

CIREC monthly NEWS

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

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Visegrad bloc including Czech Republic, Hungary, Poland, Slovakia
South East Europe & Baltic States

Eurasia Russia-Ukraine-Belarus-Kazakhstan-Uzbekistan-Azerbaijan

*Product areas include Olefins, Aromatics, Polyolefins, Methanol, Organic Chemicals,
Polyurethane Raw Materials, etc*

Issue No: 408, 25 November 2024

Features from this issue, including changing production and trade dynamics

Central European petrochemical markets

- Orlen's third quarter performance in petrochemicals continued the trend of increasing losses, with no sign of improvement in margins
- A decision on the future of Olefiny III is anticipated in December, as part of the group's strategic review
- MOL's ethylene production in Hungary and Slovakia dropped to 453,000 tons in the first nine months in 2024 against 501,000 tons in the same period in 2023

Central European polyolefin markets

- Production of polyethylene in Poland increased from 225,100 tons in the first nine months last year to 227,300 tons in the same period in 2024. Polypropylene production increased from 205,300 tons in the first nine months in 2023 to 241,900 tons in January to September 2024
- Polish imports of polyethylene increased to 1.055 million tons in January to September this year against 923,581 tons in January to September 2023
- MOL's polyolefin production dropped from 757,000 tons in the first three quarters last year to 641,000 tons in the same period this year

Central European chemical and polymer markets

- Methanol imports into Poland totalled 496,127 tons in January to September this year against 487,949 tons in the same period in 2023
- Orlen's PTA exports amounted to 285,144 tons in the first nine months against 174,806 tons in the same period in 2023. Shipments to Germany increased from 140,597 tons to 231,470 tons.
- Czech exports of synthetic rubber amounted to 99,202 tons in January to September this year versus 115,241 tons in the same nine months in 2023
- The Polish government has signed a letter of intent with domestic companies, including Grupa Azoty, to make the nitrocellulose and multi-base powders necessary for producing ammunition

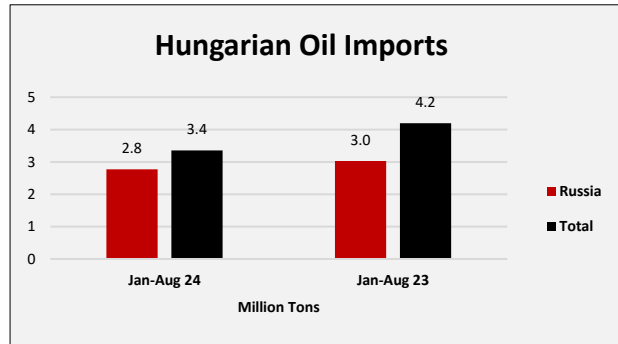
Russian chemical and polymer production-trade

- Russian chemical production dropped slightly in the third quarter this year against the first and second quarters but was higher than in the third quarter in 2023
- Russian ethylene production totalled 3.438 million tons in the first nine months in 2024 against 3.286 million tons in the same period in 2023.
- Russian propylene production totalled 1.924 million tons in the first nine months in 2024 against 1.934 million tons in the same period in 2023
- Russian bulk plastics production amounted to 8.183 million tons in the first nine months against 8.013 million tons in the same period last year
- Russian production of propylene polymers totalled 1.215 million tons in the first nine months in 2024 versus 1.291 million tons in the same period in 2023.
- PET production in Russia totalled 476,795 tons in the first nine months in 2024, of which Ekopet at Kaliningrad produced 166,094 tons and Polief produced 163,829 tons
- Synthetic rubber production in Russia amounted to 1.042 million tons in the first nine months this year against 1.049 million tons in the same period in 2023 and 1.137 million tons in 2022

CENTRAL and SOUTH EAST EUROPE

Hungary-Slovakia oil supply

Ukraine has thus far maintained its intention to close of the Druzhba pipeline on its territory from 1 January 2025, but this should not stop MOL and Slovnaft from purchasing crude from Russia through other routes. MOL could alternatively look towards full dependence on the Adria pipeline, which itself has sufficient capacity to meet extra demand but prices are higher than from Russian crude. Other users of the Adria pipeline include INA in Croatia and thus the Croatian refineries at Sisak and Rijeka do not purchase crude from Russia.

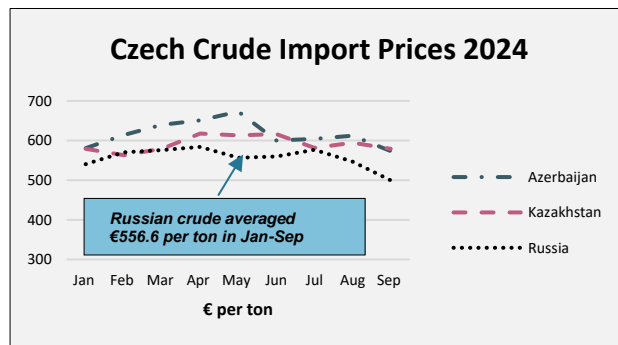


Russian oil supplies via Druzhba in September amounted to 510,000 tons for Slovakia and at 360,000 tons for Hungary. Slovnaft undertook maintenance at its crude distillation unit from 23 September, which slowed down crude intake into October. Tatneft and Russneft were seen as main Russian suppliers of crude oil to Slovakia and Hungary in September.

The Slovak government wants to impose a special tax on excess profit gained from crude purchases from Russia. Due to the EU embargo on Russian oil, the Slovak refinery has purchased the basic raw material at lower prices than its competitors on the global commodity market.

Czech fuel supplies from Slovakia

The EU's exemption on the import of Russian oil-derived products expires in on 5 December, which could cause problems for the Czech Republic as it depends on deliveries from Slovnaft's refinery in Slovakia. Around 15-20% of its fuel is supplied by MOL's Slovnaft refinery in Bratislava. While Slovnaft is working to replace Russian oil with supplies from the Adriatic pipeline, it is not clear if this pipeline's capacity would be sufficient to meet Czech demand.



Czech crude-TAL pipeline

From January 2025, the Czech Republic will rely on two oil pipelines that have never been tested at full capacity, which could result in significant price fluctuations and potential fuel shortages.

The TAL expansion is proceeding as planned, with key technical installations expected to be completed by the end of the year. Mero has held a 5% stake in TAL since 2012. The transit of Russian oil through the Druzhba pipeline is expected to cease across Ukrainian territory starting January 2025, in addition to a halt in gas transit.

The Czech Republic hopes that the expansion of the TAL pipeline will be completed by the end of this year, which will allow Unipetrol to operate solely on non-Russian sources from the start of 2025. However, the expanded TAL may not be ready until the middle of 2025 which could cause Unipetrol problems.

The pipeline's capacity is set to double from 4 million to 8 million cubic metres. Oil would then be transported to Czech refineries via the Ingolstadt-Kralupy nad Vltavou (IKL) pipeline, constructed in the late 1990s. Last year, 58% of Czech oil imports came from Russia via the Druzhba pipeline, with the rest delivered through the IKL pipeline.

Czech Crude Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Azerbaijan	1923.0	1435.1
Kazakhstan	759.5	406.6
Russia	1724.6	3476.3
US	0.0	181.4
Others	161.8	35.1
Total	4568.8	5534.5
Av price € per ton	587.4	530.5

Czech imports of crude from Russia amounted to 37.3% of total supplies of 4.569 million tons in the first nine months this year against 62.81% of the 5.535 million tons in the same period in 2023. Imports from Azerbaijan and Kazakhstan both increased in the first nine months, both in volume and percentage share. Azerbaijan has now exceeded Russia's share of market purchases. Average prices for crude imports into the Czech Republic amounted to €587.4 per ton in the first nine months in 2024 against €530.5 per ton in 2023. Crude from Russia averaged €556.6 per ton against €616.5 per ton from Azerbaijan.

Kazakh crude shipments to Germany via the Druzhba

The export of Kazakh oil to Germany via the Druzhba pipeline in January-September 2024 amounted to 1.1 million tons. 145,000 tons of Kazakh oil were delivered to Germany in September, and 133,000 tons in October. Kazakhstan has been supplying oil to Germany since 2023 through the Transneft trunk pipeline system in the direction of the Adamova Zastava oil delivery point. In January-September 2023, 590,000 tons of oil were exported to Germany and for the whole year 993,000 tons. Sources came from the Karachaganak hydrocarbon fields of north west Kazakhstan. Germany is keen to increase crude purchases up to 2.5 million tons per annum from the current agreement for 1.2 million tons.

Polish Crude Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Saudi Arabia	9582.9	8871.5
Nigeria	772.5	1118.1
Norway	8239.5	6032.1
US	1000.6	1126.4
UK	655.2	705.7
Others	18.4	0.1
Total	20,504	19291.1
Av price € per ton	574.4	542.9

Polish oil imports Jan-Sep 2024

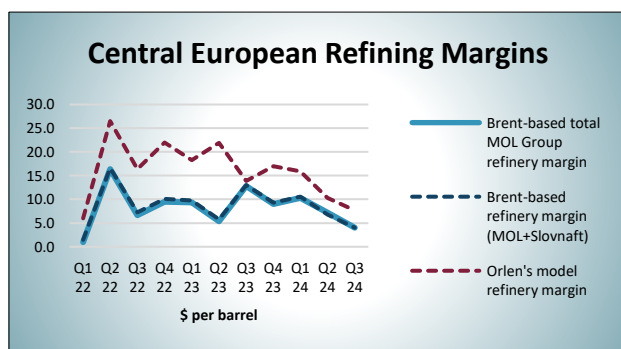
From the total of 20.504 million tons of crude imported into Poland in the first nine months in 2024, supplies from Saudi

Arabia totalled 9.583 million tons at €558.0 per ton and from Norway 8.240 million tons at \$539.1 per ton. Other suppliers to Poland include Nigeria, the US and UK.

Central European refinery margins

Refinery margins in Central Europe have gradually come down from their historical highs in 2022, but still remain close to double digits. OMV Petrom reduced its margin to \$7.1 in the third quarter against \$14.9 per ton in the same quarter last year.

Despite the absence of cheaper Russian crude supplies since early 2023 Orlen's refining margins remained above historical levels for the next few quarters until being dragged down in 2024. Previously numbers quite often less than much less than \$10 were the norm for Orlen and other regional refiners



until the start of 2022 and the indirect consequences resulting from the war in Ukraine. Orlen has gradually become more independent of Russian sources over the past decade. Supplies from Russia were last received in late February 2023.

South-East European crude supplies

Bulgaria has an oil import terminal near Burgas, and relatively quickly managed to replace its almost complete dependence on Russian oil.

