CIREC monthly NEWS

Chemical industry reporting for Central and South East Europe
Supplemented by developments in Russia & neighbouring states

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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 Poland dropped from 202,400 tons in January to May 2022 to 152,800 tons this year whilst propylene fell from 196,400 tons to 133,500 tons
- Grupa Azoty's launched the polypropylene project at Polimery Police on 22 June
- Hungarian TDI exports dropped in the first four months this year to 78,395 tons against 105,489 tons in the same four months in 2022
- MDI exports from Hungary dropped in the first four months to 53,302 tons from 80,385 tons in the same period last year
- For imports of all forms of polypropylene, Czech inward shipments fell from 223,331 tons in January to May 2022 to 219,396 tons in January to May this year

Regional methanol markets

- Imports of methanol into Poland totalled 308,668 tons in January to May this year versus 395,529 tons in January to May 2022, with Russia reducing shipments to Poland from 185,351 tons to 107,130 tons
- Exports of methanol from Poland amounted to 156,865 tons in January to May against 166,812 tons in January to May 2022
- Russia produced 1.684 million tons of methanol in the first five months in 2023 against 2.048 million tons in the same period in 2022

Russian synthetic rubber production and trade

- Synthetic rubber production in Russia amounted to 624,000 tons in January to May 2023 against 687,000 tons in the same period in 2022. Despite the decline this year May production volumes rebounded strongly to 146,000 tons, which amounts to an increase of 22.7% over the same period in 2022 and 12.9% higher than in May 2021
- Russian butadiene production totalled 219,115 tons in the first five months against 269,559 tons in the same period in 2022
- Overall Russian exports of synthetic rubber to China totalled $303.1 million in the period January to May 2023 against $174.4 million in 2022. By volume Russian shipments amounted to 200,975 tons in the first five months versus 101,029 tons last year

Petrochemical projects

- The grassroots Olefin 111 complex at Plock which is under construction includes a new 740,000-tpa steam cracker and an upgrade of an existing 300,000-tpa ethylene unit
- Irkutsk Oil Company (INK) has launched a pilot helium plant at the Yarakta oil and gas condensate field in the Irkutsk region. Due to global shortages, there is a strong potential for new helium capacity, but export opportunities may be limited
- Construction of Nizhnekamskneftekhim's EP-600 olefin complex is currently scheduled to be completed in the second half of 2024, with start-up in 2025

CENTRAL and SOUTH EAST EUROPE

Hungarian Crude Imports Jan-Apr 2023		
Country	*Kilo tons*	*€ per ton*
Azerbaijan	90.323	527.447
Croatia	188.610	589.050
Iraq	225.427	439.009
Kazakhstan	364.727	550.260
Russia	1229.892	333.119
Others	0.697	503.979
Total	2099.676	410.298

MOL crude purchases 2023

Hungary will ask the EU for a one-year extension of an exemption from sanctions against Russia for MOL and for Slovnaft to export products refined from Russian oil to the Czech Republic. MOL needs one more year to complete investment at its Slovak refinery Slovnaft that would allow a further shift to non-Russian crude. MOL owns refineries in landlocked Hungary and Slovakia, both of which are fed by the Druzhba pipeline's southern spur. Slovakia receives nearly all of its crude oil from Russia via the Druzhba pipeline but plans to cut the proportion this year. Last year, only about 5% of Slovnaft's oil intake was non-Russian but this will rise to about 30%-35%, or 2 million tons, by the end of 2023.

Russia accounted for 58.6% of MOL's crude purchases in the first four months this year from the total volume of 2.1 million tons, but by value the share only amounted to 46.8%. The EU price cap meant that Russian crude equated to €333.1 per ton which is much lower than other sources from Croatia, Iraq and Kazakhstan. Although Russia is the dominant source of imported crude into Hungary at present, efforts continue to develop other sources.

Polish Imports of Crude Oil Jan-May 2023		
Country	*Vol (million tons)*	*€ per ton*
Saudi Arabia	5.304	564.4
Lithuania	0.013	565.4
Russia	1.150	316.4
Nigeria	0.645	609.8
Norway	2.965	556.1
US	0.371	611.7
UK	0.612	605.9
Total	11.059	537.3

MOL and the Slovak refinery Slovnaft have agreed with JANAF on a fee for the use of the Adria pipeline, which plays an important role in securing alternative oil supplies for the CEE region. Although the fee was considered high the companies had no choice but to accept the offer from JANAF. Slovnaft has been using the Adria pipeline more actively since February this year. However, both Slovnaft and MOL believe that the current agreement does not create a lasting and competitive basis for supplies via the Adria pipeline to Slovakia.

Czech crude imports Jan-May 2023

The Czech Republic imported 2.962 million tons of crude oil in the first five months this year for €1.343 million, equating to €453.5 per ton. This compares against 2.796 million tons in the same period in 2022 for €1.663 million, at €594.5 per ton. Russia supplied 1.492 million tons in January to May 2022 at €545.2 per ton. This increased to 1.927 million tons in 2023 which due to the price cap was bought at only €362 per ton.

The Adria crude oil pipeline runs from the Omišalj oil terminal on the Croatian island of Krk through Croatia and then through the northern branch to Hungary and Slovakia, where it connects to the Druzhba pipeline in Shahy. The eastern part of the pipeline supplies Bosnia and Herzegovina and Serbia.

The Orlen Group in Poland has secured further supplies of crude oil from Norwegian fields in the North Sea. The agreement signed with BP provides for the supply of up to 6 million tons of raw material during the year for the Plock refinery. The first tanker with oil will arrive at Naftoport in Gdansk in the third quarter. Currently, 100% of oil goes to Poland from directions other than Russia, such as from the North Sea, West Africa, the Mediterranean, as well as the Persian and Mexican Gulfs.

Orlen may be interested in buying a stake in the Schwedt refinery (PCK) in order to ensure supplies to its own gas-station network in Germany. The main sticking point is the ownership of the plant, with Rosneft still holding a 54% stake even if the German authorities have taken operational control of PCK. The Schwedt refinery, which supplies the bulk of fuels for Berlin, had been operating at up to 60% capacity earlier this year after losing its main route for Russian oil supplies. Deliveries have been helped by a link with the Polish port of Gdansk and an agreement with Kazakhstan for 100,000 tons of crude a month. Longer term PCK Is looking to the expansion of the Rostock-Schwedt pipeline and is seeking €400 million in government aid for the upgrade.

Central European Olefin Production, Trade & Projects

PKN Orlen Production (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Ethylene	152.8	202.4
Propylene	133.5	196.4
Butadiene	26.7	28.8
Toluene	0.5	4.3
Phenol	17.9	19.4
Polyethylene	128.9	139.5
Polypropylene	115.6	146.9
PVC	92.8	128.8

Olefin 111 project outline

Designed to increase Plock's ethylene production capacity by 60% to 1.04 million tpa from 640,000 tpa, the Olefins 111 project also will include construction of five additional units for production of ethylene oxide, ethylene glycols, pyrolysis gasoline, ETBE, and styrene to expand the site's range of derivates supply to domestic and export markets.

The project also includes the closure of Plock's more than 40-year-old, original 340,000-tpa ethylene unit.

Polimex Mostostal and Naftoremont-Naftobudowa-Olefin 111 project

Polimex Mostostal and Naftoremont-Naftobudowa signed contracts in July with Orlen for the construction of the Olefin 1111 project. The scope of the work includes the construction of steel structures, overground pipelines and underground network installations. The total remuneration for the consortium is to amount to zl 3.872 billion (€868.4 million), with 45.13% of the value attributable to Polimex-Mostostal and its subsidiary. For both entities, this project is the largest order in their history. Multi-discipline works under the new agreement are to be completed only in the first half of 2027.

Thus far in the construction process the huge wash tower has been installed which is the largest component of the Olefins III Complex. It will be used in the production of ethylene oxide. From the Port of Gdansk, the column was delivered down the Vistula to Płock. Most of the large-size elements will be installed later this year. So far, about 1100 cargoes have been imported from China, Korea, India, Spain and Belgium, of which over 300 are oversized cargoes.

Polish petrochemical production Jan-May 2023

Ethylene production in Poland dropped from 202,400 tons in January to May 2022 to 152,800 tons this year whilst propylene fell from 196,400 tons to 133,500 tons. Butadiene production at Plock dropped to 26,700 tons from 28,800 tons. In the plastics sector polyethylene production dropped to 139,500 tons in January to May 2023 versus 128,900 tons in corresponding period last year and polypropylene dropped from 146,900 tons to 115,600 tons.

PKN Orlen is assessing the construction of a new ethylene pipeline is to run from Płock to Wloclawek, allowing the transport to Anwil. The route of the pipeline has been defined and indicated in the environmental impact report of the project, as well as in the draft local spatial development plans of individual municipalities. Basically, the route of the new pipeline for the most part runs close to the existing ethylene pipeline.

Anwil uses ethylene for the production of PVC supplied by pipeline directly from Orlen's petrochemical installations in Płock. Chlorine produced in Anwil in the process of brine electrolysis, is supplied by pipeline from IKS SOLINO.

Changes to Olefin 111 project required due to sanctions and the war in Ukraine

PKN Orlen on 29 June 2023 approved the conclusion of the EPCC contract for the Olefin III Complex with Hyundai Engineering Poland and Técnicas Reunidas. Based at Płock, the contractor for the Olefin III Complex, as well as the conclusion of contracts for the basic infrastructure required for the Investment into the infrastructure for the petrochemical project.

The requirement to enter into a settlement with the contractors arises from the revision of the investment assumptions, primarily influenced by the war in Ukraine. This has resulted in a range of sanctions which have indirectly increased the cost of materials, in addition to disrupting supply chains and limiting the availability of execution resources.

In addition, within the Olefins III project the core infrastructure at the production plant at Plock is being modernised, while also being prepared for future development projects, including decarbonisation projects.

PKN Orlen, through the increased scale of production of petrochemicals and chemicals, aims to leverage its market potential not only in Poland, but also across the entire region. Based on current estimates, the total cost of construction of the Olefins III Complex will amount to around zl 25 billion (€5.6 billion), and its completion is scheduled for the first half of 2027. The project is expected to contribute over zl 1 billion (€225 million) annually to the EBITDA of the Orlen Group.

Polish Monomer Import Costs (€ per ton)		
Product	***Jan-May 23***	***Jan-May 22***
Propylene	969.3	1305.1
Butadiene	1133.0	1002.9
Styrene	1311.1	1513.2

Polish propylene & butadiene imports, Jan-May 2023

Poland imported 60,552 tons of propylene in January to May against 63,781 tons in January to May 2022. Market sources of propylene imports into Poland have changed significantly in the past year. To replace imports from traditional suppliers Russia and Ukraine, imports this year apart from Germany have been sourced from Bulgaria, the Czech Republic, the Netherlands and Serbia. Although volumes overall declined slightly, average prices dropped from €1305.1 per ton in January to May last year to €969.3 this year. Prices for propylene started falling in the latter part of the 2022 following feedstock trends. Whilst feedstock prices have fluctuated this year, the weak demand has been one of the main factors affecting prices.

Polish Imports of Propylene (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Bulgaria	9.138	0.000
Czech Republic	3.951	0.000
Germany	32.089	26.174
Russia	0.000	20.588
Ukraine	0.000	17.018
Serbia	3.842	0.000
Netherlands	8.966	0.000
Others	2.565	0.000
Total	60.552	63.781
Av € per ton	969.3	1305.1

Butadiene import prices for Poland dropped from €1133.0 per ton in January to May 2022 to €1002.9 in January to May this year, with volumes declining from 40,443 tons to 35,662 tons.

Czech propylene trade Jan-May 2023

Propylene imports into the Czech Republic rose from 13,285 tons in January to May 2022 to 19,684 tons this year, with main suppliers including Germany, Romania and Poland. Average prices for propylene imports dropped in the first five months in 2023 to €1051.9 per ton against €1323.3 per ton. Exports of propylene are rarely possible from the Czech Republic, but in May this year a surplus allowed shipments of 4,928 tons to Poland, 1,033 tons to Germany and 594 tons to Slovakia.

Czech Imports of Propylene (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Germany	14.957	6.367
Bulgaria	2.712	0.000
Poland	0.000	1.029
Romania	1.048	3.148
Russia	0.000	1.220
Slovakia	0.066	0.993
Ukraine	0.000	0.524
Others	0.901	0.004
Total	19.684	13.285
Av € per ton	1051.9	1323.3

Imports of butadiene into the Czech Republic amounted to 43,359 tons in January to May 2023, all of which was supplied by Germany and Hungary. Imports increased from 28,219 tons in the first five months last year.

Hungarian Propylene Exports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Germany	0.000	3.184
Poland	1.019	0.979
Slovakia	32.197	29.468
Total	33.216	33.631
Av € per ton	1140.5	1301.1

Hungarian propylene exports Jan-Apr 2023

Exports of propylene from Hungary were virtually unchanged in the first four months, amounting to 33,216 tons versus 33,631 tons in the same period in 2022. The main factor is that prices dropped from €1301.1 per ton to €1140.5 per ton. Exports to Slovakia from MOL to Slovnaft rose from 29,468 tons to 32,197 tons in January to April 2023. Slovnaft uses propylene for the production of polypropylene.

Hungarian Butadiene Exports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Czech Republic	9.906	4.088
Germany	1.995	5.035
Poland	8.857	10.257
Total	20.758	19.380
Av € per ton	882.7	1002.9

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 which is approaching completion. Hungarian butadiene exports amounted to 20,758 tons in the first four months in 2023 against 19,380 tons in the same period in 2022.

