383
Imports		
DOP	0.275	0.000
DOTP	0.132	1.975
DINP	5.522	5.365
Total	5.929	7.340

Russian butanol production Jan-Mar 2023

Russian normal butanol production rose from 36,312 tons in January to March last year to 42,161 tons in January to March 2023. Gazprom neftekhim Salavat was the largest Russian producer, increasing production to 21,598 tons from 15,485 tons in January to March 2022.

Isobutanol production in Russia increased from 28,954 tons to 30,860 tons in January to March 2023. Gazprom neftekhim Salavat increased production from 7,972 tons to 12,578 tons, whilst SIBUR-Khimprom reduced production from 14,212 tons to 13,049 tons.

Normal butanol exports rose from 3,200 tons in the first quarter last year to 9,000 tons in the first three months this year, including an increase in shipments by Gazprom neftekhim Salavat from 1,000 tons to 5,800 tons. Isopropanol exports fell from 16,100 tons in January to March 2022 to 5,000 tons this year. Gazprom neftekhim Salavat reduced shipments from 9,100 tons to 3,500 tons whilst SIBUR-Khimprom reduced shipments from 6,600 tons to 1,500 tons.

Russian oxygenated solvents Jan-Mar 2023

Russian acetone production dropped from 46,700 tons in the first quarter last year to 37,100 tons in the same period in 2023. Omsk Kaucuk produced 6,100 tons of acetone against 12,000 tons whilst Kazanorgsintez produced 14,200 tons versus 13,800 tons. Acetone has sanctioned by the EU, preventing Russian exports and new markets are being sought by producers.

As a result of surplus availability ethyl acetate imports dropped sharply last year. In January 105,880 tons were imported which was 40% lower than in December and 78% down against the same month in 2022. The main batches of imported ethyl acetate were supplied from China where prices are 10-15% lower than from domestic plants.

Russian producers have reduced the production of ethyl acetate and butyl acetate because these products have a shelf life (nine months from the date of production), and also in order not to overpack the warehouse and not freeze assets.

Russian plasticizer trade Jan-Mar 2023

Russian plasticizer exports dropped from 3,383 tons in the first quarter in 2022 to 2,133 tons in the first quarter this year. Imports of plasticizers dropped from 7,340 tons in January to March 2022 to 5,929 tons in the same period in 2023. Nearly all of the imports this year have comprised 5,522 tons.

Kazakhstan & Uzbekistan

Raw materials for polyolefin production in Kazakhstan

Kazakhstan's raw material base for petrochemical projects based at Atyrau comes from the Tengiz field which yields a high content of ethane (up to 14%), butane and propane. Tengizchevroil has previously liquefied and exported one part of the gas another part was pumped inside the oil reservoir to maintain the necessary pressure in the wells, and the remainder was simply flared as an unclaimed product. The tightening of international and national environmental legislation has raised the question of handling these products, including the development of petrochemicals.

Polyethylene project Kazakhstan

Kazakhstan has disclosed a preliminary estimate of the cost of the plant for the production of polyethylene, which is planned to be built in partnership between KazMunaiGaz and SIBUR. Previous attempts to build a polyethylene plant have failed due to partners withdrawing.

The cost of construction of the jv Silleno gas chemical complex in Kazakhstan has been estimated to amount to around $7.6 billion, although costs could rise after the ethane pipeline has been constructed. The plant's total capacity is planned at 1.25 million tpa consisting of two lines each with 625,000 tpa. The project schedule will become clearer after the FEED stage has been completed; at this stage 2028 is cited as the possible completion date.

SIBUR's share in the project is currently 40% but could drop if a third participant enters the project. SIBUR is also in the process of obtaining a 40% stake in KPI's 500,000 tpa polypropylene project at Atyrau.

The resource base for the Silleno complex is the Tengiz oil and gas field with an abnormally high ethane content (up to 16%). Gas from Tengiz will be supplied to a gas separation unit (GSU) with a capacity of 9.1 billion cubic metres of dry gas with an extraction of up to 1.5–1.6 million tpa of ethane supplied through the pipeline to the site of the gas chemical plant. It is additionally possible to use gas from Kashagan. Technologies for the two PE lines have been selected from Chevron Phillips Chemical and Univation. UOP is most likely to become the contractor for the construction of the GSU.

Kazakh MTBE export activities

Kazakhstan started exports of MTBE in 2022, for the first time. Shymkent Petrochemical Company (SHNH) in 2021 completed the construction of an enterprise for the production of 57,000 tpa of MTBE and 81,000 tpa of powdered polypropylene. The demand of the Kazakhstan market for octane-increasing additives is about 80,000 tpa. In addition to SHNH, they are also produced by Neftekhim at Pavlodar at 20,000 tpa.

Kazakh aromatic production & exports

The Atyrau Refinery plans to increase the production and export of aromatic hydrocarbons in 2023 to a target of 208,300 tons of paraxylene and 35,700 tons of benzene. However, it is possible that the actual production will be less than the planned plans due to the possible transition of the plant to fuel mode against the background of the expected shortage of motor fuel in Kazakhstan.

Export of paraxylene from Atyrau in 2022 was carried out from January to August, after which production was suspended due to the transfer of the plant to fuel mode. In 2022 76,000 tons of paraxylene was exported from Kazakhstan (mainly to China), which was 46% more than a year earlier. Benzene was exported only in January-May amounting to 6,500 tons.

Uzbek Polyethylene Domestic Consumption (unit-kilo tons)

Regions	*Jan-Mar 23*	*Jan-Mar 22*
Tashkent	48%	48%
Samarkand	12%	11%
Fergana	11%	9%
Namangan	10%	10%
Andijan	6%	5%
Others	13%	17%
Total	100%	100%

Uzbek polyethylene consumption Q1 2023

Consumption of polyethylene decreased by 3.3% in Uzbekistan in the first quarter to 40,000 tons, based on an average monthly sales volume of 13,333 tons. Film and injection moulded polyethylene accounted for 36% and 26% of market consumption respectively, whilst pipe grade accounted for 11% of sales.

Contents from Issue No 390