Since the beginning of 2024, Bulgaria has been buying oil from Kazakhstan and North Africa countries, completely abandoning Lukoil's supplies. Bulgaria is the only EU country that has received a derogation for the import of Russian oil through sea terminals and has the right to do so until the end of 2024. This derogation has been rendered null and void due to the Bulgarian government's policy to full diversify from Russian crude.

Central European Olefin Production & Trade

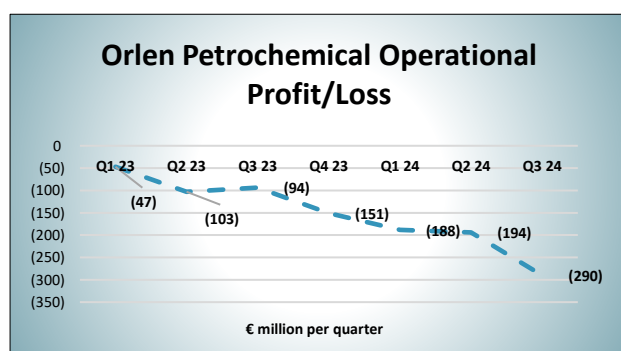
Polish Petrochemical Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Ethylene	261.8	271.6
Propylene	307.1	239.2
Butadiene	43.5	43.0
Phenol	28.2	30.9
Polyethylene	227.3	225.1
PVC	163.3	155.8
Polypropylene	241.9	205.3

Polish petrochemical production Jan-Sep 2024

Ethylene production in Poland dropped slightly from 271,600 tons in January to September 2023 to 261,800 tons in the same period in 2024, whilst propylene rose from 239,200 tons to 307,100 tons. Propylene for polypropylene production at Grupa Azoty Polyolefins is produced by a PDH unit which is supplied to Grupa Azoty Kedzierzyn on an as-needed basis.

Subsidiaries of Grupa Azoty are considering the option of regular deliveries of propylene to Kedzierzyn starting in 2025 where consumption of propylene ranges between 120,000-140,000 tpa.

Besides propylene sales, propane deliveries to the Police plant are made exclusively by sea under futures contracts with suppliers from the US or Europe.



Butadiene production at Plock increased to 43,500 tons in the first three quarters from 43,000 tons last year. In the plastics sector polyethylene production at Plock rose to 227,300 tons in January to September 2024 versus 225,100 tons in January to September 2023. Polypropylene production in Poland increased from 205,300 tons to 241,900 tons. PVC production increased from 155,800 tons to 163,300 tons.

Orlen petrochemicals Jan-Sep 2024

Orlen Group Chemical Sales (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
Monomers	643	554
Polymers	544	510
Aromatics	271	269
Fertilisers	881	712
Plastics	213	202
PTA	435	312
Total	2987	2559

Orlen's third quarter performance in petrochemicals continued the same trend from the last six or seven quarters of increasing losses, and margins remaining lacklustre. However, production in petrochemicals increased throughout the group with only benzene lower in the first three quarters.

Overall chemical production totalled 2.704 million tons in the first three quarters in 2024 against 2.453 million tons in the same period in 2023, whilst sales increased from 2.559 million tons to 2.987 million tons. Sales of monomers

increased from 554,000 tons to 643,000 tons. PTA recorded the largest rise by volume, rising from 312,000 tons to 435,000 tons.

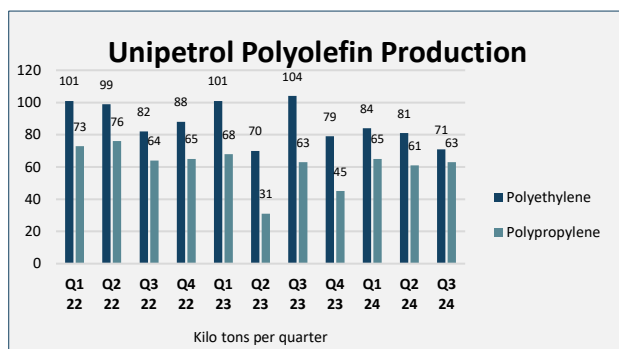
Orlen Petrochemical Revenues (€ million)		
Product	Jan-Sep 24	Jan-Sep 23
Monomers	592.5	542.2
Polymers	607.4	573.6
Aromatics	272.0	227.1
Fertilisers	237.9	237.8
Plastics	230.5	229.5
PTA	322.4	257.1
Total	2262.7	2067.3

Despite the losses the increase in sales revenues from chemical sales totalled €2.263 million in the first three quarters which was accompanied mainly by a rise in sales volumes. This included rises of sales in PTA by 36%, fertilisers by 19% and monomers by 9%.

Orlen third quarter impairment attributed to Olefiny III

Impairment of fixed assets of the petrochemical segment in Orlen amounted to zł 912 million in the

third quarter this year. It results mainly from persistently difficult economic conditions on the petrochemical market and from investment expenditures incurred in third quarter 2024 for building of the Olefiny III complex.



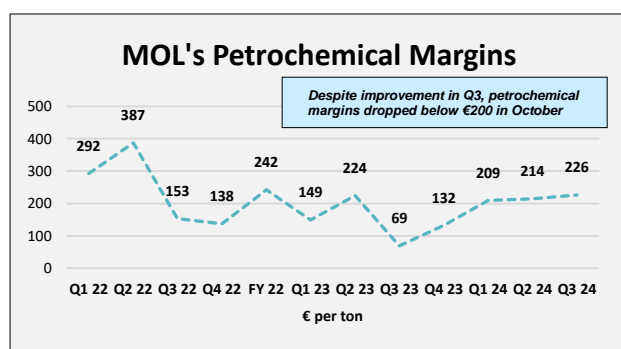
polyethylene. Production of polyethylene amounted to 71,000 tons in the third quarter this year against 81,000 tons in the second quarter and 104,000 tons in the same period last year.

Orlen Unipetrol Jan-Sep 2024

The level of petrochemical sales for Orlen Unipetrol dropped in the third quarter, due in part to routine shutdown of the Litvinov refinery and production stoppages in August and September 2024 due to an unexploded bomb found at the site.

Polypropylene production for Orlen Unipetrol was not affected by the outages in the third quarter and most of the impact was felt on

MOL's petrochemical division Jan-Sep 2024



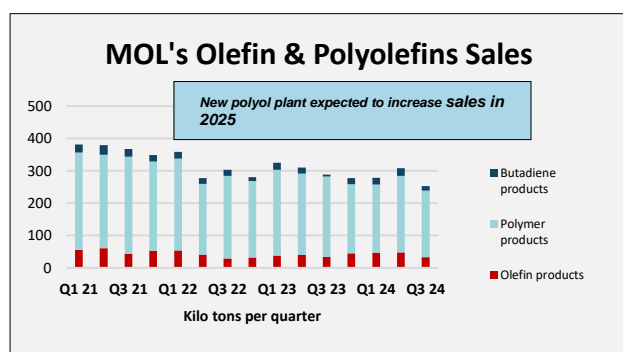
MOL's petrochemical margins increased in the third quarter this year to €226 per ton against €214 per ton in the second quarter this year. However, margins in October dropped below €200 per ton.

MOL's downstream profitability was affected in the third quarter by significant turnarounds that kept crude processing below last year's level while deteriorating macro weighed on margins. Petrochemicals margins slightly went up compared to last year's same period in line with

somewhat better price environment.

MOL's Olefin Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Ethylene	453	501
Propylene	237	269
Butadiene	55	43
Raffinate	106	58

MOL's ethylene production in Hungary and Slovakia dropped to 453,000 tons in the first nine months in 2024 against 501,000 tons in the same period in 2023. Propylene production from the two plants dropped from 269,000 tons to 237,000 tons, whilst butadiene rose from 43,000 tons to 55,000 tons. MOL's crude processing fell by 14% in the first three quarters in 2024 due to heavy maintenance works and unplanned shutdowns.



Petrochemical sales from the MOL Group are led by LDPE, HDPE and polypropylene and the general trend in recent quarters has been one of lower volumes. Other sales categories butadiene and olefin products, although rising, are much less important overall for the MOL Group.

HIP Petrohemija Jan-Sep 2024

HIP Petrohemija produced 209,000 tons of petrochemicals in the first three quarters in 2024, with volumes increased in the third quarter after

extended maintenance at the Pancevo cracker in the second quarter. Key investment activities were carried out in the ethylene and polyethylene plants. Naphtha processing totalled 280,000 tons in the first nine months. HIP Petrohemija recorded a slight loss in both EBITDA and net profit in this period. The key project comprises the construction of a polypropylene production plant.

HIP-Petrohemija Production (unit-tons)			
Product	Q1 24	Q2 24	Q3 24
Petrochemical products	75,700	35,800	97.0
Naphtha processed	99,800	54,100	126.1
Petrochemical sales	61,000	52,900	91.0

Polish Imports of Propylene (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Bulgaria	2.024	12.104
Czech Republic	4.163	15.181
Germany	62.833	42.496
Hungary	0.000	2.337
Serbia	0.000	4.828
Netherlands	0.000	15.876
Others	0.216	1.244
Total	69.958	94.973
Av price per ton	849.8	906.9

Czech Imports of Propylene (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Germany	24.909	15.987
Bulgaria	0.000	2.712
Poland	9.674	0.000
Romania	0.000	1.048
Others	0.008	9.244
Total	34.591	26.356
Av price per ton	863.6	996.1

Czech Olefin Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Ethylene	3.080	27.911
Propylene	34.591	26,356
Butadiene	37.444	52.351

Czech Olefin Exports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Ethylene	12.883	9.386
Propylene	5.394	18.073

Central European Butadiene Prices (€ per ton)		
Country	Jan-Sep 24	Jan-Sep 23
Czech Republic	863.6	996.1
Hungary	831.9	856.9
Poland	862.5	947.2

Polish Butadiene Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Austria	27.283	22.616
Czech Republic	0.944	0.909
Germany	18.319	16.510
Hungary	26.225	15.961
Others	0.953	2.530
Total	72.815	58.526
Av price per ton	862.5	947.2

volumes rising from 58,526 tons to 72,815 tons. Austria was the largest supplier, shipping 27,283 tons against 22,616 tons last year. Hungary shipped 26,225 tons to Poland in the first nine months to Poland against 15,961 tons in 2023.

Central European propylene imports, Jan-Sep 2024

Poland imported 69,858 tons of propylene in January to September against 94,973 tons in January to September 2023. Average prices dropped from €906.9 per ton in January to September last year to €849.8 this year. Germany was the main supplier to Poland, shipping 62,833 tons against 42,496 tons in the first nine months last year.

Grupa Azoty is Poland's largest merchant consumer of propylene which is bought mainly by Grupa Azoty Kedzierzyn's Oxoplast Segment. Grupa Azoty Kedzierzyn is currently focusing on expanding the portfolio based on a new product platform diversifying from the currently used aldehydes towards oxo alcohols.