Shipments into Poland totalled 8,857 tons in January to April 2023 against 19,380 tons in the same period in 2022. Exports to Germany dropped from 5,035 tons to 1,995 tons and to the Czech

Republic rose from 4,088 tons to 9,906 tons. Average prices for Hungarian butadiene exports fell to €1002.9 per ton versus €882.7 in 2023.

MOL-Lummus agreement on recycling

Lummus Technology and the MOL Group have announced an agreement in June to cooperate in the deployment and integration of chemical recycling of plastics at MOL's assets in Hungary and Slovakia. Chemical recycling of plastics is part of MOL's commitment to collect close to 5 million tpa of municipal solid waste, which includes the treatment and related investments. MOL has committed to drive circularity and has recently invested in addressing waste plastics recycling in Central Europe. With a total capacity of 40,000 tpa. The company's aim is to build a production portfolio of more than 100,000 tons of recycled plastic materials.

Polish Styrene Imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Belgium	2.056	5.441
Czech Republic	5.319	1.187
Netherlands	21.109	30.205
Germany	7.921	6.015
Others	2.389	1.796
Total	38.794	44.643
Av € per ton	1311.1	1513.2

Hungarian styrene imports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Italy	25.514	33.542
Netherlands	1.591	0.979
Others	0.273	0.060
Total	28.005	35.218
Av € per ton	1300.8	1414.6

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Ethylene	5.136	6.539
Propylene	5.974	0.025
Butadiene	0.216	1.065
Benzene	4.522	22.036
Toluene	5.347	3.997
Ethylbenzene	51.346	48.939
Styrene	5.055	0.000

Czech Petrochemical Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Ethylene	18.368	11.205
Propylene	19.665	18.075
Butadiene	43.359	28.219
Benzene	16.212	38.025
Toluene	3.082	3.268
Styrene	17.491	9.478

Lummus' Green Circle business unit will provide to MOL its advanced waste plastic pyrolysis technology, which effectively converts plastic waste into high-value chemicals and feedstocks, creating circularity. Lummus will also provide its experience and expertise in steam cracking, catalytic cracking and residue processing technology to ensure that integration with MOL's existing assets is optimized.

Central European styrene trade Jan-May 2023

Poland imported 38,794 tons of styrene in January to May against 44,643 tons in January to May last year. The Netherlands provided 21,109 tons in the first five months versus 30,205 tons in the same period in 2022. The Czech Republic has also been an important supplier this year. Styrene import costs dropped from €1513.2 per ton last year to €1311.1 in the first five months in 2023.

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 25,514 tons in January to April 2023, down from 33,542 tons in the same period in 2022. Prices for styrene imports into Hungary dropped from €1414.6 per ton in January to April 2022 to €1300.8 per ton in 2023.

Czech petrochemical trade, Jan-May 2023

Ethylene exports from the Czech Republic amounted to 5,136 tons in January to May 2023 versus 6,539 tons in the same period last year. Czech imports of ethylene amounted to 18,368 tons in January to May 2023, down from 11,205 tons in January to May last year.

Propylene imports into the Czech Republic rose from 18,075 tons in January to May 2022 to 19,665 tons this year, with main suppliers including Germany, Romania and Poland. Czech imports of butadiene amounted to 43,359 tons in January to May 2023, all of which was supplied by Germany and Hungary. Czech exports of ethylbenzene amounted to 51,346 tons against 48,939 tons in January to May 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 38,025 tons in January to May last year to 16,212 tons in January to May 2023.

Central European Polyolefin Production, Trade & Projects

Polimery Police-polypropylene plant launched

Grupa Azoty's launched the polypropylene project at Polimery Police in northern Poland on 22 June. Grupa Azoty Polyolefins states that sales of Gryfilen polypropylene from the Police plant will start in August this year. The new Grupa Azoty unit will produce 437,000 tpa of polypropylene and 429,000 tpa. Production capacity will be gradually increased over the next few months.

Second gas terminal for Poland

With the launch of Polimery Police, Poland gained a second gas terminal. The facility located at the new installations is quite significantly different from the LNG terminal at Świnoujście. The Police gas terminal is part of the company's new production chain and thus crucial for guaranteeing feedstock supplies to the new Police installations. The terminal is capable of accepting ships up to 220 metres long.

According to the design assumptions, it is planned to accept 2-3 loads of propane per month and 1 load of ethylene quarterly. In the future, the Police gas terminal may be developed further. Due to its location and technical capabilities, the quay could be used to ensure the continuity of gas supplies also for other entities.

Polypropylene produced under the Gryfilen brand consists of more than 30 types of products, including homopolymers, impact copolymers and random copolymers. The PDH plant is based on Oleflex UOP technology for the production of polymer-grade propylene by the method propane dehydrogenation, whilst Unipol GRACE technology for is used for the production of polypropylene. The polypropylene production plant provides great flexibility production, which is particularly important in a changing and demanding European plastics market.

The Polimery Police complex also includes the Marine Gas Terminal, providing the possibility of supply of propane and ethylene, i.e., essential raw materials, by sea for production. The investment in Police consumed about zl 7.2 billion. The importance of these plants is not only new installations, but also helping the country's balance sheet in the trade of chemicals. The commencement of polypropylene production in Polimery Police is a significant strengthening of Grupa Azoty's position on the European plastics market, and Poland will thus join the group of leaders in the production of this material in Europe.

Polimery Police is important not only due to the production of plastics, but also hydrogen, whose production in the process of propane dehydrogenation is estimated at nearly 17,000 tpa. Hydrogen production in Police will strengthen Grupa Azoty's high position in the area of hydrogen technologies. Finally, the plant is diversifying Grupa Azoty's product range and helping to reduce its dependence on the situation on the fertiliser market. It is those problems on the fertiliser market that have led to huge losses for Azoty in the past quarters.

Polish PP Imports (unit-kilo tons)		
Category	***Jan-May 23***	***Jan-May 22***
PP homo	215.658	284.160
Polyisobutylene	1.232	2.104
Propylene copolymers	116.814	139.618
Other	7.507	8.520
Total	341.211	434.402
Av €/ton	1538.2	1863.8

Polish PP Exports (unit-kilo tons)		
Category	***Jan-May 23***	***Jan-May 22***
PP homo	60.812	92.815
Polyisobutylene	0.300	0.060
Propylene copolymers	33.268	39.908
Other	2.920	1.354
Total	97.300	134.136
Av €/ton	1493.5	1804.4

Polish polpropylene trade Jan-May 2023

Polish polypropylene imports, including homo grade and copolymers, fell in January to May 2023 to a total of 341,211 tons versus 434,402 tons in January to May 2022. Average prices per ton decreased from €1863.8 to €1538.2 per ton. Homo grade polypropylene imports dropped from 284,160 tons in the first five months in 2022 to 215,658 tons in the same period this year whilst copolymer imports dropped from 139,618 tons to 116,814 tons.

Germany supplied 35,192 tons of propylene copolymers to Poland in the first five months for €58.321 million followed by the Netherland with 18,359 tons for €29.411 million and Belgium supplying 16,690 tons for €28,437 million.

Regarding export activity, shipments amounted to 97,300 tons against 134,136 tons in January to May 2022. Homo polymer grades comprised the main category of Polish polypropylene exports, where

Germany was the largest destination taking 16,018 tons in the first five months for €22.072 million followed by the Czech Republic taking 10,759 tons for €14.048 million.

Polish Polyethylene Trade		
Exports	***Jan-May 23***	***Jan-May 22***
Vol (kilo tons)	116.056	151.704
Value (€ million)	168.748	253.508
Av € per ton	1454.0	1671.1
Imports	***Jan-May 23***	***Jan-May 22***
Vol (kilo tons)	486.977	600.481
Value (€ million)	720.198	1108.732
Av € per ton	1478.9	1846.4

Polish polyethylene trade Jan-May 2023

Polish trade in polyethylene was down in the first five months for both imports and exports, both in volume and value. Economic conditions affected both demand and pricing. Polish imports of polyethylene totalled 486,977 tons in January to May this year against 600,481 tons in January to May 2022, with average prices falling from €1846.4 per ton to €1478.9 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 PE imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
LDPE	129.901	155.765
LLDPE	84.240	111.465
HDPE	167.100	203.599
EVA	5.766	7.756
EAO	72.905	81.781
Others	21.681	25.792
Total	486.977	600.481
Av € per ton	1478.9	1846.4

Total costs of polyethylene imports into Poland amounted to €720.198 million in the first five months against €1108.732 million in January to May last year. HDPE is the largest category of imported polyethylene into Poland, amounting to 167,100 tons in January to May versus 203,599 tons in January to May 2022. Germany was the largest supplier of HDPE to the Polish market in the first five months this year.

Polish polyethylene exports amounted to 116,188 tons in the first five months in 2023 against 153,387 tons in the first five months in 2022. Average prices for polyethylene exports from Poland declined to €1454.0 per ton against €1671.1 per ton.

Czech polyethylene exports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
LDPE	10.229	13.963
LLDPE	1.420	1.322
HDPE	138.809	123.307
EVA	1.419	1.241
Other	4.466	4.541
Total	156.343	173.647
Av € per ton	1448.54	1724.44

Czech polyethylene imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
LDPE	42.631	54.857
LLDPE	8.830	9.319
HDPE	47.587	54.401
EVA	4.344	3.804
Other	13.755	17.696
Total	117.146	140.078
Av € per ton	1675.8	1977.7

Revenues from exports decreased from €253.508 million to €168.748 million in January to May 2023. In the first five months this year exports of HDPE from Poland amounted to 79,218 tons versus 105,474 tons in January to May 2022.

Czech polyethylene trade Jan-May 2023

Czech prices for both exports and imports of polyolefins were lower in the first five months this year against the same period in 2022. Polyethylene exports amounted to 156,943 tons in the first five months of which HDPE comprised 138,809 tons. Germany was the largest destination for Czech HDPE supplied from Litvinov this year, amounting to 58,876 tons in January to May for €75.587 million. Other important markets for Czech polyethylene exports include Poland, Italy and Belgium.

For imports of all forms of polyethylene, Czech inward shipments amounted to 117,146 tons in January to May against 140,078 tons in the same period in 2022, with prices dropping from €1977.7 per ton to €1675.8. Germany was the largest source of polyethylene imports, amounting to 28,682 tons for €45.802 million, followed by Belgium with 14,994 tons for €25.610 million.

Hungarian polyethylene trade Jan-Apr 2023

MOL's polyethylene exports dropped from 128,937 tons in January to April 2022 to 116,564 tons in the same period this year whilst revenues fell from €204.209 million to €156.437 million in 2023. Average prices dropped from €1583.8 per ton in 2022 to €1342.1 per ton in 2023.

Hungarian Polyethylene Exports (unit-kilo tons)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
LLDPE	2.467	2.065
LDPE	33.148	31.395
HDPE	76.592	83.450
Other	4.357	12.027
Total	116.564	128.937

Hungarian Polyethylene Imports (unit-kilo tons)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
LLDPE	8.989	7.203
LDPE	15.926	19.971
HDPE	27.437	33.311
Other	13,890	13,046
Total	66.342	73.531
Av € per ton	1746.3	1875.3

HDPE shipments from Hungary dropped from 83,450 tons in January to April 2022 to 76,592 tons in the same four months in 2023, whilst exports of LDPE increased from 31,395 tons to 33,148 tons.

Hungary remains a net exporter of LDPE and HDPE and still a net importer of LLDPE and ethylene copolymers. In the first four months in 2023 imports of all grades of polyethylene into Hungary amounted to 66,342 tons against 73,531 tons in the same period in 2022. Imports costs for polyethylene fell to €115.853 million against €137.895 million in the same period last year. Prices per ton decreased from €1875.3 in January to April 2022 to €1746.3 this year.

Czech polypropylene trade Jan-May 2023

For imports of all forms of polypropylene, Czech inward shipments fell from 223,331 tons in January to May 2022 to 219,396 tons in January to May this year, with average prices dropping from €1919.1 per ton to €1667.1.

Czech polypropylene exports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
PP Homo	98.061	109.920
Propylene Copolymers	20.881	22.260
Other	3.058	1.131
Total	122.000	133.311
Av € per ton	1530.7	1814.6

Czech polypropylene imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
PP Homo	122.405	133.155
Propylene Copolymers	90.794	83.008
Other	6.197	7.167
Total	219.396	223.331
Av € per ton	1667.1	1919.1

Exports of all forms of polypropylene from the Czech Republic amounted to 122,000 tons in January to May versus 133,311 tons in January to May 2022, with average prices dropping from €1814.6 per ton to €1530.7. Homo-grade PP provides the main category of Czech polypropylene exports, amounting to 98,061 tons in January to May this year versus 109,920 tons in the same period in 2022.

Hungarian polypropylene trade Jan-Apr 2023

Regarding Hungarian polypropylene exports, MOL shipped 44,236 tons of homo grade polypropylene in January to April 2023 which was up from 40,682 tons in the same period in 2022, whilst copolymer exports dropped from 36,101 tons to 31,147 tons.