Exports of propylene from Hungary increased in the first eight months to 62,758 tons against 55,420 tons in the same period in 2023. Export prices from Hungary dropped from €1059.6 per ton to €1101.2 per ton.

Czech olefin monomer trade, Jan-Sep 2024

Imports of propylene into the Czech Republic rose from 26,356 tons in January to September 2023 to 34,591 tons in 2024. Germany has supplied nearly all the propylene this year. Average prices for propylene imports in the first nine months in 2024 dropped to €863.6 per ton against €996.1 per ton in the same period in 2023. Exports of propylene dropped slightly in the first nine months to 5,394 tons versus 18,073 tons.

Central European butadiene imports, Jan-Sep 2024

Czech imports of butadiene dropped in the first nine months in 2023 from 52,351 tons down to 37,444 tons in January to September 2024, most of which was supplied by Germany and Hungary. Germany supplied 25,416 tons in the first nine months against 40,257 tons last year n and shipments from Hungary dropped from 11,857 tons to 10,181 tons.

Butadiene prices paid for imports into the Czech Republic dropped from €889.3 per ton to €793.7 per ton. Nearly all the butadiene went to Kralupy for conversion into synthetic rubber.

Hungarian butadiene exports amounted to 38,040 tons in the first eight months in 2024 against 30,909 tons in the same period in 2023. Shipments into Poland totalled 21,719 tons in January to August 2024 against 30,909 tons in the same period in 2023. Average prices for Hungarian butadiene exports fell to €831.9 per ton versus €856.9 in 2023.

Butadiene import prices for Poland dropped from €947.2 per ton on average in January to September 2023 to €862.5 in January to September this year, with

Central European Polyolefin Production & Trade

Polish Polyolefin Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Polyethylene	227.3	225.1
Polypropylene	241.9	205.3

Central European polyolefins production Jan-Sep 2024

Production of polyethylene in Poland increased from 225,100 tons in the first nine months last year to 227,300 tons in the same period in 2024. Polypropylene production increased from 205,300 tons in the first nine months in 2023 to 241,900 tons in January to September 2024.

MOL's Polyolefin Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
LDPE	116	159
HDPE	196	233
PP	329	365
PE Totals	312	392

Although polyolefin margins have been relatively stable this year, they have been much lower than the peak margins recorded in 2021. In the third quarter this year polyethylene margins averaged €474 per ton against compared to €353 in the third quarter in 2023, whilst polypropylene averaged €426 against €345 in 2023.

MOL's polyolefin production at its two sites in Hungary and Slovakia dropped from 757,000 tons in the first three quarters last year to 641,000 tons in the same period this year. For monomers, external olefin sales for MOL comprise ethylene shipments to BorsodChem for PVC production and internal group sales involve propylene to Slovnaft for polypropylene production.

Polish Polyethylene Trade		
Exports	Jan-Sep 24	Jan-Sep 23
Vol (kilo tons)	244.680	225.670
Av € per ton	1343.8	1105.3
Imports	Jan-Sep 24	Jan-Sep 23
Vol (kilo tons)	1055.032	923.581
Av € per ton	1282.7	1369.6

Polish polyethylene trade Jan-Sep 2024

Polish trade in polyethylene increased in the first nine months for both imports and exports. The increase in demand had been relatively modest in the first part of the year and has gradually risen by more than 10% for the first three quarters against 2023.

Poland's large deficit in polyethylene supply was one of the original reasons behind Orlen's previous management devising the Olefiny III project at Plock in 2018.

Polish PE imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
LDPE	275.051	249.129
LLDPE	167.004	152.388
HDPE	339.271	314.488
EVA	15.233	14.407
EAO	215.966	148.260
Others	42.507	44.908
Total	1055.032	923.581
Av € per ton	1282.7	1369.6

Polish imports of polyethylene increased to 1.055 million tons in January to September this year against 923,581 tons in January to September 2023, with average prices falling from €1369.6 per ton to €1282.7 per ton.

HDPE is the largest category of imported polyethylene into Poland, amounting to 339,271 tons in January to September against 314,488 tons in January to September 2023. Germany was the largest supplier of HDPE to the Polish market this year.

LLDPE imports into Poland increased from 152,388 tons in January to September 2023 to 167,004 tons in the same period in 2024. Most of the LLDPE imports were sourced from West Europe, including France, the Netherlands and Germany. Imports of ethylene alpha olefins amounted to 215,966 tons in the first three quarters this year against 148,260 tons in the same period in 2023.

Polish PE Exports (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
LDPE	46.456	41.065
LLDPE	17.337	12.815
HDPE	152.681	153.590
EVA	2.664	9.347
EAO	18.452	4.521
Other	7.089	4.332
Total	244.680	225.670
Av € per ton	1282.7	1369.6

Polish polyethylene exports amounted to 244,680 tons in the first nine months in 2024 against 225,670 tons in the first nine months in 2023. Average prices for polyethylene exports from Poland decreased to €1282.7 per ton against €1369.6 per ton in the period January to September last year.

In the first nine months this year exports of HDPE from Poland amounted to 152,681 tons versus 153,590 tons in January to September 2023. LDPE exports increased from 41,065 tons to 46,456 tons.

Czech polyethylene exports (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
LDPE	28.367	19.721
LLDPE	3.065	2.653
HDPE	250.847	277.538
EVA	2.943	2.470
Other	12.077	17.746
Total	297.300	320.128
Av € per ton	1392.518	1291.413

exports include Poland, Italy and Belgium.

Czech polyethylene imports (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
LDPE	82.289	79.039
LLDPE	15.877	18.290
HDPE	91.901	89.284
EVA	8.845	8.151
Other	31.865	32.928
Total	230.778	227.692
Av € per ton	1488.6	1599.4

Hungarian Polyethylene Exports		
Product Group	Jan-Aug 24	Jan-Aug 23
LLDPE	3.108	4.304
LDPE	53.296	60.670
HDPE	147.857	153.870
Other	9.694	8.458
Total	213.955	227.497
Av € per ton	1242.3	1254.5

Hungarian Polyethylene Imports		
Product Group	Jan-Aug 24	Jan-Aug 23
LLDPE	20.333	17.302
LDPE	30.308	30.796
HDPE	65.384	58.199
EAO	10.632	6.396
EVA	4.341	2.760
Other	19.791	17.774
Total	150.790	133.227
Av € per ton	1528.9	1643.7

rose by an average of 11.1%, while average spot prices increased by 19.6%. Part of the pressure on pricing came from reduced competition and delayed deliveries from Asia where imports were restricted by the high cost of freight. Due to the Middle East conflict and attacks on ships in the Red Sea, Asian-sourced deliveries have been less attractive, leading to increased interest in locally produced polypropylene. Only at the end of September did larger volumes of polypropylene from Asia start to reappear on the market, driven by a gradual decrease in freight costs.

Polish PP Supply/Demand Balance (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
Production	241.9	203.5
Exports	299.3	163.1
Imports	711.7	675.5
Market Balance	654.3	715.8

Azoty Polyolefins in sales of polypropylene from the Polimery Police Plant. Due to upward price pressure Polish export prices rose to €1362.7 per ton in September versus €1334.9 in August and

Czech polyethylene trade Jan-Sep 2024

Polyethylene exports from the Czech Republic amounted to 297,300 tons in the first nine months in 2024 against 320,128 tons in 2023. Export prices increased from €1291.4 per ton to €1392.5 per ton.

HDPE export shipments comprised 250,847 tons in the first nine months in 2024 against 277,538 tons in the same period in 2023. Germany was the largest destination for Czech HDPE supplied from Litvinov. Other important markets for Czech polyethylene

For imports of all forms of polyethylene, Czech inward shipments amounted to 230,778 tons in January to September 2024 against 227,692 tons in 2023, with prices dropping from €1599.4 per ton to €1488.6 per ton. Germany was the largest source of polyethylene imports.

Hungarian polyethylene trade Jan-Aug 2024

Hungarian polyethylene exports were slightly lower in the first eight months in 2024, amounting to 213,955 tons against 227,497 tons in the same period in 2023.

Export revenues fell from €285.396 million to €265.800 million in 2024, translating into average prices dropping from €1254.1 per ton in 2023 to €1242.3 per ton.

HDPE shipments from Hungary amounted to 147,857 tons in January to August 2024 versus 153,870 tons in the same eight months in 2023, whilst exports of LDPE dropped from 60,670 tons to 53,296 tons.

Hungary remains a net exporter of LDPE and HDPE and at the same time a net importer of LLDPE and ethylene copolymers. Imports totalled 150,790 tons in the first eight months in 2024 against 133,227 tons in the same period in 2023, with HDPE imports increasing from 58,179 tons to 65,384 tons. Hungarian import prices for polyethylene dropped on average from €1643.8 in January to August 2023 to €1528.9 in the first eight months in 2024.

Central European polypropylene pricing third quarter

Due to availability issues in the third quarter contract prices for propylene copolymers and homopolymers in Europe rose by an average of 11.1%, while average spot prices increased by 19.6%. Part of the pressure on pricing came from reduced competition and delayed deliveries from Asia where imports were restricted by the high cost of freight. Due to the Middle East conflict and attacks on ships in the Red Sea, Asian-sourced deliveries have been less attractive, leading to increased interest in locally produced polypropylene. Only at the end of September did larger volumes of polypropylene from Asia start to reappear on the market, driven by a gradual decrease in freight costs.

Polish PP Trade Jan-Sep2024

Higher polypropylene prices in the third quarter helped Grupa Azoty Polyolefins in sales of polypropylene from the Polimery Police Plant. Due to upward price pressure Polish export prices rose to €1362.7 per ton in September versus €1334.9 in August and

€1236.4 in July. Overall, for the first nine months export prices averaged €1306.4 per ton against €1463.5 in the same period last year.

Polish PP Exports (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
PP homo	222.615	106.796
Propylene copolymers	69.539	53.240
Other	6.198	2.579
Total	299.312	163.132
Av € per ton	1306.4	1463.5

Regarding export volumes from Poland, shipments of homo polymers more than doubled in the first nine months in 2024 to 222,615 tons against 106,796 tons in January to September 2023. The increase in exports was driven by production at the new Police plant. Overall propylene polymer exports from Poland increased from 163,132 tons in the first three quarters last year to a total of 299,312 tons in the same period this year.

Polish PP Imports (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
PP homo	451.064	437.817
Polyisobutylene	2.333	1.893
Propylene copolymers	240.492	219.673
Other	17.787	16.080
Total	711.676	675.463
Av € per ton	1390.3	1469.4

Polish polypropylene imports, including homo grade and copolymers, increased in the first nine months to 711,676 tons against 675,463 tons in the same period in 2023. Average prices for all types of polypropylenes decreased from €1469.4 per ton to €1390.3 per ton. Homo grade polypropylene imports increased from 437,817 tons in January to September last year to 451,064 tons in 2024, whilst copolymer imports increased from 219,673 tons to 240,492 tons. Whilst polyethylene consumption in Poland increased in the

first three quarters the demand for polypropylene has dropped this year, falling to 654,300 tons against 715,800 tons.

Grupa Azoty Polyolefins, PP production at Police

Whilst the polypropylene plant Polimery Police is yet to be handed over full, from the contractor

Czech Polypropylene Exports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
PP homo	175.263	163.725
Propylene Copolymers	36.022	35.610
Other	4.579	27.596
Total	215.863	226.932
Av price €	1175.8	1354.3

Czech Polypropylene Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
PP homo	219.133	221.581
Propylene Copolymers	165.184	162.336
Other	14.224	10.773
Total	398.541	394.691
Av price €	1581.0	1604.7

Hyundai to Grupa Azoty Polyolefins, production at the plant is gradually being ramped up. Ultimately, more than 30 types of polypropylene will be available on the market under the Gryfillen brand. Currently, Grupa Azoty Polyolefins currently produces 700-800 tons of polypropylene per day which equates to around 60-65% of capacity. Some parts of the equipment are not working properly and thus need some repairs.

Czech PP Trade Jan-Sep 2024

For imports of all forms of polypropylene, Czech inward shipments amounted to 398,541 tons in the first nine months in 2024 against 394,691 tons in January to September 2023. Average prices dropped from €1604.7 per ton to €1581.0 per ton.

Exports of all forms of polypropylene from the Czech Republic amounted to 215,863 tons in January to September versus 226,932 tons in January to September 2023, with average prices dropping from €1354.3 per ton to €1175.8 per ton. Homo-grade PP provides the main category of Czech polypropylene exports, amounting to 175,263 tons in January to September this year versus 163,725 tons in 2023.

Hungarian Polypropylene Exports (unit-kilo tons)		
Product Group	Jan-Aug 24	Jan-Aug 23
PP homo	84.813	84.532
Propylene copolymers	55.840	81.548
Others	14.279	7.738
Total	154.931	173,817
Av € per ton	1355.0	1365.2

Hungarian polypropylene trade Jan-Aug 2024

MOL shipped 154,931 tons of propylene polymers in January to August this year from Hungary, against 120,274 tons in January to August 2023 with average prices

dropping from €1365.2 per ton to €1355.0 per ton. Polypropylene imports into Hungary amounted to 217,918 tons in January to August 2024 against 181,685 tons in January to August 2023, with average prices dropping to €1616.6 per ton versus to €1507.9 per ton in the first eight months last year.

Central European Rubber Markets

Czech Rubber Trade (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
Exports synthetic rubber	99.202	115.241
Imports synthetic rubber	101.187	95.102
Imports natural rubber	67.402	62.387

Czech synthetic rubber trade Jan-Sep 2024

Czech exports of synthetic rubber amounted to 99,202 tons in January to September this year versus 115,241 tons in the same nine months in 2023. The closure of the ESBR plant at Kralupy affected both production and exports. Conversely imports of synthetic rubber

increased from 95,102 tons in the first nine months in 2023 tons to 101,187 tons in January to September 2024. Natural rubber imports into the Czech Republic increased from 62,387 tons to 67,402 tons.

Czech Butadiene Rubber Exports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
France	2.873	2.893
Germany	5.034	0.000
Hungary	5.885	6.012
India	13.003	10.245
Italy	3.674	0.000
Poland	8.596	11.141
Romania	5.891	0.000
Serbia	5.002	2.323
Slovakia	4.867	9.908
South Korea	4.837	10.888
Spain	4.156	0.000
Turkey	6.526	3.335
US	0.179	0.857
Others	10.300	31.023
Total	80.823	88.625
Revenues €	131.414	149.791
Av € per ton	1709.9	1691.1

Natural rubber prices have been rising recently which has meant that prices increased on average from €1679.5 per ton in the first nine months last year to €1768.4 per ton this year. Synthetic rubber prices have now risen above natural rubber prices, with import values amounting to €2116.6 per ton in the first nine months this year.

Czech butadiene rubber trade Jan-Sep 2024

The Czech Republic exported a total of 80,823 tons of butadiene rubber in the first nine months this year against 88,625 tons in the same period in 2023.

Average prices for butadiene rubber increased from €1691.1 per ton to €1709.9 per ton. Czech exports of butadiene rubber to India amounted to 13,003 tons in January to September 2024 against 10,245 tons in the same period in 2023. Other important markets included Poland where exports amounted to 8,596 tons in the first nine months this year against 11,141 tons in the same period in

Czech Butadiene Rubber Imports		
	Jan-Sep 24	Jan-Sep 23
Total (unit-kilo tons)	22.100	18.654
Revenues € million	46.674	42.644
Av € per ton	2111.2	2297.2

2023.

Besides exports the Czech Republic also imported 22,100 tons of butadiene rubber in the first nine months in 2024 versus 18,564 tons in the same period in 2023. The two largest suppliers to the Czech market in the first nine months this year were Germany and the US, accounting for around 80% of total imports.

Hungarian synthetic rubber Imports (unit-kilo tons)		
Product Group	Jan-Aug 24	Jan-Aug 23
Butadiene Rubber	18.167	32.590
HBR	1.668	5.162
SBR	37.891	34.825
Other	13.690	17.895
Total	71.416	90.471
Revenues € mil	175.383	204.322
Av € per ton	2455.8	2258.4

Hungarian synthetic rubber trade Jan-Aug 2024

Hungarian imports of synthetic rubber amounted to 71,416 tons in the first eight months versus 90,471 tons in January to August 2023, whilst import costs dropped from €204.322 million to €175.383 million. Average prices rose from €2258.4 per ton to €2455.8 in 2024.

Butadiene rubber imports dropped from 32,590 tons to 18,167 tons, with costs dropping from €59.109 million to €32.202 million. Imports of halogenated butyl rubber dropped from 5,162 tons to 1,668 tons whilst SBR imports rose from 34,825 tons to 37,891 tons. Regarding exports, Hungary shipped 39,795 tons of synthetic rubber in the first eight months this year at an average price of €2629.0 per ton. The largest category of exports comprised S-SBR grade, amounting to 34,407 tons over January to August 2024.

Polish Synthetic Rubber Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
ESBR	24.059	16.454
Block SBR	33.257	27.695
S-SBR	23.321	16.325
Butadiene Rubber	61.131	40.770
Butyl Rubber	3.084	3.600
HBR	6.334	7.314
NBR	7.783	5.161
Isoprene Rubber	34.255	10.491
EPDM	32.519	32.169
Others	22.292	37.905
Total	248.036	197.885
Av € per ton	1,831.1	2,198.0

Polish rubber trade Jan-Sep 2024

Poland imported a total of 200,985 tons of synthetic rubber in January to September this year against 155,354 tons in January to September 2023. By category butadiene rubber was the largest purchased product, accounting for 52,391 tons in the first nine months in 2024 against 33,442 tons in 2023. Other product areas experiencing rises in imports this year include isoprene rubber and block SBR.

Rubber import prices into Poland for both synthetic and natural have seen gradual declines from January to September this year as a combination of economic factors have taken effect. Overall, synthetic rubber import prices dropped from €2274.5 in the first nine months in 2023 to €1808.3 in 2024.

Most of the isoprene rubber imports this year were redirected to export activity, rising to 28,246 tons in the first nine months in 2024 against only 4,201 tons in the same period in 2023.

Polish Exports of Synthetic Rubber (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
SBR	160.076	136.319
Butadiene Rubber	58.607	34.519
Isoprene Rubber	30.757	7.895
Others	15.294	26.984
Total	264.734	205.716
Av	1637.9	1605.5

Synthetic rubber exports from Poland amounted to 89,711 tons in total against 71,114 tons in January to September 2023. India was the largest destination for Polish exports, consisting mostly of SBR grades. Exports of butadiene rubber from Poland amounted to 40,516 tons in January to September versus 18,897 tons last year. Major destinations for Polish butadiene exports were led by Belgium.

Synthos Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Polystyrene	49.3	54.8
EPS	60.9	68.8
Synthetic Rubber	193.3	153.3

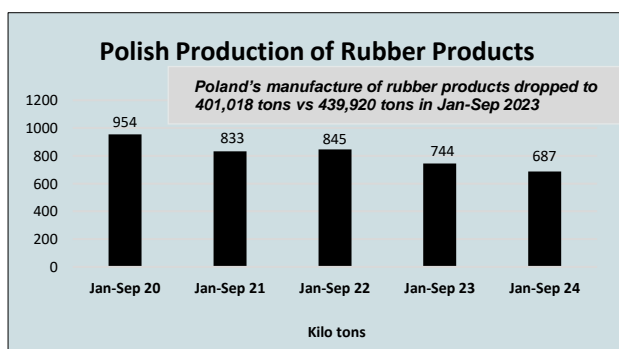
Polish synthetic rubber production and domestic market Jan-Sep 2024

Synthetic rubber production at Oswiecim for Synthos amounted to 193,300 tons in January to September 2024 from 153,300 tons in the same period in 2023. Production increased this year although the market remains under pressure. Synthos experienced a fire at its Oswiecim plant in June although production has not been affected.

Synthos rubber sales

Lower consumption of rubber in Poland this year continues the dominant trend from 2023. Sales of synthetic rubber by Synthos dropped by 61,000 tons in 2023 over 2022, although this was partly affected by the closure of the Kralupy EBSR plant. The line is now closed with all shutdown costs booked. Increased export activity has helped Synthos to increase its production of synthetic rubber this year mainly due to higher sales to Asia.

In each of the first nine months in 2024 production of rubber products in Poland, based on both synthetic and natural rubber, was lower than in the same month last year. As a result, production of rubber products in the first nine months this year dropped to 401,018 tons against 439,920 tons in the same period last year.



The largest segment of rubber products, tyre production, dropped in the first nine months and amounted to 260,696 tons against 293,245 tons in the same period last year. All areas of tyre production showed lower volumes in the first nine months. European tyre manufacturers are faced by cheaper competition which makes it harder to increase volume sales. While prices are harder to challenge the local European producers the quality is often inferior particularly for winter tyres.

Central European aromatics and derivatives

Polish Aromatic Exports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Benzene	119.434	119.319
PTA	285.144	174.806
Bisphenol A	2.171	7.356
Nonylphenol	2.595	3.379
Phthalic Anhydride	4.165	2.691
TDI	3.596	3.627
Toluene	1.426	2.810

Polish aromatic exports Jan-Sep 2024

Polish exports of benzene totalled 119,434 tons in January to September against 119,319 tons in the same period last year. Average prices increased to €963.2 per ton from €838.3 per ton last year. The average contract price of benzene in the third quarter of 2024 rose by 15% but at the same time fell by 20% against the second quarter this year. Prices for Polish benzene dropped from €1087 per ton in June to €903 per ton in September. Germany was the main consumer of Polish benzene exports, taking 103,063 tons in January to September against 79,209 tons in the previous year.