Hungarian Polypropylene Exports (unit-kilo tons)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
PP homo	44.236	40.862
Propylene copolymers	31.147	36.101
Others	6.095	10.613
Total	81.478	87.576
Av € per ton	1385.1	1593.2

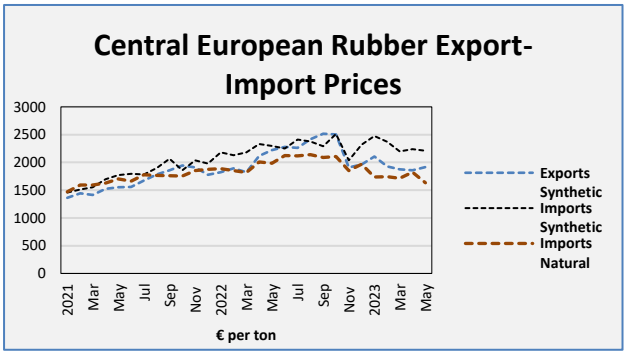
Hungarian Polypropylene Imports (unit-kilo tons)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
PP homo	39.484	41.365
Propylene copolymers	18.741	23.281
Others	8.766	10.190
Total	66.991	74.836
Av € per ton	1603.3	1817.8

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 €151.154 million to €114.985 million, with average prices dropping from €1593.2 per ton to €1385.1.

Polypropylene imports into Hungary amounted to 66,991 tons in the first four months in 2023 versus 74,836 tons in the same period in 2022, with costs falling in January-April 2023 to €107.406 million from €136.035 million last year.

Overall average prices dropped from €1817.8 per ton to €1603.3 per ton this year, whilst copolymer prices dropped from €1845.9 to €1538.4 per ton. By category homo grade imports into Hungary comprised 39,484 tons in January to April 2023 against 41,365 tons whilst copolymers fell to 18,741 tons against 23,281 tons.

Central European Rubber Markets



Synthetic rubber prices Jan-May 2023

Synthetic rubber prices in Europe stabilised to an extent in May after the successive months of slow decline. Butadiene rubber prices rose from €1728 per ton in April to €1857 in May, primarily due to feedstock cost changes.

Overall synthetic rubber prices were similar in the first five months in 2023 over 2022. Of course market fundamentals are significantly different in those two comparative years. The upper average price for synthetic rubber prices rose slightly from €2224 per ton in January to May 2022 to €2298 per ton in 2023, whilst the lower band dropped from €1975 to €1937. Natural rubber prices have seen the largest fall, dropping from €1912 per ton to €1732 per ton with May numbers dipping to €1634 per ton. Since then, natural rubber prices to European buyers have risen, largely driven by Far East markets.

Czech Rubber Trade (unit-kilo tons)		
	Jan-May 23	***Jan-May 22***
Exports synthetic rubber	69.335	85.807
Imports synthetic rubber	52.318	64.175
Imports natural rubber	33.856	36.745

Czech synthetic rubber trade Jan-May 2023

Czech exports of synthetic rubber amounted to 69,335 tons in January to May this year versus 85,807 tons in the same five months in 2022. Imports declined from 64,175 tons to 52,318 tons in January to May 2023. Natural rubber imports into the Czech Republic dropped from 36,745 tons to 33,856 tons.

Czech Exports of EBSR		
	Jan-May 23	***Jan-May 22***
Kilo tons	15.034	33.309
€ million	26.134	61.189
Av € per ton	1738.0	1858.0

Exports of emulsion styrene butadiene rubber (ESBR) from the Czech Republic dropped in the first five months to 15,034 tons against 33,309 tons in the same period last year. Synthos announced in March that it had decided to close the ESBR line at its Kralupy nad Vltavou site 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-May 23***	***Jan-May 22***
France	1.801	2.910
Hungary	2.386	2.671
India	6.336	9.390
Poland	6.239	6.274
Serbia	1.131	1.862
Slovakia	4.865	4.262
South Korea	6.000	2.548
Turkey	1.660	0.934
US	0.284	2.362
Others	14.834	13.472
Total	45.536	46.685
Revenues € million	**83.863**	**92.090**
Av € per ton	1841.7	1972.6

Approximately 80% of the volume of products sold by this segment is attributed to large tyre companies such as Michelin, Continental, Bridgestone, Goodyear, and Pirelli. The remaining 20% of product volume sold in this segment comes from other markets, such as technical rubber products, shoe soles, flexible cables and transmission belts

Czech butadiene rubber trade

The Czech Republic exported a total of 45,536 tons of butadiene rubber in the first five months in 2023 against 46,885 tons in the same period in 2022. Revenues were down from 92,090 tons to 83,863 tons period January to May 2023, with average prices falling from €1972.5 per ton to €1841.7 per ton.

The largest destination for Czech exports of butadiene rubber is India to where 6,366 tons was shipped in January to May 2023 against 9,390 tons in the same period in 2022. Other important markets included Poland where exports amounted to 6,239

tons in the first five months this year against 6,274 tons in the same period in 2022, and South Korea rising from 2,548 tons to 6,000 tons.

Hungarian synthetic rubber Imports (unit-kilo tons)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
Butadiene Rubber	17.316	14.710
HBR	2.655	5.270
SBR	14.767	13.107
Other	10.674	13.651
Total	45.411	46.739
Hungarian synthetic rubber Imports (€ million)		
Product	***Jan-Apr 23***	***Jan-Apr 22***
Butadiene Rubber	38.832	27.290
HBR	6.907	12.837
SBR	36.665	27.099
Other	28.520	32.177
Total	110.924	99.403
Av € per ton	2443.0	2127.0

Hungarian synthetic rubber imports Jan-Apr 2023

Hungarian imports of synthetic rubber dropped slightly by volume in the first four months this year to 45,411 tons against 46,739 tons in the same period in 2022. Overall costs of synthetic rubber imports increased to €110.924 million from €99.403 million, with average prices rising from €2127 per to €2443 per ton.

Butadiene rubber imports rose from 14,710 tons to 17,316 tons, with costs rising from €27.290 million to €38.832 million. Imports of halogenated butyl rubber dropped from 5,270 tons in the first four months in 2022 to 2,655 tons which has been due to EU sanctions on Russia, even if sanctions have been amended for rubber imports since March this year.

Polish rubber trade Jan-May 2023

Poland imported 113.560 tons of synthetic rubber in January to May this year against 123,126 tons in January to May in 2022. Average prices dropped from €2430.2 per ton last year to €2161.8 in the first five months this year.

Polish Synthetic Rubber Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
ESBR	11.287	5.956
Block SBR	12.882	18.091
S-SBR	10.863	5.515
Butadiene Rubber	26.537	20.005
Butyl Rubber	2.645	1.840
HBR	5.369	6.117
NBR	2.540	5.553
Isoprene Rubber	4.591	15.453
EPDM	17.984	19.830
Others	18.862	24.766
Total	113.560	123.126
Av € per ton	2,161.8	2,430.2

Imports of synthetic robber from Russia continue to enter the country after the sanctions introduced last year were amended to allow tyre manufacturers to adapt gradually to new supply sources.

Quotas have been established for imports of Russian rubber, running up to 2024, but it appears that Russian producers are concentrating more on the Chinese market. Nizhnekamskneftekhim in particular has shifted large volumes of sales from European markets to an easterly direction. Isoprene rubber has thus far been excluded from sanctions and this now comprises the main share of rubber export shipments from Russia to Poland.

Butadiene rubber imports from Russia amounted to 4,349 tons in the first five months this year, priced at €1694 per ton compared to €2007 per ton for the entire import volume into Poland of 26,537 tons.

Polish Exports of Synthetic Rubber (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
SBR	78.005	91.998
Butadiene Rubber	18.897	19.208
HBR	1.484	2.326
Others	15.239	22.446
Total	113.626	135.978

Imports of halogenated butyl rubber from Russia amounted to 3,430 tons from the total of 5,369 tons in the period January to May 2023. Average prices from Russia amounted to €2444 per ton against the overall average of €2592. The UK has started supplying Poland this year to replace some of the Russian imports.

Synthos Production in Poland (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Polystyrene	29.9	31.0
EPS	41.1	42.8
Synthetic Rubber	81.1	120.2

Synthetic rubber exports from Poland amounted to 113,626 tons in the first five months against 135,978 tons in January to May 2022. Exports of butadiene rubber from Poland amounted to 18,897 tons in January to May versus 19,208 tons last year.

Synthetic rubber production at Oswiecim for Synthos amounted to 81,100 tons in January to May 2023 from 120,200 tons in the same period in 2022. Production has been affected this year by demand side factors.

Central European aromatics and derivatives

Polish Exports of Benzene (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Czech Republic	11.946	24.712
Germany	48.646	48.416
Others	1.242	6.438
Total	61.833	79.567
Av € per ton	871.4	1043.5

Polish benzene exports Jan-May 2023

Polish exports of benzene totalled 61,833 tons in January to May against 79,567 tons in the same period last year. Average prices dropped to €871.4 per ton against €1043.5 per ton in January to May last year. Germany purchased 48,646 tons from Poland in the first five months and the Czech Republic 11,946 tons. Benzene exports from Poland were lower in the first quarter this year due to the problems for Petrochemia Blachownia in receiving coal based raw materials from Ukraine. Petrochemia Blachownia is part of the Czech Agrofert group

Polish Aromatic Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Adipic Acid	5.190	4.936
Bisphenol A	10.361	5.768
Caprolactam	4.663	2.079
Ethylbenzene	51.070	48.979
Paraxylene	0.000	22.274
Phenol	32.023	48.648
Phthalic Anhydride	14.933	13.687
PTA	3.042	0.910
Styrene	31.032	44.782
TDI	32.088	33.507
Toluene	9.133	10.288

Polish-Czech aromatic imports Jan-May 2023

Phenol imports into Poland amounted to 32,023 tons in January to May 2023 for €42.499 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 May this year Germany was the dominant supplier of phenol to Poland, shipping 23,153 tons for €30.553 million.

Czech Aromatic Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Benzene	16.212	38.025
Toluene	3.082	3.268
Styrene	17.491	9.478
Bisphenol A	12.405	15.040

In other product areas, styrene imports amounted to 31,032 tons in the period January to May 2023 versus 44,782 tons in the same period in 2022 whilst ethylbenzene imports rose from 48,979 tons to 51,070 tons. Nearly all of the ethylbenzene imports come from the Czech Republic. Czech benzene imports dropped in the first five months to 16,212 tons against 38,025 tons in the same period in 2022, whilst toluene imports dropped to 3,082 tons and styrene rose to 17,491 tons.

Spolana Caprolactam Exports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Belgium	0.841	3.638
Germany	0.222	3.362
Italy	5.734	7.227
Slovenia	1.444	3.043
Switzerland	1.149	1.208
Others	0.077	0.063
Total	9.467	18.541
Av € per ton	1876.3	2277.9

Central European caprolactam market

Poland produced 40,800 tons of caprolactam in the first five months against 43,400 tons in January to May last year. In the first five months caprolactam imports amounted to 4,663 tons.

The Czech Republic exported 9,467 tons of caprolactam in January to May for €16.546 million, down from 18,541 tons in the same period last year for €44.759 million. Average prices dropped from €2277.9 per ton to €1876.3 in 2023. All of the exports were shipped to European countries. Italy was the largest destination for Spolana's exports, reducing shipments from 7,227 tons in January to May 2022 to 5,734 tons this year.

Polish PTA Exports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Germany	73.712	154.964
Lithuania	0.953	19.349
Switzerland	3.809	3.301
Turkey	2.002	1.496
Others	7.933	4.103
Total	89.569	183.312
Av Price €	887.3	899.0

Polish PTA exports Jan-May 2023

PTA exports from Poland amounted to 89,569 tons in January to May this year against 183,312 tons in January to May 2022, with average prices rising from €887.3 per ton to €899.0 per ton. The key factor this year behind the lower purchases was that Germany reduced purchases from 183,312 tons to 89,569 tons. Switzerland was the second largest destination for PTA export shipments, taking 3,809 tons versus 3,301 tons.

Central European isocyanates & polyols

Hungarian TDI Exports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Austria	1.059	0.999
Belgium	11.093	16.306
Germany	3.509	5.250
Italy	10.351	14.428
Poland	10.523	12.933
Portugal	4.848	5.555
Romania	4.379	5.079
Spain	3.612	4.239
Turkey	11.591	14.206
Others	17.429	26.494
Total	78.395	105.489
Av € per ton	3036.4	2686.6

Hungarian TDI-MDI exports Jan-Feb 2023

Hungarian TDI exports dropped in the first four months this year to 78,395 tons against 105,489 tons in the same four months in 2022. Average prices rose from €2686.6 per ton to €3036.4 in 2023. Price dropped from a peak of €3255.4 per ton in January to €2812.7 per ton in April which measured against €2966.6 per ton in April 2022. The gap between 2023 and 2022 prices is gradually narrowing.

Lower volume sales were recorded this year due largely to weaker economic performance throughout Europe. Exports of TDI to Belgium dropped from 16,306 tons in the first four months last year to 11,093 tons in January to April 2023 whilst volumes to Italy fell from 14,428 tons to 10,351 tons. Elsewhere in West Europe exports to Portugal dropped from 5,555 tons to 4,848 tons, and to Spain from 4,239 tons to 3,612 tons. In Central Europe shipments to Poland fell from 12,933 tons to 10,351 tons and Romania from 2,675 tons to 2,089 tons.

Hungarian MDI Exports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Czech Republic	2.306	2.734
Germany	6.778	7.860
Italy	3.667	2.198
France	4.540	3.716
UK	1.721	2.960
Poland	12.540	14.846
Romania	6.425	8.859
Turkey	2.466	5.064
US	0.000	17.103
Others	12.859	15.045
Total	53.302	80.385
Av € per ton	2243.9	2542.5

MDI exports from Hungary dropped in the first four months to 53,302 tons from 80,385 tons in the same period last year. The most significant drop in sales was the US where no shipments were made in the first four months against 17,103 tons in January to April 2022. In contrast to higher TDI prices, MDI export prices dropped from €2542.5 per ton in January to April 2022 to €2243.9 per ton this year.