Polish PTA Exports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belgium	2.446	0.240
France	2.508	6.171
Germany	231.470	140.597
Lithuania	15.425	1.618
Switzerland	0.000	4.297
Turkey	9.457	7.452
Others	23.837	13.111
Total	285.144	174.806
Av € per ton	771.9	854.7

Grupa Azoty is the largest consumer of benzene in Poland which it usually buys from domestic sources. Benzene is mainly delivered under one-year contracts, with supplementary purchases made on the spot market. Benzene is sourced chiefly from domestic and EU suppliers.

Polish PTA exports Jan-Sep 2024

Orlen's PTA exports amounted to 285,144 tons in the first nine months against 174,806 tons in the same period in 2023. Shipments to Germany increased from 140,597 tons to 231,470 tons.

Polish PTA Production and Trade		
	Jan-Sep 24	Jan-Sep 23
Production (kilo tons)	443.0	309.0
Total Sales (kilo tons)	435.0	312.0
Total Revenues (€ million)	330.7	277.4
Exports (Kilo tons)	285.1	174.8
Export Revenues (€ million)	220.1	147.5

Despite the logistical difficulties in importing PTA from Asia average prices dropped from €854.7 per ton in the first nine months last year to €771.9 per ton in the first nine months in 2024. For the European market, the contract price of PTA in the European market decreased in the first three quarters by 3.8% against the same period in 2023. From the beginning of August, demand for PTA began to gradually decline, leading to an

improvement in its availability. By the end of the quarter, the availability of PTA fully met demand. Imports from Asia increased at the end of the reporting quarter due to a drop in freight costs. Prices in China are reported to be falling and the European market has been following a similar trend.

Polish Aromatic Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Adipic Acid	9.586	9.273
Benzene	0.083	0.000
Bisphenol A	5.914	14.036
Caprolactam	9.512	9.197
Ethylbenzene	73.365	97.547
Paraxylene	36.254	0.000
Phenol	82.249	59.569
Phthalic Anhydride	30.141	26.712
PTA	11.090	5.175
Styrene	50.213	54.591
TDI	61.789	58.104
Toluene	17.175	20.075

PTA exports from Orlen amounted to 66% of total sales by volume in the first nine months this year against 56% in the same period in 2023. This year Orlen has purchased paraxylene on the merchant market in order to support higher PTA production at Wloclawek. Production increased to 443,000 tons in the period January to September 2024 against 309,000 tons last year when the plant was stopped for extended maintenance.

Polish aromatic imports Jan-Sep 2024

Phenol imports into Poland amounted to 82,249 tons in January to September 2024 which was up from 59,569 tons in the same period in 2023. Germany supplied 61,632 tons in the first nine months followed by Spain with 6,528 tons. Average prices for phenol imports amounted

to €1288.4 per ton in 2024 against €1209.1 per ton last year.

Polish Phenol Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Finland	4.357	11.137
Germany	61.632	42.743
Spain	9.043	0.000
Others	7.217	5.689
Total	82.249	59.569
Av € per ton	1288.4	1201.9

Grupa Azoty is the largest domestic consumer of phenol in Poland. The procurement strategy is based primarily on supplies from the domestic and the EU markets, with deliveries from outside Europe covering any deficit. The Group secures phenol supplies for its own needs under long-term contracts concluded directly with Europe's largest producers.

of the ethylbenzene imports come from the Czech Republic. Phthalic anhydride imports into Poland increased from 26,712 tons in January to September 2023 to 30,141 tons in the same period in 2023. Phthalic anhydride is used predominantly by Grupa Azoty at Kedzierzyn in the production of plasticizers. The procurement strategy is based primarily on supplies from the domestic and the EU

markets, with deliveries from outside Europe covering any deficit.

Polish Styrene Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belgium	16.464	4.108
Czech Republic	7.081	6.229
Finland	0.309	0.662
Netherlands	21.806	21.930
Germany	9.940	8.865
Saudi Arabia	7.707	0.000
Others	4.262	4.884
Total	67.570	46.651
Av € per ton	1388.9	1232.0

Paraxylene imports into Poland have been required this year to support higher PTA production at Wloclawek, totalling 36,254 tons in the first nine months. Lower PTA production and demand last year meant that no imports were undertaken. Paraxylene production takes place at Plock in Poland and production is designed to be coordinated with PTA production at Wloclawek.

Central European styrene imports Jan-Sep 2024

Synthos in Poland imported 67,570 tons of styrene in January to September against 46,651 tons in January to September last year. The Netherlands provided 21,806 tons in the first nine months in 2024 versus 21,930 tons. The Czech Republic has also been an important supplier to Poland this year, shipping from Kralupy to Oswiecim. Synthos uses styrene throughout its three main divisions including synthetic rubber, insulating materials and dispersions.

Hungarian styrene imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Germany	0.060	0.642
Italy	35.333	45.122
Netherlands	4.547	2.791
Others	0.042	0.547
Total	39.983	49.103
Av € per ton	1256.2	1396.9

Styrene imports into Hungary amounted to 39,983 tons in the first eight months in 2024 against 49,103 tons in the same period last year. Imports from Italy dropped from 45,122 tons against 35,333 tons in the first eight months in 2023. Styrene prices dropped from €1396.9 per ton to €1256.2 per ton in 2024.

Czech Styrene Trade (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Exports	9.170	10.224
Imports	12.269	25.051

Czech exports of styrene have been largely balanced with imports this year. Exports amounted to 9,170 tons against 10,224 tons last year, whilst imports dropped from 25,051 tons to 12,269 tons.

Central European styrene monomer prices have stabilised this year after a turbulent year in 2023. The highest price for styrene this year was achieved occurred in May when prices paid by consumers averaged €1525.0 per ton. Demand in the main application areas is slightly better last year, but both rubber and insulation markets are still struggling to return to normal volumes.

Czech aromatic trade Jan-Sep 2024

Czech caprolactam exports amounted to 16,264 tons in the first nine months this year up from 14,973 tons in the same period in 2023. Average prices increased from €1691.7 per ton to €1744.5 per ton with upward pressure felt in the second and third quarters. Italy was the largest destination for Spolana's exports, accounting for 7,438 tons against 8,331 tons last year. Aniline exports from the Czech Republic increased in the first nine months to 70,550 tons against 51,405 tons in the same period in 2023. Exports to Hungary increased from 46,277 tons to 60,777 tons.

Czech Aromatic Exports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Benzene	9.510	15.197
Toluene	7.714	8.665
Ethylbenzene	69.347	96.510
Styrene	9.170	10.224
Caprolactam	16.264	14.973
Aniline	70.550	51.405
Czech Aromatic Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Benzene	34.500	19.366
Toluene	4.185	5.263
Styrene	12.269	25.051
Bisphenol A	24.160	21.397

Czech benzene imports rose to 34,500 tons in the first nine months in 2024 against 19,366 tons in the same period in 2023, whilst exports dropped slightly from 15,197 tons to 9,510 tons. There are two producers of benzene in the Czech Republic including Unipetrol at Litvinov and Deza at Valasske Mezirici.

Benzene consumption in the European market is expected to stay low in the upcoming months, with any potential recovery in demand hinging on broader economic factors. Regarding toluene, imports into the Czech Republic dropped to 4,185 tons from 5,263 tons whilst exports dropped from 8,665 tons to 7,714 tons.

Bisphenol A and epoxy resins trade Czech Republic

Bisphenol A imports into the Czech Republic totalled 24,160 tons in the first nine months in 2024 against 21,397 tons last year, with average prices dropping from €1486.6 per ton to €1356.1 per ton. The largest supplier to the Czech market is South Korea which increased shipments to 19,186 tons from 9,414 tons in the same period in 2023.

Czech Epoxy Resins (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Austria	2.886	2.858
Germany	13.997	20.465
Spain	3.022	3.108
France	3.091	3.564
Italy	4.012	3.716
Poland	1.399	1.782
Others	7.388	6.522
Total	35.795	42.015
Av Price per ton	2254.7	2424.5

Czech exports of epoxy resins amounted to 35,795 tons in the first nine months in 2024 against 42,015 tons in the same period in 2023. Whilst volumes were similar prices fell from €2424.5 per ton to €2254.7 per ton. The price reduction over the past twelve months has been driven by the decline in raw material prices combined with downward pressure from market conditions.

Germany remains the largest market for Czech epoxides, accounting for 13,997 tons in the first nine months in 2024 against 20,465 tons in the same period in 2023. Exports to

Poland amounted to 1,399 tons of the total 9,530 tons imported in the first nine months.

At the request of the three epoxy resin manufacturers Olin, Westlake and Spolchemie, the European Commission has launched an anti-dumping investigation into imports of epoxy resins from China, South Korea, Taiwan and Thailand. According to the European producers, imports of epoxy resins from

Hungarian Benzene Exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Czech Republic	3.259	11.900
Germany	7.912	1.995
Poland	15.352	17.014
Others	6.378	0.000
Total	32.901	30.909
Av € per ton	813.0	856.9

these sources are surging into the EU market at unfairly low prices and are causing significant damage to the entire epoxy resins industry in the EU.

To protect the interests of the EU epoxy resin industry, the largest producers have decided to team up and filed a complaint before the European Commission.

Hungarian aromatic imports Jan-Aug 2024

Hungarian benzene exports in the first eight months in 2024 increased to 32,901 tons against 30,909 tons in the same period last year due to lower production. Although prices declined from €856.9 per ton to €813.0 per ton. Exports are distributed largely to Poland, Germany, and the Czech Republic. Benzene is used in Hungary in the MDI chain.

Hungarian Toluene Imports		
	Jan-Aug 24	Jan-Aug 23
Ktons	29.281	22.502
€ mil	26.520	25.348
€ per ton	905.4	1126.5

Toluene imports into Hungary increased in the first eight months this year to 29,281 tons from 22,502 tons in 2023. This increase was in line with the increase in TDI production at BorsodChem. Germany was the largest supplier of toluene followed by Slovakia from the Slovnaft refinery. Other suppliers included Belgium and Romania.