Poland was the largest destination for Hungarian MDI exports, shipping 12,540 tons in the first four months in 2023 versus 14,846 tons in the first same period in 2022. Romania is the second largest market in Central and South East Europe, taking 6,425 tons in the first four months this year which was down from 8,859 tons.

BorsodChem-annual TDI shutdown and MDI expansion

BorsodChem's TDI plant (250,000 tpa) started annual maintenance on 15 July which is expected to last for around 30 days. This shutdown is a routine maintenance process based on the annual schedule and will not affect the company's production and operation.

The MDI plant (350,000 tpa) will be phased out of production and maintenance on 18 July and this shutdown is expected to last for around 80 days. This shutdown involves modernisation and the expansion of capacity to 400,000 tpa.

Czech MDI imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
China	1.414	1.173
Belgium	4.046	5.399
Germany	1.908	4.526
Hungary	5.266	2.891
Netherlands	2.433	1.377
Others	0.549	0.568
Total	15.615	15.934
Av Price € per ton	2465.5	2495.2

Central European isocyanate trade Jan-May 2023

MDI imports into the Czech Republic totalled 15,615 tons in January to May 2023 against 15,934 tons in the same period in 2022. Average prices dropped slightly from €2495.2 per ton to €2465.5.

The leading supplier was Hungary which shipped 5,266 tons in the first five months against 2,891 tons in the same period last year. TDI imports into the Czech Republic imports into the Czech Republic amounted to 3,019 tons in January to May this year versus 3,378 tons in January to May 2022.

Polish MDI Imports (€ million)		
Country	***Jan-May 23***	***Jan-May 22***
Germany	34.485	50.691
Netherlands	19.409	23.754
Hungary	35.305	47.106
Belgium	20.990	34.931
South Korea	6.045	1.559
Others	16.279	12.094
Total	132.513	170.136
Ktons delivered	59.496	68.074
Av € per ton	2227.3	2499.3

MDI imports into Poland totalled 31,847 tons in January to May 2023 against 40,624 tons in January to May last year. Due to lower volumes overall costs for MDI imports into Poland dropped from €170.136 million to €132.513 million, with average prices dropping from €2499.3 per ton to €2227.3 in January to May 2023. Germany reduced shipments to €34.485 million by value, down from €50.691 million last year, whilst imports from Hungary dropped from €47.106 million to €35.305 million.

TDI imports into Poland amounted to 28,243 tons in January to May against 33,925 tons in the same period in January to May 2022. Prices this year averaged €3125.3 per ton in the first five months against €2800.3 per ton in 2022. The cost of toluene was one of the factors behind the rise in TDI prices, but also supply/demand factors. The supply of TDI is considered in short supply in Europe resulting in imports from countries such as South Korea and the US.

Polish TDI Imports (€ million)		
Country	***Jan-May 23***	***Jan-May 22***
Belgium	2.262	1.130
Germany	21.813	20.576
Hungary	39.351	39.326
Netherlands	4.950	5.200
Saudi Arabia	3.156	1.889
South Korea	9.295	0.000
Others	7.441	6.055
Total	88.268	94.999
Ktons	28.243	33.925
Av € per ton	3125.3	2800.3

Czech polyol imports Jan-May 2023

Czech polyol imports increased in the first five months to 20,480 tons against 18,035 tons in the same period in 2022, with average prices dropping from €2802.9 per ton last year to €2634.5 in the first five months in 2023. The leading supplier to the Czech market was Belgium which shipped 6,084 tons in the period January to May 2023 against 4,505 tons last year, followed by Germany which exported 3,838 tons up slightly from 3,833 tons.

Czech Polyol Imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Belgium	6.084	4.505
Germany	3.838	3.833
France	3.241	2.412
Netherlands	2.027	1.828
Romania	0.825	1.422
Slovakia	2.132	1.946
Others	2.323	2.092
Total	20.470	18.035
Av € per ton	2634.5	2802.9

Polish polyol trade Jan-May 2023

Polish polyol imports amounted to 59,232 tons in the first five months in 2023 against 68,429 tons in the same period in 2022. The major sources of imports came from Belgium, Germany and the Netherlands. Polyol import prices dropped from €2670.1 per ton to €2205.6 per ton. The largest source of imports came from Germany in the first five months, amounting to 13,482 tons against 24,492 tons in the same period in 2022.

MOLs polyol project in Hungary

Hungary imported 20,205 tons of polyols in the first four months this year against 14,714 tons in the same period in 2022. Prices dropped from €2612 per ton in 2022 to around €2000 in 2023.

Polish Polyol Imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Belgium	7.431	13.628
China	4.272	0.439
France	2.247	0.000
Germany	13.482	12.492
Netherlands	11.612	6.641
Romania	6.747	15.375
Saudi Arabia	1.663	11.362
South Korea	7.317	0.000
Others	4.460	8.493
Total	59.232	68.429
Price	2205.6	2670.1

The main The polyol project at Tiszaujvaros was originally scheduled to start in mid-2021 but the pandemic slowed the progress down sharply which has been followed by the impact of the war in Ukraine. 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.

MOL currently hopes to complete the 200,000 tpa polyol project in the second half of 2023. The completion will take place simultaneously as the propylene glycol and propylene oxide plants are finished. The project schedule overall is around 97% completed.

Central European organic chemical trade

Hungarian maleic anhydride exports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Austria	1.126	1.138
Germany	0.696	0.376
Italy	1.126	1.249
Poland	1.061	2.324
Slovenia	0.656	0.829
Others	2.066	2.318
Total	6.731	8.234
Av € per ton	1302.4	2232.5

Hungarian maleic anhydride exports Jan-Apr 2023

Hungary exported 6,731 tons of maleic anhydride in the first four months this year against 8,234 tons in the same period in 2022, with average prices dropping from €2232.5 per ton to €1302.4. Export shipments to Italy and Austria both amounted to 1,126 tons in the first four months this year, down from 1,249 tons and 1,138 tons respectively last year. Exports to Poland from Hungary dropped from 2,324 tons to 1,061 tons.

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-Apr 23***	***Jan-Apr 22***
Germany	1.501	0.547
France	0.470	2.147
Netherlands	4.448	8.124
Russia	0.000	1.488
Others	1.949	0.587
Total	8.367	12.894
Av € per ton	2092.8	2285.7

Hungarian acrylonitrile imports Jan-Apr 2023

Hungary imported 8,367 tons of acrylonitrile in the first four months in 2023 against 12,894 tons last year. The Netherlands was the main source of imports in both years, shipping 4,448 tons in January to April 2023 versus 8,124 tons in 2022. Acrylonitrile prices dropped on average from €2285.7 per ton in the first four months last year to €2092.8 per ton in 2023.

Hungarian aniline imports Jan-Apr 2023

Aniline imports into Hungary increased from 39,848 tons in the first four months in 2022 to 55,678 tons in the same period in 2023. Inward shipments from BorsodChem-MCHZ in the Czech Republic amounted to 26,269 tons against 37,879 tons in the same period last year. Belgium supplied 18,534 tons in the first four months this year against only 683 tons in 2022. Cost prices of aniline imports dropped from €1800.5 per ton to €1446.1 in 2023.

Hungarian aniline imports (unit-kilo tons)		
Country	***Jan-Apr 23***	***Jan-Apr 22***
Belgium	18.534	0.683
China	10.875	0.019
Czech Republic	26.269	37.879
Others	0.000	1.267
Total	55.678	39.848
Av € per ton	1446.1	1800.5

BorsodChem opened its new plants for nitrobenzene and aniline at the start of July. The nitrobenzene plant consists of a capacity of 240,000 tpa and aniline at 200,000 tpa, in addition to a plant for concentrated nitric acid plant with a capacity of 1,000 tpa.

Polish Organic Chemical Trade		
Exports	***Jan-May 23***	***Jan-May 22***
Vol (kilo tons)	532.6	752.1
Value (€ million)	673.0	1,032.6
Imports	*Jan-May 23*	*Jan-May 22*
Vol (kilo tons)	1,156.5	1,398.0
Value (€ million)	1,788.1	2,277.6

Polish organic chemical trade Jan-May 2023

The main feature of Polish organic chemical trade in the first five months was the lower volumes compared to January to May 2022. Exports of organic chemicals fell from 752,100 tons in January to May last year to 532,600 tons, whilst imports into Poland dropped from 1.398 million tons to 1.157 million 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 EO/PO Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
DEG	12.449	10.227
Ethylene Glycol	42.597	20.936
Ethylene Oxide	7.293	6.740
Propylene Glycol	8.201	8.848

Ethylene oxide imports into Poland totalled 7,293 tons in January to May versus 6,740 tons in January to May 2022. Poland stopped importing ethylene oxide from Russia in May last year. Ethylene glycol imports increased in the first five months to 42,597 tons versus 20,936 tons in the same period last year.

Polish Organic Chemical Imports (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Acetic Acid	16.313	19.377
Acetone	2.925	4.010
Butadiene	35.661	37.107
DINP/DOP	15.887	10.943
Ethyl Acetate	7.741	6.627
Isopropanol	4.303	4.280
Lysine	17.357	27.569
Maleic Anhydride	5.627	5.939
Melamine	16.680	8.887
Methanol	308.668	395.529
Propylene	60.552	75.555
VAM	6.314	8.452

Polish Imports of Acetic Acid (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Austria	0.626	0.568
China	1.376	2.156
Germany	0.675	2.690
UK	2.690	4.912
US	8.543	4.911
Others	2.403	4.140
Total	16.313	19.377
Av Price	905.9	1181.0

Czech Methanol Imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Germany	2.744	2.353
Russia	6.237	12.697
Poland	21.939	10.924
Others	2.590	0.829
Total	33.511	26.804
Av € per ton	312.2	439.2

Polish Methanol Imports (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Azerbaijan	4.981	0.000
Belgium	33.413	0.044
Finland	0.000	25.583
Germany	19.426	49.849
Netherlands	3.344	0.024
Norway	23.149	16.787
Russia	185.481	302.346
US	10.001	0.000
Trinidad	7.989	0.000
Venezuela	20.765	0.000
Others	0.118	0.897
Total	308.668	395.529
€ price per ton	277.7	369.8

Belgium supplied the largest volume of glycols to the Polish market, shipping 36,811 tons in the first five months.

Methanol imports into Poland totalled 308,668 tons in January to May this year against 395,529 tons in the same period in 2022. Although Russia reduced supplies from 302,346 tons to 185,481 tons, it still remained the largest source of imports. May was the last month where shipments from Russia to Poland were made.

For other organic chemical imports Poland imported 16,313 tons of acetic acid in January to May against 19,377 tons in January to May 2022. The US was the leading supplier, shipping 8,543 tons followed by the UK with 2,690 tons. Average prices dropped from €1181.0 per ton to €905.9 per ton. Ethyl acetate imports into Poland amounted to 7,741 tons in January to May this year against 6,627 tons in January to May 2022. Belgium provided the largest share of imports.

Regarding export activity in organic chemicals shipments of monochloroacetic acid (MCAA) rose sharply in the first five months to 15,633 tons against only a few hundred tons in the same period in 2022. MCAA production is undertaken by the PCC Group at Brzeg Dolny. The destinations for Polish MCAA exports are spread throughout Europe including Germany, Italy, France and Spain.

Other organic chemical exports include acetone where shipments amounted to 5,993 tons in the first five months this year vs 8,314 tons in January to May 2022. Normal butyl acetate exports dropped from 7,659 tons to 5,006 tons.

Central European methanol markets

Central European methanol trade Jan-May 2023

Czech imports of methanol amounted to 33,511 tons in the first five months this year against 26,804 tons in the same period in 2022. Russia accounted for 6,237 tons against 12,697 tons in January to May last year whilst imports from Poland increased from 10,924 tons to 21,939 tons. Prices per ton for methanol imports into the Czech Republic dropped from €439.2 in the first five months last year to €312.2 in January to May 2023.

Imports of methanol into Poland totalled 308,668 tons in January to May this year versus 395,529 tons in January to May 2022 with Russia reducing shipments from 185,351 tons to 107,130 tons. Average prices amounted to €277.7 per ton against €369.8 per ton last year. Poland has been developing alternative sources to Russian methanol before the full embargo took full effect in June. Apart from Venezuela and Belgium, other new sources arrived this year from the US and Trinidad.

Poland Methanol Exports to Central Europe		
Country	*Jan-May 23*	*Jan-May 22*
Austria	29.002	33.625
Czech	29.179	33.652
Germany	38.375	46.424
Romania	17.443	8.923
Slovakia	21.553	19.350
Ukraine	8.915	2.192
Hungary	12.260	19.661
Others	0.137	2.985
Total	156.865	166.812
Av € per ton	384.9	430.2

Exports of methanol from Poland amounted to 156,865 tons in January to May against 166,812 tons in January to May 2022. Revenues from Polish exports of methanol rose from €10.004 million in the first five months in 2022 to €60.213 million in January to May 2023, with export prices dropping from €430.2 per ton to €384.9 per ton. Ukraine imported 8,915 tons of methanol from Poland in the first five months.

Methanol imports into Hungary in the first four months in 2023 were similar to last year, amounting to 31,418 tons against 31,573 tons. Imports from Russia dropped from 10,763 tons to zero and from Slovakia from 7,624 tons to 4,181 tons. The largest suppliers to the Hungarian market this year included Germany which provided 8,572 tons in January to April and the Netherlands which supplied 9,672 tons. Average prices amounted to €451.8 per ton this year against €439.8 in 2022.