Hungarian TDI Exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Austria	2.069	1.892
Belgium	24.445	21.941
Germany	7.482	6.068
Italy	19.282	17.894
Poland	17.669	16.888
Portugal	4.290	6.700
Romania	9.100	9.153
Spain	6.601	6.950
Turkey	25.621	21.540
Others	46.570	44.888
Total	163.129	153.913
Av € per ton	1958.8	2654.4

Polish TDI Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belgium	4.832	1.903
Germany	14.424	12.617
Hungary	27.238	20.921
Netherlands	4.832	3.567
South Korea	5.736	6.070
Others	2.535	3.921
Total	60.984	50.972
Av € per ton	2138.9	2689.5

Hungarian MDI Exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Belgium	10.401	9.023
Czech Republic	7.468	4.507
Germany	14.697	13.905
Algeria	3.003	0.817
Italy	7.220	6.943
France	5.099	6.862
Spain	3.201	3.326
UK	5.381	3.654
Netherlands	6.969	2.610
Poland	23.563	21.888
Romania	10.807	11.443
Turkey	16.828	7.937
Others	35.265	21.878
Total	149.901	114.793
Av € per ton	1930.6	2070.8

Czech MDI Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
China	2.829	2.948
Belgium	7.742	7.026
Germany	6.102	3.685
Hungary	6.521	7.879
Netherlands	5.717	5.214
Others	1.946	1.001
Total	30.858	27.753
Av Price €	2080.8	2267.7

Central European isocyanates & polyols

Hungarian TDI exports Jan-Aug 2024

Isocyanate exports from Hungary have increased this year, rebounding from the declines in 2023. Hungarian TDI exports rose in the first eight months to 163,129 tons against 153,913 tons in January to June 2023. Average prices dropped from €2654.4 per ton to €1958.8 in 2024.

Exports of TDI from Hungary to Belgium rose from 21,941 tons in the first eight months in 2023 to 24,445 tons in January to August 2024, whilst volumes to Italy increased from 17,894 tons to 19,282 tons. Elsewhere in West Europe Hungarian exports to Portugal dropped from 6,700 tons to 4,290 tons, whilst shipments to Germany increased from 6,068 tons to 7,482 tons. In Central Europe shipments to Poland rose slightly from 16,888 tons to 17,669 tons and to Romania dropped slightly from 9,153 tons to 9,100 tons. In addition to exports, Hungary imported 3,348 tons of TDI in the first eight months in 2024 against 3,436 tons in the same period last year. Whilst volumes remained similar, prices have dropped by around 20% in 2024.

TDI imports into Poland amounted to 60,984 tons in January to September against 50,972 tons in the same period in January to September 2023. Prices this year averaged €2138.9 per ton in the first nine months. Besides imports, Poland exported 3,596 tons of TDI in the first nine months in 2024, against 3,627 tons in the same period in 2023.

Central European isocyanate trade Jan-Sep 2024

Hungary exported 149,901 tons in the first nine months in 2024 against 114,793 tons in the same period last year. Export sales increased due to slightly better conditions for consumption.

Poland was the largest destination for Hungarian MDI exports, shipping 23,563 tons in the first eight months in 2024 versus 21,888 tons in the same period in 2023. Turkey took 16,828 tons of MDI from Hungary in the first eight against 7,937 tons in the same period in 2023. Besides exports, Hungary imported 4,030 tons of MDI in the first eight months in 2024 against 3,226 tons in the same period last year. Whilst volumes remained similar, prices dropped from €1985.0 per ton last year to €1797.5 per ton in 2024.

MDI imports into the Czech Republic totalled 30,858 tons in January to September 2024 against 27,753 tons in the same period in 2023. The leading supplier was Belgium which shipped 7,742 tons in the first nine months versus 7,026 tons in the same period in 2023. Average prices for MDI dropped from €2369.5 per ton to €2097.6 per ton.

MDI imports into Poland totalled 126,340 tons in January to September 2024 against 109,256 tons in January to September last year. Average prices dropped from €2103.9 per ton to €1930.2 per ton. Germany increased shipments to 36,230 tons against 29,708 tons and Hungary supplied 30,722 tons. Belgium was also important supplying 27,139 tons.

Polish MDI Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Germany	36.230	29.708
Netherlands	16.893	18.865
Hungary	30.722	26.314
Belgium	27.139	19.142
South Korea	6.632	5.554
Others	8.723	9.673
Total	126.340	109.256
Av € per ton	1930.2	2103.9

Hungarian polyol imports Jan-Aug 2024

Hungarian polyol imports amounted to 25,200 tons in the first eight months this year against 33,962 tons in the same period in 2023. Prices dropped this year to €2192.8 per ton. The largest supplier of polyols this year has been China, shipping 6,837 tons to Hungary, followed by the Netherlands with 5,298 tons.

Central European polyol prices started 2024 on a slight downward trajectory, continuing the trend from 2023. The market has tended to stabilise this year even if profit margins for producers have been minimal. The question is now what impact the MOL plant will have on the market. As yet the impact on the market has not been seen either in additional volumes or prices.

Hungarian Polyol Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Austria	0.509	0.545
Belgium	1.609	16.195
China	6.837	7.184
Germany	2.580	2.529
Italy	0.204	0.319
Netherlands	5.298	3.305
Poland	0.742	1.292
Romania	2.011	1.267
Others	5.408	1.326
Total	25.200	33.962
Av € per ton	2192.8	2863.1

In fact, polyol exports from Hungary declined in the first eight months this year to 6,772 tons against 10,406 tons in the same period last year. MOL's new complex possesses a capacity of 205,000 tpa of polyols in addition to 60,000 tpa of propylene glycol. Applications include flexible and rigid foams, polyols are used in the production of unsaturated polyester resins (UPR), functional fluids, and personal care products.

MOL-polyol plant operational activity

MOL plans to start production of polyether polyols in the second quarter of 2025. At present, the company is gradually carrying out sample production and is about to purchase external propylene oxide as a raw material. The

addition of new capabilities is expected to bring some growth momentum to the market. However, the European polyether polyol market in 2024 continues to show a downward trend.

In view of relatively high production costs, European polyether polyols are considered not to be competitive in global export markets. European suppliers are restricted from expanding their businesses through price competition, compared to Chinese counterparts.

Czech polyol imports Jan-Sep 2024

Czech polyol imports dropped in the first nine months to 33,952 tons against 43,036 tons in the same period in 2023, with average prices rising slightly from €2506.4 per ton last year to €2589.6 in 2024. The leading supplier to the Czech market was Belgium which shipped 10,333 tons in the period January to September 2024 against 12,788 tons in the same period in 2023. This was followed by Germany which exported 5,769 tons, down from 8,283 tons.

Czech Polyol Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belgium	10.333	12.788
Germany	5.769	8.283
France	5.417	6.431
Netherlands	3.848	4.203
Romania	0.928	1.674
Slovakia	3.138	4.284
Others	4.519	4.765
Total	33.952	43.036
Av € per ton	2589.6	2506.4

Polish polyol trade Jan-Sep 2024

Polish polyol imports amounted to 105,890 tons in the first nine months in 2024 against 109,744 tons in the same period in 2023. The major sources of imports came from Belgium, Germany and the Netherlands. Polyol import prices dropped from €2069.5 per ton to €1812.6 per ton. The largest source of imports in the first nine months came from the Netherlands, amounting to 26,510 tons against 22,974 tons in the same period in 2023.

Poland exported 40,943 tons of polyols in the first nine months in 2024 against 41,734 tons in 2023. Average prices dropped to €2121.0 per ton from €2279.3 per ton last year. Italy was the largest destination for Polish exports of polyols, rising to 6,092 tons from 3,805 tons last year whilst Germany took 4,596 tons.

Polish Polyol Imports (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belgium	17.058	13.815
China	6.439	5.372
France	3.807	4.150
Germany	24.482	24.730
Netherlands	26.510	22.974
Romania	10.965	11.560
Saudi Arabia	1.564	2.774
South Korea	5.873	12.450
Others	9.193	11.919
Total	105.890	109.744
Av € per ton	1812.6	2069.5

PCC Rokita Jan-Sep 2024

The polyol and polyurethane market continues to provide challenges to PCC Rokita, although there has been some slight improvement over 2023 with margins rising from 4.2% to 7.2% in the first three quarters this year. Total revenues in the polyurethane sector decreased by 16% in the first nine months in 2024, although it is necessary to distinguish between polyester polyol sales which have performed better than polyether polyols.

For several quarters, PCC Rokita has been observing the impact of imports of polyether polyols from outside Europe. Producers from the Far East retain ambitions to take over part of the market in Europe despite the problems of logistics through the Middle East at present.

PCC Rokita Product Sales (unit-kilo tons)		
Product Group	Jan-Sep 24	Jan-Sep 23
Polyurethanes	65.3	60.7
Chloralkalis	219.9	241.2
Chemical	17.6	16.1
PCC Rokita's sales (€ million)		
Product Group	Jan-Sep 24	Jan-Sep 23
Polyurethanes	89.9	110.7
Chloralkalis	73.1	126.7
Chemical	18.0	19.7
PCC Rokita's Prices (€ per ton)		
Product Group	Jan-Sep 24	Jan-Sep 23
Polyurethanes	2484.1	2668.9
Chloralkalis	622.0	837.4
Chemical	1796.4	1977.6
PCC Rokita's Margins (€ per ton)		
Product Group	Jan-Sep 24	Jan-Sep 23
Polyurethanes	7.2%	4.2%
Chloralkalis	11.0%	26.1%
Chemical	9.3%	9.8%

For polyether polyols, the key market is flexible foams which are used mainly in the furniture industry. For a number of years, the market has been experiencing lower demand than before the pandemic and much lower than during the pandemic. Difficult consumer markets have meant that PCC Rokita has to started lean towards the production of mass polyols rather than focusing on its mainstream higher quality polyols.

In contrast to polyether polyols, the demand for polyester polyols has been relatively good this year. The main sales application is polyurethane insulation panels. Demand from existing customers has been good and PCC Rokita has been close to using its full production capacity.

PCC Rokita sold a total of 65,300 tons of polyols in the first three quarters in 2024 against 60,700 tons in the same period last year. Due to reduced prices revenues dropped from €110.7 million to €89.9 million. Revenues from chloralkalis dropped from €126.7 million to €73.1 million, with profit margins dropping from 26.1% to 11.0%.

Polish Polyol Exports 2024 (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
Ktons	40.943	41.734
Av price	2121.0	2279.3

Around two thirds of polyol production for PCC Rokita are exported from the Brzeg Donly site and mostly to European destinations. From the 65,300 tons sold in the first three quarters, 40,943 tons were exported at an average price of €2121.0 per ton.

PCC Exol's sales (unit-kilo tons)		
Surfactant Product Group	Jan-Sep 24	Jan-Sep 23
Detergents and cosmetics	54.2	50.4
Industry	31.7	25.5
PCC Exol's sales (€ million)		
	Jan-Sep 24	Jan-Sep 23
Detergents and cosmetics	60.186	65.877
Industry	60.186	58.884

PCC Exol Jan-Sep 2024

In the first three quarters in 2024 PCC Exol generated sales revenues of zł 702.2 million which was lower by 4.4% compared to the same period last year. Revenues also include sales of ethylene oxide to a company from the PCC Group, and this accounted for 10.8% of sales.