Hungarian Methanol Imports (unit-kilo tons)		
Country	*Jan-Apr 23*	*Jan-Apr 22*
Austria	0.559	0.811
Germany	8.572	2.769
Netherlands	9.672	3.184
Poland	6.738	2.873
Russia	0.000	10.763
Slovenia	0.304	0.429
Slovakia	4.181	7.624
Others	1.391	3.120
Total	31.418	31.573
Av € per ton	451.8	439.8

Polish Chemical Production (unit-kilo tons)		
Product	*Jan-May 23*	*Jan-May 22*
Caustic Soda Liquid	148.6	172.5
Caustic Soda Solid	32.9	29.5
Caprolactam	40.8	69.9
Acetic Acid	0.9	1.1
Ammonia (Gaseous)	703.0	1070.0
Ammonia (Liquid)	35.8	46.1
Pesticides	18.2	31.3
Nitric Acid	782.0	994.0
Nitrogen Fertilisers	630.2	848.0
Phosphate Fertilisers	82.9	136.4
Potassium Fertilisers	82.9	129.6

Central European chemical production

Agrofert buys nitrogen business from Borealis

Borealis AG has sold its nitrogen business to Agrofert including fertiliser, melamine and technical nitrogen products. On 5 July 2023 the transaction, valuing the business on an enterprise value basis at €810 million, was completed.

By adding Borealis' production assets in Austria, Germany, and France, as well as a comprehensive sales and distribution network, this business combination complements Agrofert's existing capabilities in serving its customers in the fertilisers and technical nitrogen business across Europe. Additionally, the sale extends Agrofert's existing portfolio with melamine. Borealis now intends to focus on its core activities in the petrochemical industry.

Talks are underway on the sale of Azoty Puławy to Orlen

Grupa Azoty, Grupa Azoty Puławy and the Orlen Group signed a cooperation and confidentiality agreement in June, which will enable due diligence process for the acquisition of the Puławy division. It is possibly too early to say whether though this is a done deal.

Although Azoty's first quarter results recorded significant losses, which started this process of a possible asset sale, the group does expect better results later this year. Thus, whilst Azoty is still interested in the sale of Pulawy, Orlen will have to offer a financial incentive for the transaction to go through. Where this may be helpful for Azoty is that the funds from the sale may help the group accelerate the necessary and costly process of energy transformation and allow for additional development investments.

In other matters, the Polish government has taken control of the Russian company Akron's 20% stake in Grupa Azoty. Akron is controlled by Vyacheslav Kantor, a Russian oligarch seen as close to Vladimir Putin. Poland will now look to sell the stake, which is worth an estimated 500 million zloty (€113 million). The funds from the sale will be then be frozen until a later date. The stake was bought over ten years ago in an attempt to influence the Polish fertiliser market.

RUSSIA

Windfall taxes could penalise profitable Russian chemical producers

The Russian State Duma has passed the first bill concerning the windfall tax on excess profits, which is designed replenish the budget finances and support for military expenditure and the war in Ukraine. This bill proposes to tax companies that have achieved certain rates of profits in a one-off payment by 28 January 2024. Previously, companies tried to offer their solutions to paying additional tax but were largely ignored.

EU sanctions 11th package and implications for Russian chemicals

The EU has adopted the 11th package of sanctions against Russia. Its main points relate to the import of Russian oil and the supply of dual-use goods. The petrochemical industry could be directly affected by another ban on the sale, licensing, transfer of intellectual property rights and trade secrets used in connection with limited goods.

The windfall tax has been outlined to affect industrial producers with revenues of more than 1 billion roubles per annum (only $11 million), which includes even the smallest chemical companies. The primary condition provided that the profit in 2021-2022 should be higher than the profit in 2018-2019. The windfall tax rate for 2021-2022 will comprise 10% of the difference in profits. Producers can reduce the rate by half, to 5% if it agrees to pay tax before 30 November 2023. Fosagro has already followed this path.

Most producers will probably face a windfall tax of sorts, as almost all large-tonnage producers have reported good results in recent years. Although profits have been reinvested in maintenance and new products the Ministry of Finance has concluded that these companies are cash-rich enough to be taxed again, even after paying mandatory taxes.

Chemical exporters achieved high profits in 2020-2021 based mostly on shipments to Europe which are now no longer possible, whilst shipments to China involve much tighter margins due to logistical costs. The tax is declared as a one-time tax, but the Ministry of Finance allows it to be levied in the future.

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Caustic Soda	507.0	539.0
Soda Ash	1,507.0	1,523.0
Ammonia	7,200.0	7,500.0
Nitrogen Fertilisers	5,335.0	5,034.0
Phosphate Fertilisers	1,853.0	1,854.0
Potash Fertilisers	3,365.0	3,510.0
Synthetic Fibres	61.9	67.0

Russian chemical production May 2023

The production of chemicals in Russia increased by 7.9% in May this year against May 2022. The production of rubber and plastic products rose by 17.8% over May 2022, although remained slightly lower than in 2021. May this year was a particularly difficult month for chemical and rubber producers which explains the rise in May this year.

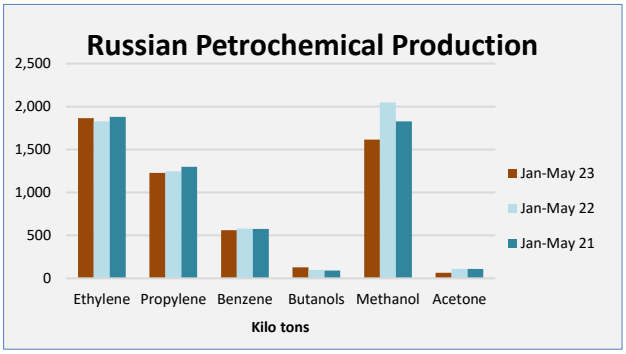
Despite the increase in tonnage production volumes in May, values dropped by 7.3% against May 2022. The drop in values to 465.4 billion roubles ($5.137 billion) in May 2023 against May last year is explained by high prices for chemical products in the first five months in 2022. Prices then saw a significant decline in the period June-December 2022. The production value of rubber and plastic products fell by even more, dropping by 11.7% in May 2023 to 173.2 billion roubles ($1.916 billion).

Russian base chemical and fertiliser production Jan-May 2023

Regarding base chemical production, Russian ammonia production totalled 7.2 million tons in January to May 2023 against 7.5 million tons in the same period in 2022 whilst caustic soda dropped from 539,000 tons to 507,000 tons. Nitrogen fertiliser production totalled 5.335 million tons in the first five months in 2023 against 5.034 million tons in the same period last year.

Russian petrochemical production Jan-May 2023

Russian ethylene production rose slightly in January to May 2023 to 1.865 million tons against 1.828 million tons in the first five months in 2022. Propylene production dropped from 1.246 million tons to 1.246 million tons and benzene fell from 578,000 tons to 559,000 tons.



Sanctions have been damaging overall for the Russian chemical industry, but not in the way that they might have been anticipated. The changes in petrochemical production have not been significant. Ethylene production was actually higher than in the first five months in 2022 but only slightly down from the same period in 2021. Propylene has seen a decline since 2021, whilst butadiene production has been impacted by lower output in the tyre sector. In the organic chemical sector butanols have seen a rise in production since 2022, whilst both methanol and acetone have been adversely affected by sanctions on exports to the EU.

Russian Petrochemical Production (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Ethylene	1,864.9	1,827.6
Propylene	1,226.4	1,246.1
Benzene	559.0	578.0
Butanols	127.2	96.7
Methanol	1683.9	2048.4
Synthetic Rubber	624.0	687.0
Acetone	64.0	111.2

Russian rubber & polymer production Jan-May 2023

Production of plastics in primary forms in Russia amounted to 911,000 tons in May which is 1.5% higher than in the same month last year, but still 3.8% lower than in May 2021. The production of styrene polymers amounted to 53,000 tons, which 4% higher than last year. The production of ethylene polymers amounted to 294,000 tons, which although is 2% lower than in May 2022, remains at the same level of May 2021. Polypropylene production in May this year increased by 3.2% over May 2022, amounting to 179,325 tons. PVC production increased in May over April but still remains lower than in previous years.

Russian Polymer Production (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Plastics in Bulk	4,473.0	4,450.0
Polyethylene	1,538.0	1,431.0
Polystyrene	246.1	248.9
PVC	407.1	451.4
Polyamide	57.9	82.6
Synthetic Rubber	624.0	687.0
Synthetic Fibres	61.9	67.0

The product area which is reporting weak performance is the group polyacetals, polycarbonates, alkyd resins, allyl alcohol ester polymers, etc where production dropped 10% in May and is not showing recovery signs. Output in urea-formaldehyde and melamine-formaldehyde resins has been in decline since April 2022 and despite some stabilisation remains under demand pressure. The production of polyamides fell sharply in June 2022, and since then it has remained at the level of around 12,000 tons per month.

Russian production of synthetic rubbers in primary forms amounted to 624,000 tons in January to May 2023 compared to 687,000 tons in January to May 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.

Russian tyre production continues to remain suppressed

The decline in tyre manufacturing of 21.4% in 2022 provided the main factor behind the reduction in synthetic rubber production. Rubber consumption in tyre manufacturing dropped by 28% in the first five months in 2023 against the same period in 2022.

The production of plastics totalled 4.473 million tons in the first five months this year against 4.450 million tons in the same period last year. The production of polyethylene rose from 1.431 million tons to 1.538 million tons in the first five months in 2023. This market has been particularly helped by the increased consumption in pipe manufacture for water and gas pipelines. Polyethylene is produced at eight plants in Russia, the largest of which is ZapSibNeftekhim at Tobolsk. Domestic demand to some extent has replaced exports of polyethylene to European markets.

Polystyrene production amounted to 246,100 tons in January to May against 248,900 tons in the same period in 2022. PVC is the bulk polymer which has seen the largest fall in production, declining from 451,400 tons in the first five months in 2022 to 407,100 tons. The production of synthetic fibres decreased in January to May 2023 to 61,900 tons compared to 67,000 tons in the same period in January to May 2022.

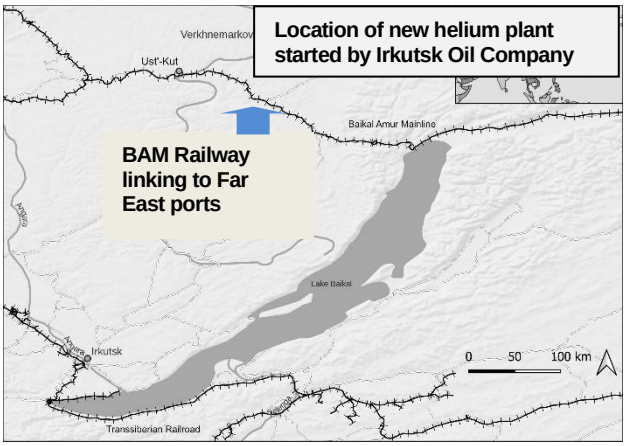
Russian petrochemical projects

Nizhnekamskneftekhim EP-600 olefin complex to be completed in 2024

The Ethylene-600 Industrial Park at Alabuga in Tatarstan, which is being developed as part of the consumption chain from the new olefin complex under construction at Nizhnekamskneftekhim, has been approved for new residents. The Ethylene-600 Industrial Park is a joint project of SIBUR and the Alabuga SEZ. For the time being at least this will be the only site in Russia where producers of low and medium-tonnage chemicals can gain access to petrochemical raw materials (primarily ethylene).

The first stage of construction involves the construction of the largest logistics complex in Russia named after Deng Xiaoping. The design capacity of the terminal will be 600 thousand containers per annum. The name of the terminal reflects the limited options of Russia in selling products, as China represents the only large-scale destination.

Whilst Chinese consumers are able to purchase from other sources Russian sellers are less fortunate. For petrochemical plants in Tatarstan there is no choice in the face of sanctions. The Chinese market is the alternative to the European market that will slowly make up for even if not all the losses, but at least part of them.



Construction of Nizhnekamskneftekhim's EP-600 olefin complex is currently scheduled to be completed in the second half of 2024, with start-up in 2025. 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. A hexene plant is also under construction at Nizhnekamsk, which is being managed by SIBUR. By the start of July this year the project had concluded 31% of its schedule.

Russian helium plants-Irkutsk and Amur

Irkutsk Oil Company (INK) has launched a pilot helium plant at the Yarakta oil and gas condensate field in the Irkutsk region. Due to global shortages, there is a strong potential for new helium capacity, but export opportunities may be limited by Russia's economic isolation. INK also aims to build another helium plant with a capacity of 7-10 million cubic metres per annum on the basis of the Markovskoye oil and gas condensate field in the Irkutsk Oblast.

Currently there are no direct sanctions on helium exports from Russia, but Western shipping companies are not allowed to call on Vladivostok. Thus, there are much fewer sailings in and out and it is more difficult to get the helium containers that need to be filled with helium in and out of Russia. Until 2021, Russia's only producer of liquid and gaseous helium was Gazprom's Orenburg helium plant with a capacity of 6 million cubic metres per annum. Gazprom opened the first of three helium lines of 20 million cubic metres per annum in 2021 as part of the Amur Gas Processing Plant. This first line suffered an explosion in January 2022 and has since remained idle whilst there is uncertainty over completion of the other two lines. Sanctions may have complicated construction, but Gazprom is stating that helium will be available in the second of half of 2023.

Russian petrochemical markets

Russian Propylene Exports (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Lukoil-NNOS	10.995	39.746
SIBUR-Kstovo	0.483	10.552
Angarsk Polymer Plant	0.000	5.100
Stavrolen	11.263	10.056
Total	22.741	65.454

Russian propylene exports & sales Jan-May 2023

Propylene exports from Russia amounted to 22,741 tons in the first five months in 2023 against 65,454 tons in January to May 2022. Due to the loss of European business Lukoil-NNOS reduced export shipments from 39,746 tons to 10,995 tons in January to May this year whilst SIBUR-Kstovo reduced shipments from 10,552 tons in 2022 to 483 tons. 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-May 23***	***Jan-May 22***
Angarsk Polymer Plant	12.903	13.607
SIBUR-Kstovo	62.077	71.310
Akrilat	6.644	12.520
LUKoil-NNOS	91.737	77.433
Tomskneftekhim	1.118	0.485
Stavrolen	3.302	13.597
Others	2.658	0.448
Total	182.055	189.400

Russian sales of propylene on the domestic merchant market amounted to 182,055 tons in the first five months against 189,400 tons in the same period last year. The largest propylene supplier to the domestic market was Lukoil-NNOS, shipping 91,737 tons against 77,433 tons in January to May 2022 followed by SIBUR-Kstovo which reduced sales from 71,310 tons to 62,077 tons.

ZapSibNeftekhim purchased 26,085 tons of merchant propylene in January to May this year versus 61,092 tons in the same period in 2022, sourced mostly from other SIBUR plants.

Russian Propylene Domestic Purchases (unit-kilo tons)		
Consumer	***Jan-May 23***	***Jan-May 22***
Saratovorgsintez	81.054	78.192
Volzhskiy Orgsintez	3.723	4.919
Akrilat	11.490	14.889
SIBUR-Khimprom	20.024	12.580
Omsk-Kaucuk	18.573	4.307
Tomskneftekhim	1.077	1.706
ZapSibNeftekhim	26.085	61.092
Moscow Refinery	5.156	1.218
Ufaorgsintez	8.692	7.453
Khimprom Kemerovo	2.154	3.433
Plant of Synthetic Alcohol	0.252	2.283
Others	2.572	2.193
Total	180.952	194.265

Saratovorgsintez increased purchases of merchant propylene in the first five months to 81,054 tons from 78,192 tons in January to May 2022, mostly supplied by Lukoil from its Kstovo refinery and the remainder from Stavrolen.

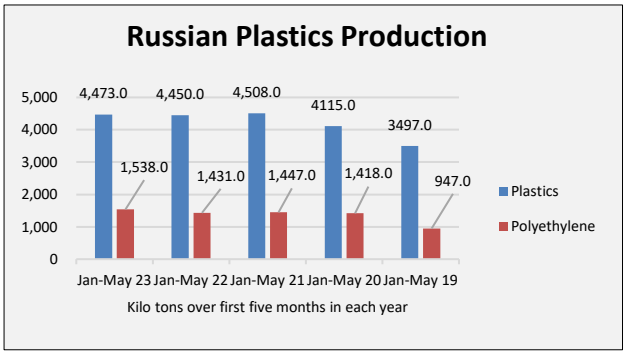
Other consumers of merchant propylene in Russia include Akrilat which reduced purchases from 14,889 tons in the first five months last year against 11,490 tons in the same period in 2022. Akrilat uses propylene in the production of acrylic acid and acrylates. SIBUR-Khimprom increased purchases in January to May 2023 to 20,024 tons from 12,580 tons last year. Propylene is used by SIBUR-Khimprom in the production of oxo alcohols.

Russian Butadiene Production (unit-kilo tons)		
Producer	*Jan-May 23*	*Jan-May 22*
ZapSibNeftekhim	95.622	121.098
Nizhnekamskneftekhim	73.737	96.475
Togliattikaucuk	19.600	22.840
Sterlitamak Petrochemical Plant	11.400	14.166
Omsk Kaucuk	18.756	14.980
Total	219.115	269.559

Russian butadiene production Jan-May 2023

Russian butadiene production totalled 219,115 tons in the first five months against 269,559 tons in the same period in 2022. Only Omsk Kaucuk showed an increase over 2022, rising from 14,980 tons to 18,756 tons whilst the largest producer ZapSibNeftekhim reduced production from 121,098 tons to 95,622 tons. Nizhnekamskneftekhim reduced production from 96,475 tons to 73,737 tons.

Russian bulk polymers



Russian plastics production Jan-May 2023

Russian bulk plastics production amounted to 4.473 million tons in January to May this year against 4.450 million tons in the same period in 2022 and 4.508 million tons in 2021.

Polyethylene production amounted to 1.538 million tons in the first five months, up from 1.431 million tons in the same period in 2022. Demand has been quite robust this year. Moreover, since the second quarter this year prices for the main brands of basic polymers polyethylene and polypropylene have seen some acceleration.

Despite mitigating the effects of sanctions across many segments, 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. However, whilst sanctions have created opportunities for Russian companies to develop its own production to replace imported products, overall the lack of trade with Europe provides major hurdles to long term growth.

Tomskneftekhim looks to develop local processing

Tomskneftekhim is looking for directions and opportunities to increase the volume of polymer processing in the Tomsk region. Tomskneftekhim also actively cooperates with Russian manufacturers in the supply of special components, high-tech products and equipment.

The Tomskneftekhim plant is one of the leading Russian polymer producers, part of SIBUR. The company produces low-density polyethylene, polypropylene and on their basis special grades with special consumer properties for such segments as medicine, construction, agriculture, cable industry and others. The installed production capacity of monomers is 300,000 tpa of ethylene and 139,000 tpa of propylene. For polyolefins, Tomskneftekhim's capacity includes 140,000 tpa of polypropylene and 270,000 tpa of LDPE.

Russian polyethylene pipe production Jan-May 2023

Russian plastic pipe production amounted to 458,200 tons in the first five months in 2023 against 389,700 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. In parts of Russia such as the Far East and the Volga region the demand for pipe replacement has been very high this year. Large-scale infrastructure projects are being undertaken in the Far East, and this creates a demand for high-quality modern materials.

Russian Plastics Production (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
Pipes, tubes and hoses and their fittings	458.2	389.7
Plates, sheets, film and strips of polymer	653	622.9
Other plates, sheets, film plastic porous	188.1	184.7
Other plates, sheets, plastic non-porous	220	190.7

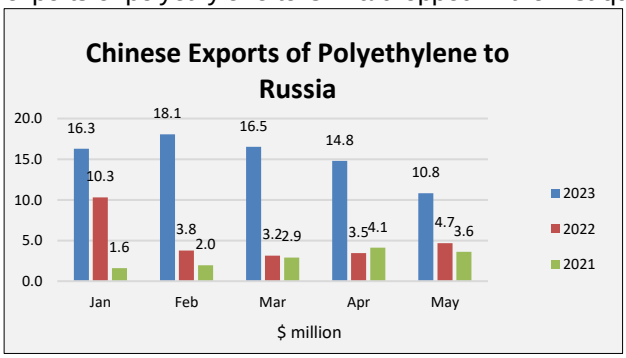
PE100 is the main polyethylene grade used in pipe construction in Russia. In 2022, a total of 548,000 tons of this polymer was processed which was up 30% over 2021 from 422,000 tons. Another 20% growth is forecast for 2023, raising the total amount to 650,000 tpa. PE80 production previously took place at Stavrolen but stopped due to a fire some years ago. Some businesses still try to use PE80 where possible as it cheaper than PE100, but generally it is quite difficult to source.

Polyplastik aims to build a plant in Primorye

The Primorsky Polymer Pipe Plant will build a line in the Primorsky Territory for the production of single-layer and multi-layer polyethylene pipes. The products are used in water supply and gas supply systems. Polymer pipes with a diameter of 20 to 1200 millimetres will be produced at the coastal site. The start of production is scheduled for the third quarter of 2023. The line is designed to produce pipes with a volume of up to 24,000 tpa. The Polyplastik group built a line for the production of polymer pipes at Khabarovsk in 2016. In 2022, Polyplastik produced and delivered 262,000 tons of pipes and fittings to facilities in all regions of Russia which was 50,000 tons more than in 2021.

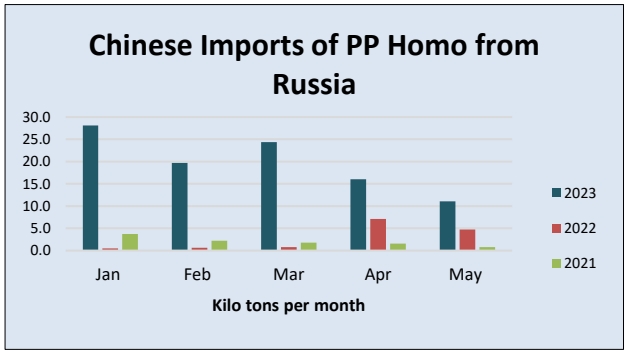
Russian polyethylene trade Jan-May 2023

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 119,300 tons in the first five months in 2022 to 78,600 tons in the same period in 2023.

By contrast inward shipments of polyethylene from China into Russia increased by value in the first five months to $76.5 million tons versus $25.3 million in 2022 and €14.5 million in 2021. By volume imports totalled 41,000 tons in the first five-month period in 2023, the most expensive of which included ethylene-vinyl acetate and ethylene-hexene copolymers.



Russian-Chinese polypropylene trade Jan-May 2023

Both exports and imports of polypropylene from Russia to China increased in the first five months this year as Russian producers secured new customers to replace those lost from the EU.

Exports of polypropylene from Russia to China amounted to 99,900 tons in the first five months in 2023 against 13,800 tons in the same period in 2022. Imports from China into Russia increased in the first five months last year from $9.5 million to $60.1 million this year.

Russian PVC market 2023

Russian PVC production fell from 451,400 tons in the first five months in 2022 to 407,100 tons in the same period this year. Despite the overall drop, production in May this year reported the highest volume since April 2022, rising 3.6% to 90,400 tons. Last year PVC production dropped by 11.5% against 2021 to a total of 970,000 tons. For suspension PVC Russian production fell from 6.5% from 960,000 tons in 2021 to 902,000 tons in 2022.

Russian Hydrogen, PVC-E project consideration at Sterlitamak

Russian Hydrogen is considering a project for the production of emulsion PVC (PVC-E) at the PVC plant at Sterlitamak owned by Bashkir Soda Company. The capacity of the proposed plant has been set at 50,000 tpa; currently a feasibility study is being undertaken. As part of the construction of the plant for emulsion PVC production, the existing EDC and VCM production facilities will be modernised. Currently, the production of PVC-E in Russia is available only at the RusVinyl plant at Kstovo where the capacity is 30,000 tpa.

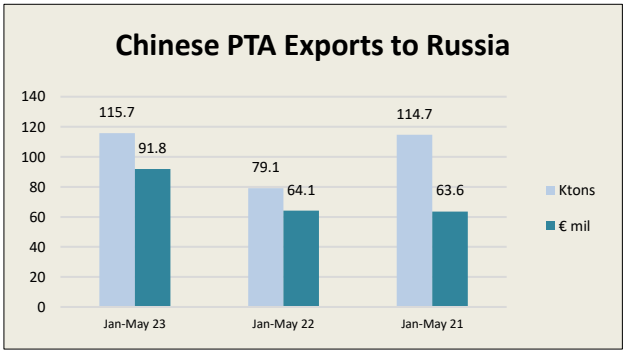
The fall in Russian PVC production was due partly to EU sanctions on imported additives combined with lower domestic demand from the PVC processing sector. The shortage of European products was compensated last year to an extent by supplies from China. The import of PVC-S to Russia increased by 61%, to 97,000 tons compared to 2021. In 2023 imports in the first five months dropped to a total of 42,593 tons against 62,673 tons in the same period in 2022.

Russian PVC consumption in 2022 decreased by 9% against 2021 and amounted to about 800,000 tons. Before 2022 China was a major supplier of PVC suspension grade to Russia, and last year started selling emulsion grade PVC which amounted to 34,000 tons over the twelve months. Emulsion grade imports from Europe dropped in 2022 to 23,000 tons versus 95,000 tons in 2021. Chinese producers of PVC-S not only replaced European supplies with emulsion grade PVC, but also with additives.

Paraxylene-PTA-PET

Russian PTA imports Jan-May 2023

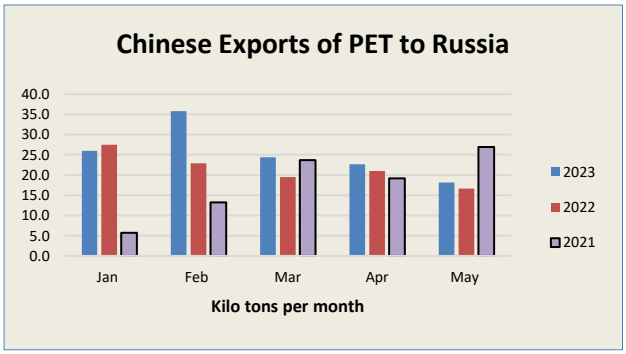
Russian PTA imports from China increased in the first five months to 115,665 tons versus 79,056 tons in the same period last year and 114,678 tons in 2021. This year values of imports amounted to $91.830 million in the first five months against $64.1 million in 2022 and $63.616 million in 2021.



Nearly all of the PTA imports from China were shipped to Ekopet at Kaliningrad by rail. PTA import prices averaged $793.9 in the first five months this year, down from $810.8 in 2022 and up from $554.7 in 2021.