Revenues from sales of surfactants for use in detergents and cosmetics dropped from €65.877 million to €60.186 million in the first three quarters

in 2024 whilst surfactants for use in industry rose from €58.884 million to €60.186 million.

The PCC Exol Group achieved a gross margin on sales of 17.3% against 19.0% last year. The surfactant market was characterized by oversupply on the part of European producers, resulting from the additional production capacities they launched in 2023. At the same time, increased imports of surfactants to Europe continued, in particular from Asia.

Chimcomplex Financial Performance (€ million)		
	Jan-Sep 24	Jan-Sep 23
Total Revenue	230.498	212.069
Total expenses	226.934	209.839
Gross result	3.564	13.679
Net result	1.933	10.999

Chimcomplex incurred lower gross and net profits.

Chimcomplex Jan-Sep 2024

Chimcomplex's turnover recorded a slight increase in the first three quarters although the European market for polyols remains characterized by the continued low demand in certain industrial segments. Higher costs combined with exchange rate differences from loans meant that

Chimcomplex Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Chlorine	205.031	235.627
Propylene oxide	56.242	51.457
Polyol	65.242	60.602
Plasticizers	31.553	2.798
Inorganic chlorides	1.735	4.933
Methylamines	0.246	0.994
Total	361.049	356.411

Total revenues in January-September 2024 amounted to €230.5 million against €212.1 million, whilst operating costs increased from €209.9 million to €226.9 million. The company recorded a net profit of €1.933 million against €10.999 million last year.

Production volumes increased in the first three quarters to 361,049 tons against 356,411 tons last year. Chlorine production at the Borzesti platform dropped from 235,627 tons to 205,031 tons, whilst propylene oxide production at Ramnicu Valcea rose from 51,457 tons to 56,242 tons.

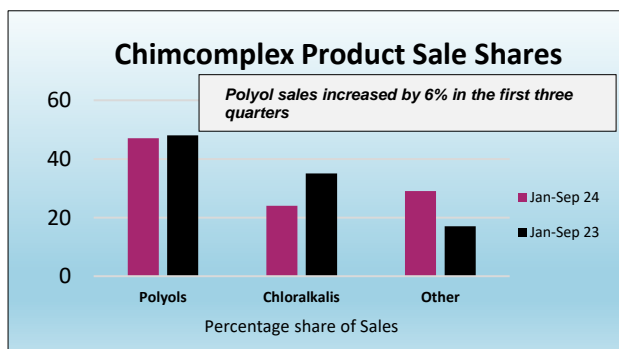
Polyol production at the same site increased from 60,602 tons to 66,242 tons and the largest proportional rise came from plasticizers which increased from 2,798 tons to 31,553 tons.

Chimcomplex oxo alcohol plant restart in 2024

Chimcomplex restarted the oxo-alcohol production plant at the beginning of 2024, and forecasted that the monthly operating rate would consist of 2,700-3,200 tons of 2-ethylhexanol (2-EH) in addition to 135 tons of n-Butanol and 270 tons of isobutanol. For the first nine months Chimcomplex produced 28,103 tons against 812 tons in the same period last year. Supply chain problems at the beginning of the year led to higher propylene prices, amplified by external pressures from Asian markets, especially between February and May. As a result, oxo-alcohols recorded price adjustments, stabilizing only in the middle of the year, but at a higher level than at the beginning of 2024.

Chimcomplex propylene and utility production costs

Propylene was the only raw material where increases were recorded this year, with purchase costs rising €701 per ton in the first three quarters last year to €751 per ton in 2024. Chimcomplex sourced 71% of its propylene purchases from Rompetrol Rafinare at the Petromidia refinery and imported the remainder. Overall average utility purchase prices decreased in the first three quarters determined by the decrease in the prices of natural gas and electricity on the market and higher utilisation of the company's co-generation plants. This had a favourable impact on the costs of finished products that consume large utilities (soda, oxo-alcohols).



represents an increase of 6% compared to 2023. The company recorded significant sales increases in markets such as the UK, Ukraine, Greece, Sweden and Spain, but faced declines in West European markets such as Germany, Italy and the Benelux countries.

Chimcomplex polyol sales Jan-Sep 2024

Polyol sales from Chimcomplex in the first nine months in 2024 amounted to 62,522 tons, which

Hungarian maleic anhydride exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Austria	0.334	2.012
Germany	1.966	0.912
Italy	2.235	2.110
Poland	4.817	1.862
Slovenia	1.167	1.332
Others	5.888	4.675
Total	16.407	12.902
Av € per ton	1186.0	1217.9

Central European organic chemical trade

Hungarian maleic anhydride exports Jan-Aug 2024

Hungary exported 16,407 tons of maleic anhydride in the first eight months this year against 12,902 tons in the same period in 2023, with average prices dropping from €1217.9 per ton to €1186.0 per ton. Exports to Poland from Hungary increased from 1,862 tons in January to August 2023 to 4,817 tons in the same period in 2024.

Hungarian organic chemical trade is relatively balanced in values with volume imports slightly exceeding exports. In the first eight months this year exports of organic chemicals amounted to €1.016 billion against imports of €1.020 billion.

Hungarian acrylonitrile imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Germany	2.218	2.418
France	0.363	0.891
Netherlands	6.772	8.008
South Korea	0.223	0.000
Others	1.465	3.374
Total	8.823	14.691
Av € per ton	1631.9	2126.0

Hungarian acrylonitrile imports Jan-Aug 2024

Hungary imported only 8,823 tons of acrylonitrile in the first eight months in 2024 against 14,691 tons in the same period in 2023. The Netherlands was the main source of imports in both years, shipping 6,772 tons in January to August 2024 versus 8,008 tons in the same period last year. Acrylonitrile import prices dropped on average from €2126.0 per ton last year

to €1631.9 per ton this year.

Hungarian aniline imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Belgium	7.942	18.650
China	0.000	11.067
Czech Republic	60.754	42.871
Total	68.720	72.588
Av € per ton	1422.3	1467.5

Hungarian aniline imports Jan-Aug 2024

Aniline imports into Hungary decreased slightly from 72,588 tons in the first eight months in 2023 to 68,720 tons in the same period in 2024.

Inward shipments from BorsodChem-MCHZ in the Czech Republic amounted to 60,754 tons against 42,871 tons last year. Belgium supplied 7,942 tons in the first eight months this year against 18,650 tons in the same period in 2023. Cost prices of aniline imports declined from €1467.5 per ton to €1422.3 per ton.

Polish Organic Chemical Trade		
Exports	Jan-Sep 24	Jan-Sep 23
Vol (kilo tons)	1,189.3	1,121.4
Value (€ million)	969.7	897.8
Imports	Jan-Sep 24	Jan-Sep 23
Vol (kilo tons)	2,933.9	2,973.3
Value (€ million)	2,049.6	1,981.6

Polish organic chemical trade Jan-Sep 2024

Exports of organic chemicals from Poland increased from 1.121 million tons in January to September last year to 1.189 million tons in the same period in 2024, whilst imports dropped from 2.973 million tons to 2.934 million tons.

Polish Organic Chemical Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Acetic Acid	29.927	25.722
Acetone	5.331	6.158
Butadiene	72.815	58.526
DINP/DOP	18.722	17.420
Ethyl Acetate	12.743	16.334
Formaldehyde	12.403	9.358
Isopropanol	7.284	5.979
Maleic Anhydride	6.673	7.219
Methanol	496.127	487.949
Propylene	69.958	94.973
VAM	15.859	14.469

Methanol imports into Poland totalled 496,127 tons in January to September this year against 487,949 tons in the same period in 2023. Acetic acid imports were up this year, amounting to 29,927 tons in the first nine months against 25,722 tons last year.

Prices of acetic acid have dropped this year averaging €627.5 per ton, down from €817.0 per ton. Imports from the UK increased from 5,930 tons in January to September 2023 to 13,537 tons whilst volumes from the US dropped from 12,236 tons to 8,916 tons.

Plasticizer imports into Poland amounted to 18,722 tons in the first three quarters in 2024. Prices in the

third quarter rose by 10.6%, with the price of DOTP/Oxoviflex produced at Kedzierzyn up by 10%. The primary factors driving the annual change in the prices of plasticizers were the rising costs of commodities and energy used for their production. At the same time demand for plasticizers in the third quarter of 2024 remained very low. Inflationary pressures limited demand for a wide range of their uses.

Ethyl acetate imports into Poland amounted to 12,743 tons in January to September this year against 16,334 tons in January to September 2023. Belgium provided the largest share of imports. VAM imports amounted to 15,859 tons in the first nine months versus 14,469 tons last year.

Polish ethylene-propylene oxides and glycols

Ethylene oxide imports into Poland totalled 15,130 tons in January to September versus 16,768 tons in January to September 2023. Germany currently represents the main source of inward shipments.

Polish EO/PO Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
DEG	21.120	26.534
Ethylene Glycol	40.531	88.166
Ethylene Oxide	15.130	16.768
Propylene Glycol	16.586	16.336
Propylene Oxide	5.391	0.257

Ethylene oxide is used in Poland mostly by PCC Rokita and PCC Exol.

Ethylene glycol imports dropped in the first nine months to 40,531 tons versus 88,166 tons in the same period last year. Belgium supplied the largest volume of glycols to the Polish market. Propylene oxide is produced by PCC Rokita, but imports are occasionally required and amounted to 5,391 tons in the first nine months this year.

Polish Organic Chemical Exports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Acetic Acid	1.348	1.116
Acetone	8.017	9.980
Methanol	150.774	215.093
Monochloroacetic Acid	24.355	27.541
N-Butyl Acetate	5.610	7.940
Phthalic Anhydride	4.165	2.691
Propylene	12.316	0.000

Regarding export activity in organic chemicals, shipments of methanol from Poland amounted to 150,774 tons in January to September against 215,093 tons in January to September 2023. Germany imported 77,376 tons in the first nine months against 61,560 tons in the same period in 2023, whilst Ukraine increased imports slightly to 19,363 tons from 17,792 tons.

Polish shipments of monochloroacetic acid (MCAA) declined in the first nine months to 24,355 tons against 27,541 in the same period in 2023. The destinations for Polish MCAA exports are spread throughout Europe including Germany, Italy, France and Spain.

Czech DINP Exports		
	Jan-Sep 24	Jan-Sep 23
Ktons	28.550	28.781
€ million	43.156	41.477

Other organic chemical exports from Poland include acetone where shipments amounted to 8,017 tons in the first nine months this year versus 9,980 tons in January to September 2023. Normal butyl acetate exports dropped from 7,940 tons to 5,610 tons in January to September 2024. The largest destination for Polish butyl acetate exports is Germany.