Russian PET trade Jan-May 2023

In the first five months Russian import values of PET from China amounted to $117.8 million against $117.7 million in January to May 2022. By volume imports rose from 107,500 tons to 127,000 tons.



Polief-under sanctions imposed by Ukraine

Polief was included on a new list of Ukrainian sanctions, focused on companies located in Bashkortostan. The sanctions have been stipulated to apply for a period of 10 years. In the short term these sanctions are purely symbolic as there is no trade between Russia and Ukraine. Problems could emerge when the war is concluded although there are no signs at present. In effect the sanctions mean that Polief will be unable to operate in the Ukrainian market through sales and even transit routes.

Polief's MEG Domestic Purchases (unit-kilo tons)		
Company	***Jan-May 23***	***Jan-May 22***
Nizhnekamskneftekhim	25.2	26.2
SIBUR-Kstovo	5.7	0.3
Total	30.9	26.4

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.

The capacity of the plant at Blagoveshchensk is currently estimated at 374,000 tpa of PTA and 252,000 tpa of PET. Following the introduction of recycling facilities Polief has become an example of a closed economy where the re-involvement of used plastic bottles in production and further circulation.

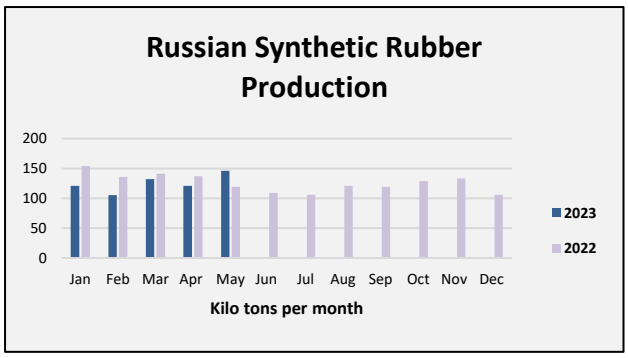
New polyester fibre plant Shakty, using both PTA and MEG

A new plant capable of producing up to 200 tons of polyester fibre daily was opened at Shakty near Rostov in June, where both PTA and MEG will be used. The plant for the production of polyester staple fibre is the third project of the Avangard company in the Rostov region.

The capacity of the Shakhty Polyester Plant (SHPZ) in the production of polyester staple fibre is 73,000 tpa. The product at Shakty is obtained according to a direct synthesis scheme from PTA and MEG. Despite the presence of several factories for the production of polyester fibres operating on secondary raw materials, this market in Russia remains import dependent.

The ShPZ has been fully provided with MEG supplied by SIBUR, which is the only manufacturer of this product in Russia (Nizhnekamskneftekhim, SIBUR Neftekhim). SIBUR (Polief) also supplied its PTA for the start-up and homologation of the plant.

Synthetic rubber



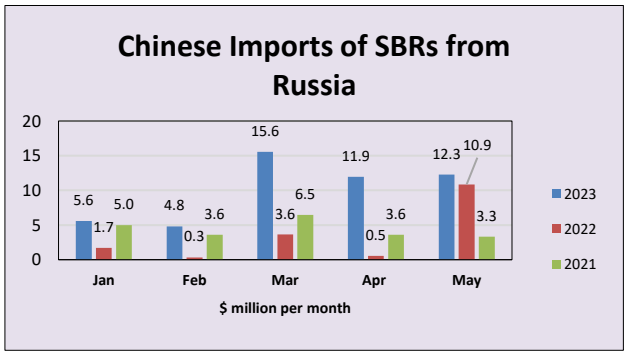
Russian synthetic rubber production Jan-May 2023

Synthetic rubber production in Russia amounted to 624,000 tons in January to May 2023 against 687,000 tons in the same period in 2022. Despite the decline this year May production volumes rebounded strongly to 146,000 tons, which amounts to an increase of 22.7% over the same period in 2022 and 12.9% higher than in May 2021.

The positive result in May was obtained by the industry despite the low level of production in the tyre industry. Tyre manufacturing for passenger cars dropped by 8.8% compared to May last year and by as much as 60.1% compared to the same period in 2021. The impact of sanctions, whether they be institutional and governmental through to self-sanctioning by Western companies impacted heavily on the tyre industry. As a result, the share of domestic consumption of rubbers in the Russian market decreased from 63.7% in 2021 to 50.3% in 2022. By volume tyre production in Russia amounted to 117,200 tons in the first five months against 163,300 tons in the same period in 2022.

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 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.

Chinese Synthetic Rubber Imports from Russia (unit-kilo tons)		
Product	***Jan-May 23***	***Jan-May 22***
SBRs	43.877	11.322
Butadiene Rubber	36.963	5.038
Butyl Rubber	45.635	32.936
HBR	17.970	23.230
NBR	13.617	3.440
Isoprene Rubber	19.651	19.204
Others	23.263	5.860
Total	200.975	101.029

Russian Chinese rubber trade Jan-May 2023

Exports of styrene thermoplastics from Russia to China in the first five months this year amounted to $50.162 million against $17.045 million in the same period in 2022 and $21.932 million in 2021. By volume Russian exports increased from 11,322 tons **in** the first five months in 2022 to 43,877 tons in January to May this year.

Overall Russian exports of synthetic rubber to China totalled $303.1 million in the period January to May 2023 against $174.4 million in 2022. By volume Russian shipments amounted to 200,975 tons in the first five months versus 101,029 tons last year.

By volume butyl rubber exports from Russia to China increased from 32,396 tons in January to May 2022 to 45,6359 tons in the same period this year. For rubber producers, as for all Russian companies, the reorientation to Asian markets is associated with logistical problems. The capacity of Russian railways and Russian Far Eastern ports does not allow to quickly reorient all supplies to Asia.

Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Shchekinoazot	563.202	631.949
Gazprom Methanol	324.610	315.500
Metafrax Chemicals	492.861	546.825
Akron	34.415	44.345
Azot Novomoskovsk	9.320	101.650
Angarsk Petrochemical	13.449	13.513
Azot Nevinnomyssk	38.866	51.258
Tomet	174.549	297.814
Ammoni	32.670	45.545
Totals	1683.942	2048.399

Russian methanol production Jan-May 2023

Russia produced 1.684 million tons of methanol in the first five months in 2023 against 2.048 million tons in the same period in 2022. Gazprom Methanol was the only producer to increase output this year, rising from 315,500 tons in the period January to May 2022, whilst Azot at Novomoskovsk showed the largest proportional fall from 101,650 tons to 9,320 tons. At the same time as production has been mostly idle at Azot this year exports from Novomoskovsk have increased to 40,400 tons in the first five months in 2023 against 31,100 tons in the same period last year.

Shchekinoazot reduced production from 631,949 tons to 563,284 tons whilst Metafrax Chemicals reduced production from 546,825 tons to 492,861 tons. Tomet produced 174,549 tons of methanol in January to May 2023 versus 297,814 tons last year whilst Ammoni in Tatarstan reduced methanol production from 26,652 tons to 15,449 tons.

Bureaucracy could increase for Russian methanol producers

The Ministry of Industry and Trade plans to form a unified register of producers, sellers and consumers of methanol in 2024. Market participants will be obliged to register themselves. Companies that have not been registered will be banned from working with methanol. The reason behind increased control is to try and stop methanol being sourced easily by illegal alcohol manufacturers.

To be included in the register, organisations will have to confirm the availability of facilities for the production, use and disposal of methanol, the presence of tanks for its sale, storage and transportation. Companies will be obliged to ensure safety in the circulation of methanol and comply with accounting and control requirements. Additional control should mean additional costs for market participants.

Russian Methanol Balance (unit-kilo tons)		
	Jan-May 23	***Jan-May 22***
Production	1683.942	2048.399
Exports	779.078	946.960
Domestic Sales	614.740	690.502
Captive/Inventory	290.124	410.937

Russian methanol market balance Jan-May 2023

The full EU ban on Russian methanol exports from 18 June means that China takes on the mantle of being the largest export market for Russian producers for the foreseeable future. The extended date for the sanction enforcement at least enabled some of the producers to adapt to non-EU markets even if they do not replace EU trade in full.

The fall in production in the first five months amounted to 18% against 2022, which corresponds exactly to the same percentage fall in exports. Domestic merchant sales declined by 11% in the first five months whilst internal processing saw the largest drop. Overall, the combined internal usage and methanol inventories dropped from 410,937 tons in January to May 2022 to 290,124 tons this year.

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Azot Nevinnomyssk	3.5	1.0
Azot Novomoskovsk	40.4	31.1
Akron	0.0	4.9
Metafrax Chemicals	205.7	200.6
Gazprom Methanol	171.9	111.3
Tomet	38.3	119.0
Shchekinoazot	319.3	477.6
Ammoni	0.0	1.5
Total	779.1	947.0

Efforts to develop the domestic market have for some producers such as Metafrax represented a strategic long-term aim, but growth is mostly gradual and does not provide a substitute for export activity. The domestic methanol market primarily depends on consumer industries and is poorly sensitive to price changes.

Producers expect exports to drop in volume by around 20% over 2023, but the main problem should come from lower profitability due to higher costs of logistics. This effect has been partially mitigated by state support aimed at reducing the

cost of transporting methanol within the country. The sanctions also call into question the construction of the vast majority of the previously announced new methanol capacities, with the exception of those that were initially focused on Asian markets.

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	***Jan-May 23***	***Jan-May 22***
Belarus	89.175	92.841
China	292.022	0.000
Finland	106.441	407.521
Germany	5.265	333.631
Kazakhstan	14.398	14.227
Latvia	1.230	30.953
Lithuania	9.019	35.074
Netherlands	20.814	120.262
Poland	126.002	181.979
Romania	0.000	26.488
Slovakia	0.000	49.035
Turkey	114.631	35.710
UK	0.000	8.398
Ukraine	0.000	11.916
Others	0.500	5.504
Total	779.5	947,000

Methanol exports from Russia, despite Western restrictions, increased by 9%, to 2.068 million tons in 2022. This year exports are likely to fall by around 22%, whilst at the same time facing increased transport costs.

Russian methanol exports & market overview Jan-May 2023

Russian methanol exports amounted to 779,100 tons in the first five months in 2023 versus 947,000 tons in the same period in 2022. Shchekinoazot reduced exports from 477,600 tons to 319,300 tons whilst Metafrax Chemicals increased shipments from 200,600 tons to 205,700 tons this year.

Russian methanol exports to Belarus decreased to 89,175 tons in January to May 2023 against 112,191 tons in January to May 2022. Exports to Kazakhstan in the first five months in 2023 dropped to 14,398 tons from 18,417 tons last year whilst more significantly shipments to Poland dropped from 219,739 tons to 126,002 tons.

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 18 June this year exports to the EU are no longer legally possible. Romania and Slovakia have not been able to receive methanol from Russia since the end of February 2022and 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. This now appears to be regular business for the Gubakha plant, whilst seeking out other opportunities such as recent shipments to the United Arab Emirates.

In foreign markets, Russia's main competitive advantage has traditionally come from the low cost of raw materials natural gas. Much of this advantage is eroded in shipments to China through the costs of transport which for most producers ranges from 50% to 100% higher than to customers in the EU.

In terms of product pricing Russian shipments to China in the first five months this year have been similar to numbers achieved in the EU markets.

By overall volumes Tomet exported only 38,300 tons of methanol in the first five months this year versus 119,000 tons in the same period last year. Gazprom Methanol increased exports slightly in the first three months from 111,300 tons to 171,900 tons. The largest destination for Russian methanol exports in the first five months was China, taking 292,022 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 114,631 tons was supplied to Turkey in the first five months which was transported through the ports of Kavkaz and Temyruk.

On 18 June the full ban on the export of methanol to the EU came into force. No EU shipments were made in June when 75.9% of Russian exports went to China. The sanction amendment allowing Russian companies which set up contracts before 7 October 2022 up to 18 June this year was important, providing a period when it was possible to build up sales to China.

A total of 268,771 tons of methanol was shipped to the EU in the first five months of 2023 against 899,063 tons in the same period in 2022. For the whole of last year Russian methanol exports to the EU totalled 1.494 million tons against 1.651 million tons in January to December 2021.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Azot Nevinnomyssk	2.606	12.414
Azot Novomoskovsk	0.000	55.678
Metafrax Chemicals	175.431	154.721
Gazprom Methanol	135.365	166.044
Tomet	125.225	164.782
Shchekinoazot	164.824	112.112
Ammoni (Mendeleevsk)	14.670	24.751
Total	618.121	690.502

Russian methanol domestic sales, Jan-May 2023

Domestic merchant market sales tended to stabilise in the second quarter and then weaken slightly towards the end of the quarter. In March-April, the price per ton of methanol in Russia had increased but has now eased back, partly due to the cessation of exports to the EU which has freed up product.

In the first five months in 2023 Tomet supplied 125,225 tons to the domestic merchant market against 164,782 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-May 23***	***Jan-May 22***
Pigment	14.730	14.744
Shchekinoazot	12.401	14.660
Akron	52.482	68.275
Metafrax	120.697	167.255
Sverdlov Plant	3.624	7.227
Khimsintez	16.416	22.772
Uralkhimplast	18.313	19.318
Nizhnekamskneftekhim	68.930	35.491
Metadynea	16.088	19.057
Total	323.680	368.799

Gazprom Methanol reduced domestic shipments of methanol from 166,044 tons in January to May last year to 135,365 tons in January to May 2023. Previously formaldehyde was produced by Gazprom Methanol, but the assets were sold in 2021.

Shchekinoazot increased domestic sales from 112,112 tons in the first five months in 2022 to 164,824 tons in January to May 2023. Shchekinoazot probably faces the largest challenges of all the Russian producers. Internal methanol processing is still quite small and the expansion of capacity to 1.45 million tpa in 2021 was aimed at exploiting the Western markets. The company's geographical location makes it very hard to export to China profitably. Metafrax Chemicals increased merchant shipments in the first five months this year from 154,721 tons to 175,431 tons.

Metafrax Chemicals-formic acid from methanol

Metafrax will create the production of formic acid from methanol using Russian technology. Currently 100% of formic acid is imported to Russia. In 2022, the formic acid market in Russia amounted to 17,000 tons, of which 14,000 tons are used in agriculture, the main application is feed silage and grain preservation, functional feed additives.

The company launched a paraformaldehyde plant with a capacity of 30,000 tpa in November 2022. As a result of the project, the internal processing of methanol at the Gubakha plant increased to 450,000 tpa.

Formaldehyde production amounted to 323,680 tons in January to May 2023 versus 368,799 tons in the same five months in 2022. Metafrax reduced production from 167,255 tons to 120,697 tons whilst Akron reduced production from 68,275 tons to 52,482 tons.

Metafrax-AKM

Metafrax Chemicals has put into operation a complex for the production of ammonia, urea and melamine (AKM). The plant includes capacities of 500,000 tpa of urea, 298,000 tpa of ammonia and 40,000 tpa of melamine. Urea and melamine, in addition to sales in the domestic and foreign markets, are planned to be used as raw materials for the production of resins by Metadynea, which is part of Metafrax Group.

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Angarsk Petrochemical company	14.744	15.783
Azot Nevinnomyssk	8.453	6.515
Gazprom neftekhim Salavat	33.060	20.893
SIBUR-Khimprom, Perm	16.069	11.538
Total	72.326	54.729

Russian Isobutanol Production (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Angarsk Petrochemical Company	10.755	11.234
Gazprom neftekhim Salavat	18.469	12.208
SIBUR-Khimprom, Perm	31.068	22.710
Total	60.292	46.152

Russian butanol production Jan-May 2023

Russian normal butanol production rose from 54,729 tons in January to May last year to 72,326 tons in January to May 2023. Gazprom neftekhim Salavat was the largest Russian producer, increasing production to 33,060 tons from 20,893 tons.

Isobutanol production in Russia increased from 46,152 tons to 60,292 tons in January to May 2023. Gazprom neftekhim Salavat increased production from 12.208 tons to 18,469 tons, whilst SIBUR-Khimprom increased production from 22,710 tons to 13,049 tons.

Russian Butanol Exports (unit-kilo tons)		
N-Butanol	***Jan-May 23***	***Jan-May 22***
Gazprom neftekhim Salavat	6.5	2.0
SIBUR-Khimprom	0.0	0.6
Angarsk Petrochemical	2.8	1.1
Azot Nevinnomyssk	0.5	1.7
Dmitrievsky Chemical Plant	0.0	1.4
Total	9.8	6.9
Isobutanols	***Jan-May 23***	***Jan-May 22***
Gazprom Neftekhim Salavat	4.0	12.2
SIBUR-Khimprom	3.8	9.6
Angarsk Petrochemical	0.0	0.0
Dmitrievsky Chemical Plant	0.3	0.5
Total	8.1	22.3

Normal butanol exports rose from 6,900 tons in the first five months last year to 9,000 tons in the first five months this year, including an increase in shipments by Gazprom neftekhim Salavat from 2,000 tons to 6,500 tons. Isopropanol exports fell from 22,300 tons in January to May 2022 to 8,100 tons this year. Gazprom neftekhim Salavat reduced shipments from 12,200 tons to 4,000 tons whilst SIBUR-Khimprom reduced shipments from 9,600 tons to 3,800 tons.

Russian oxygenated solvents Jan-May 2023

Russian acetone production dropped from 69,100 tons in the first five months last year to 64,900 tons in the same period in 2023. Omsk Kaucuk produced 12,700 tons of acetone against 15,500 tons whilst Kazanorgsintez produced 23,200 tons versus 23,100 tons. Acetone has sanctioned by the EU, preventing Russian exports and new markets are being sought by producers. Exports fell in the first five months from 55,660 tons in the first five months in 2022 to 2,054 tons in the same period this year.

Russian Acetone Production (unit-kilo tons)		
Producer	***Jan-May 23***	***Jan-May 22***
Ufaorgsintez	14.6	15.6
Kazanorgsintez	23.2	23.1
Novokuibyshevsk Petrochemical	14.3	14.9
Omsk Kaucuk	12.7	15.5
Total	64.9	69.1

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 2023 (unit-kilo tons)		
Exports		
	Jan-May 23	***Jan-May 22***
DOTP	3.321	4.665
Imports		
DOP	1.615	0.177
DOTP	0.927	4.222
DINP	9.999	9.513
Total	12.541	13.912

Russian plasticizer trade Jan-May 2023

Russian plasticizer exports dropped from 4,665 tons in the first five months in 2022 to 3,321 tons in the first five months in 2022. Imports

of plasticizers dropped from 13,912 tons in January to May 2022 to 12,541 tons in the same period in 2023. The largest share of plasticizer imports comprises DINP which actually increased in the first five months this year to 9,999 tons from 9,513 tons last year. Most of Russia's plasticizer imports this year came from South Korea, followed by China and India.

Russian chemical projects and new products

Titan Group-epoxy resin plans at Omsk

The Titan Group of Companies plans to obtain its own technology for the production of epoxy resins at Omsk in 2024. The plans of Titan to build an epoxy resin plant, which will cover part of the demand for Russia. Currently Russia imports around 70,000 tpa of epoxy resins. The site for production has already been selected. The investment value of the entire industrial chain, including the production of the necessary bisphenol and polycarbonate, is estimated at 60 billion roubles.

Expansion of Agidol-1 capacity at Sterlitamak

Sterlitamak based companies Sterlitamak Petrochemical Company (SNCP) and Sintez-Kaucuk started this year the modernisation of the Agidol-1 crystalline production unit, including a 55% increase in capacity. Demand for Agidol-1 is rising due to increased demand for curing components for epoxy resins, as well as usage in the production of maleic anhydride which has recently started by SIBUR at Tobolsk. Agidol-1 crystalline is used to stabilize polymeric materials used for domestic and food purposes.

Shchekinoazot-spunbond expansion

Shchekinoazot has completed the construction of the production of multilayer nonwoven material using meltblown technology (spunbond, SSMS). The company now has three lines for the production of spunbond following the introduction of plants in 2009 and 2015 with respective capacities is 3,600 tpa and 6,240 tpa. The production capacity for producing material using the Meltblown technology (spunbond, SSMS) is 8,640 tpa.

Polyvinyl alcohol Azot Nevinomyssk

Azot at Nevinnomyssk plans to create a workshop for the production of polyvinyl alcohol (PVA) and methyl acetate. The company, which is owned by Evrokhim, also wants to expand the capacity for vinyl acetate which provides the basis for the new organic products. PVA is currently not produced in Russia.

Soda-Chlorate

Evrokhim has outlined plans for a project to build a sodium chlorate and hydrogen peroxide plant in Novomoskovsk by 2026. The capacity of the proposed sodium chlorate plant, which would be based on the existing chlorine plant at Novomoskovsk chlorine, could rise to 25,000 tpa.

Siberian Titan-TiO2

Siberian Titan hopes this year to start the construction of a proposed plant at Seversk in the Tomsk Oblast for titanium pigment dioxide based on fluoride technology in the Tomsk region. Russia's only production plant for titanium dioxide currently takes place at Crimean Titan. Should Ukraine retake control of Crimea Russia will no longer be able to state that the plant falls under its territorial control.

Finance may be the hurdle for investors. Even prior to the latest drop in rouble values the construction of the titanium dioxide plant at Seversk had been estimated to cost much more originally estimated. The latest estimate places costs at around $50 million. The production capacity at the initial stage will be 10,000 tpa which will comprise around 10% of the demand of the Russian market.

Kaustik is building units for bromine and bromide production

Kaustik at Volgograd is currently building new facilities for the production of bromine with a capacity of 3,000 tpa and sodium bromide with a capacity of 3,750 tpa. Bromine and sodium bromide are in strong demand on the market and are widely used in various industries. Applications include the preparation of drilling fluids for petrochemistry, production of pesticides and insecticides for agriculture, production of flame retardants for the chemical industry, etc. Technology for this project is being provided from China, with equipment deliveries expected in the third quarter in 2023. Kaustik increased sales by 22% in 2022 compared to 2021 and amounted to 31.4 billion roubles. PVC accounted for 28% of the company's sales, caustic soda 23% and magnesium hydroxide 9.6%. Kaustik produced 26,100 tons of magnesium hydroxide in 2022, which was close to full capacity.

Kazakhstan

Kazakh gas treatment plant for polyethylene plant

On 1 June 2023, KMG PetroChem LLP (a subsidiary of KazMunaiGaz) and Tengizchevroil signed agreements for construction of Gas Separation Complex (GSK) project which is important for providing feedstocks for petrochemical production. The construction of the GSK is expected to be carried out on the territory of the Tengiz field. GSK is an infrastructure facility designed for the production of ethane used as a raw material at a polyethylene plant at Atyrau.

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.

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.

The project includes the supply of dry gas from TCO to KMG PetroChem, the provision of technical services and other coordination issues during the construction and operation of the facility. All these efforts are aimed at supporting the plans of the Republic of Kazakhstan for the development of the country's petrochemical industry.

Kazakhstan Petrochemical has agreed on a loan of $150 million with the Eurasian Development Bank (EDB, which finances projects within the framework of the Eurasian Economic Union).

KPI polypropylene outage & exports

The gas chemical complex in the Atyrau region stopped for repairs for the period 5 June to 25 July, as it is necessary to carry out warranty performance tests. The plant was constructed by Chinese contractors and is yet to work at full capacity. On 3 April 2023, a power failure occurred at the polypropylene plant which led to a partial shutdown of production. Kazakhstan Petrochemical Industries (KPI) plant hopes to achieve full production capacity 519,000 tpa of polypropylene by the end of 2023, the bulk of which will be shipped for export. There are some doubts that the plant can reach full capacity, but production should be sufficient to fully meet the needs of the domestic market in polypropylene, as well as export volumes. Regarding export markets KPI has already established direct deliveries of products to China, EU countries, Turkey and Russia.

The KPI plant exported 54,000 tons to China in 2022, with the aim to ship 170,000 tons in 2023. Other markets include Europe with 50,000 tons. The plant expects to ship up to 12% of the total production volume to the domestic market or around 60,000 tpa.

Butadiene project Kazakhstan change of ownership

KazMunaiGaz withdrew from the jv with Tatneft Butadien, and its 25% stake was transferred to the Samruk-Kazyna fund. KazMunaiGaz withdrew from the joint venture on 19 June, and on the same day the Samruk-Kazyna Fund became its participant. KazMunaiGaz owned 25% of the share, with the remaining 75% belongs to the Russian company Tatneft. The change of the Kazakh owner will reduce the financial burden on KMG, transferring it to the parent company.

KazMunaiGaz and Tatneft established the Butadien jv at the end of 2021. Raw materials for the new plant, which was originally planned to be launched in 2026 in the Atyrau region, should be supplied from the Tengiz field by Tengizchevroil, and the finished products, in turn, will be sent to the KamaTyresKZ tire

plant, launched at the end of 2022 near Karaganda. This is a joint venture between Tatneft and the Kazakh group Allur.

The estimated production capacity is 186,000 tpa of butadiene rubbers and 170,000 tpa of isobutane. At the moment, design work is underway and technology licensors have been involved. In the meantime, it is hoped that the replacement of KMG with Samruk-Kazyna in the Butadien project will get it off the ground.

The first stage of construction and installation work has already begun at the site. The plant will produce five different types of products including styrene-butadiene-styrene-rubber, divinyl-styrene synthetic rubber, butadiene, and isobutane-isobutylene fraction. In November 2022, Butadien signed a butane purchase and sale agreement with Tengizchevroil for feedstocks. The supply volume will be 380,000 tpa of butane. The launch of production is scheduled for 2026 on the territory of the National Industrial Petrochemical Technopark in the Atyrau region.

KazAzot-ammonia and urea complex

KazAzot intends to invest about $1 billion in the construction of an ammonia-urea complex in the Aktau Seaport special economic zone in the Mangystau region. The planned completion date is the fourth quarter in 2026.

KazAzot has signed a contract for the design and construction of a new ammonia-urea complex with the Spanish company Técnicas Reunidas. KazAzot currently now produces 400,000 tpa of ammonium nitrate. The total volume of products, including urea and ammonium nitrate, will be about 1.5 million tpa, which will fully meet the needs of domestic farmers and industrial enterprises in high-quality nitrogen fertilisers.

Pavlodar-hydrogen project

Pavlodar Petrochemical Plant has signed an agreement on the construction of a hydrogen plant with the Kazakh division of Air Liquide. The estimated cost of the project is €80 million.

Air Liquide Munai Tech Gases is a joint venture between Air Liquide and KazMunayGaz with 75% and 25% stakes, respectively. The company operates hydrogen and nitrogen production units at the Pavlodar Petrochemical Plant, and since 2021 has been operating hydrogen and nitrogen production units at the Atyrau Oil Refinery. In addition, since 2021, the company has started commercial production at the newly built nitrogen production unit in Karabatan near Atyrau.

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