Czech Organic Chemical Imports (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Acetone	4.232	4.280
DEG	1.760	1.086
DINP	6.492	3.561
2-EH	16.658	15.122
Ethyl Acetate	2.430	2.467
Ethylene Glycol	5.525	5.513
Methanol	52.597	54.808
N-Butanol	5.871	7.979
Propylene Glycol	2.757	2.976

Czech organic chemical trade Jan-Sep 2024

Czech organic chemical exports amounted to 421,400 tons in the first three quarters, up slightly against 2023, whilst imports rose slightly to 523,600 tons. DINP plasticizer exports amounted to 28,550 tons against 28,781 tons in the first nine months in 2023, with revenues increasing from €41.477 million to €43.156 million.

Methanol is the largest imported organic chemical, amounting to 52,597 tons versus 54,808 tons in the same period in 2023. Imports of 2-ethylhexanol (2-EH) increased from 15,122 tons to 16,658 tons, of which Poland supplied 9,425 tons and Belgium 3,966 tons.

Central European methanol market

Polish Methanol Imports (unit-kilo tons)

Country	Jan-Sep 24	Jan-Sep 23
Azerbaijan	5.000	4.981
Belgium	122.742	50.133
Estonia	5.920	0.000
Germany	68.255	45.779
Netherlands	56.106	21.210
Norway	45.438	92.687
Russia	0.000	188.185
US	13.577	22.374
Trinidad	53.338	39.512
Venezuela	112.992	20.765
Others	12.769	2.323
Total	496.127	487.949
€ price per ton	318.6	287.1

Polish methanol imports Jan-Sep 2024

Methanol imports into Poland totalled 496,127 tons in January to September this year against 487,949 tons in the same period in 2023. Average prices amounted to €318.6 per ton against €287.1 per ton last year.

Poland has been developing alternative sources to Russian methanol before the full embargo took full effect in June 2023. Belgium was the largest European supplier to Poland this year, shipping 122,742 tons in the first nine months against 50,133 tons in 2023. Norway reduced exports to 45,438 tons of methanol to Poland in the first nine months in 2024 against 92,867 tons in the same period in 2023, whilst imports from Venezuela increased from 20,765 tons to 112,992 tons. In addition to supplies from Venezuela imports from Trinidad amounted to 53,338 tons this year.

Poland Methanol Exports (unit-kilo tons)

Country	Jan-Sep 24	Jan-Sep 23
Austria	1.546	30.312
Czech	30.522	42.015
Germany	77.376	61.560
Romania	0.000	18.927
Slovakia	21.025	32.015
Ukraine	19.363	17.792
Hungary	0.264	12.284
Others	0.679	0.187
Total	150.774	215.093
Av € per ton	340.0	362.5

Apart from Venezuela and Belgium, other new sources arrived last year from the US and Trinidad. The lowest prices this year have been granted by Trinidad and Venezuela, comprising €291 per ton and €293 per ton respectively. Of the European sources of methanol 7Belgium provided the most competitive at €302 per ton.

Methanol is the largest organic chemical exported from Poland, all of which is based on imported sources. In the first nine months this year imports amounted to 150,774 tons against 215,093 tons in the same period last year. After Germany, the Czech and Slovak Republics represent the important destinations for Polish methanol exports, followed by Ukraine.

Czech Methanol Imports (unit-kilo tons)

Country	Jan-Sep 24	Jan-Sep 23
Germany	4.994	4.759
Norway	0.096	0.887
Estonia	5.173	0.000
Russia	0.000	6.237
Poland	38.527	38.597
Others	3.806	4.328
Total	52.596	54.808
Av Price €	387.4	384.1

The reduced shipments this year can largely be attributed to the full ban on Russian methanol purchases as other countries have been able to find other sources. Azerbaijan, for example, has increased sales to the EU countries which has added competition to Polish traders.

Czech imports of methanol amounted to 52,596 tons in the first nine months in 2024 versus 54,808 tons in the same period in 2023. Imports from Poland amounted to 38,527 tons in the first nine months this year. Prices per ton for methanol imports into the Czech Republic were up slightly at €387.4 per ton. Estonia became a new supplier to the Czech

Hungarian methanol imports (unit-kilo tons)

Country	Jan-Aug 24	Jan-Aug 23
Germany	39.577	19.605
Netherlands	9.749	18.366
Poland	1.209	10.234
Slovenia	13.507	2.200
Slovakia	0.000	4.591
Others	1.400	3.500
Total	65.692	59.508
Av € per ton	434.0	437.3

Republic in 2024, supplying 5,173 tons in the first nine months. Estonia also supplied 5,920 tons to Poland this year.

Methanol imports into Hungary in the first eight months in 2024 amounted to 65,592 tons against 59,508 tons in the same period in 2023. The largest supplier to the Hungarian market was Germany which provided 39,577 tons versus 19,605 tons in the same period last year. Slovenia was the second largest supplier providing 13,507 tons against 2,200 tons.

Grupa Azoty

Grupa Azoty Jan-Sep 2024

Grupa Azoty posted a consolidated net loss of zł 226 million in Q3 2024 compared to a loss of zł 743 million a year earlier. For the first three quarters the group recorded a consolidated net loss of zł 975 million compared to a loss of zł 1,842 million in 2023, with sales revenues dropping to zł 9,828 million from zł 10,462 million. The EBITDA loss reached zł 299 million compared to a loss of zł 1,357 million in this respect a year earlier.

Grupa Azoty emphasized that the third quarter this year was another period of weak global and European economic conditions, resulting in insufficient demand for fertiliser and chemical products. European producers continued to be negatively impacted by imports of products to the EU, which had

Grupa Azoty Revenues (€ million)						
Period	Agro	Plastics	Chemicals	Energy	Others	Total
Jan-Sep 24	2014.6	482.2	657.0	915.0	240.7	4309.6
Jan-Sep 23	2247.5	303.8	753.0	1240.4	275.2	4819.9

a key impact on the performance of the Grupa Azoty's core business segments.

Improvement in Q3 results. compared to the same period last year is the result of corrective actions. This has included cost cutting and strengthening of businesses, including the renegotiation of key contracts with suppliers and business partners and the search for new business opportunities. In addition, Grupa Azoty has taken

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Caprolactam	78.4	67.2
Acetic Acid	1.6	1.5
Ammonia (Gaseous)	1547.0	1240.0
Ammonia (Liquid)	72.4	62.9
Pesticides	40.7	34.6
Nitric Acid	1610.0	1311.5
Nitrogen Fertilisers	1287.0	1071.1
Phosphate Fertilisers	169.4	127.6
Potassium Fertilisers	658.4	133.6

greater steps towards developing integration and creating greater uniformity between the companies that make up the group.

In the key Agro segment, the segment's final result was driven by increased imports of fertilisers, mainly from Russia and Belarus. However, Poland is contemplating introducing significant tariffs on imports from Russia, depending on EU approval, which could start to give Azoty better protection.

The prices of most production raw materials and energy utilities recorded a decline in the third quarter, particularly in the case of coal and electricity. Despite the positive impact of lower unit costs on Grupa Azoty's performance, EBITDA margins for all sales divisions were negative despite the improvement with the corresponding period of 2023.

Production and sales volumes in the plastics sector have increased this year whilst the prices of phenol decreased. This has meant an improvement in margins even if they remain negative. The segment's

Grupa Azoty to produce explosives

The Polish government has signed a letter of intent with domestic companies, including Grupa Azoty, to produce the nitrocellulose and multi-base powders necessary for producing ammunition. Grupa Azoty is well-equipped with raw materials and technological infrastructure to support explosives production. Poland currently imports explosives from Germany, Czech Republic, Slovakia, France, Finland, Switzerland and Canada. With government support, Grupa Azoty may now establish a nitrocellulose and multi-base powders plant at Tarnow.

performance also includes production and sales of Grupa Azoty Polyolefins, which is the main driver behind revenue rises in this division. The total sales volume of polypropylene in the third quarter amounted to 56,000 tons.

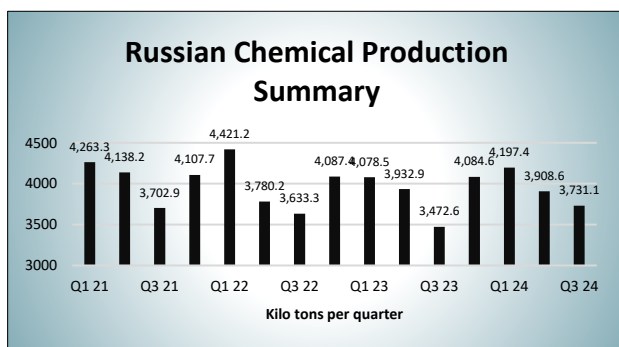
Grupa Azoty's restructuring considerations

Grupa Azoty continually considering new measures in trying to reduce the huge debt burden which has accumulated in the past three to four years. Apart from cutting costs, the group has been talks with Orlen regarding the sale of assets, jv prospects, etc. However, selling assets such as the caprolactam facilities to Orlen presents complications that could hamper other products produced by Grupa Azoty such as polyamide. The financial gains for Azoty would not justify the sale and the plants form a strategic part of the group which would make physical separation very difficult.

RUSSIA

Russian chemical production in the third quarter 2024

Russian chemical production dropped slightly in the third quarter this year against the first and second quarters but was higher than in the third quarter in 2023. Chemical plant utilisation rates averaged 72.3% in the third quarter this year against 76.0% in the second quarter, indicating a slight slowdown but this could easily be associated with maintenance turnarounds. Domestic demand is holding up for now, but inflation is a growing problem for the economy as a whole.



Interest rates were increased by the Russian Central Bank to 21% in October in order to try

and contain inflation and further hikes almost certainly may follow. There have been some tentative signs of slowing consumption over the past few months. Russian banks have provisionally forecasted GDP growth of 2.5%-3% in 2025, but overheating represents their main concern.

Russian chemical plants targeted by drones and missiles

Since the start of the war in February 2022 the chemical industry in Russia has largely been isolated from missile strikes, whether through collateral damage or intentional. That picture seems to be changing as Ukrainian intelligence identifies chemical plants that are contributing to Russia's military campaign.

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Ethylene	3437.7	3286.5
Propylene	1924.0	1934.0
Benzene	1019.4	946.5
Toluene	289.3	261.4
Xylenes	323.9	321.4
Orthoxylene	90.4	87.4
Paraxylene	142.7	140.7
Styrene	523.4	495.0
Ethylbenzene	614.1	551.3
Methanol	2839.4	2921.1
Isopropanol	52.5	49.7
Butanols	96.6	110.3
Phenol	182.2	186.7
Acetic Acid	198.7	142.0
Phthalic Anhydride	71.6	69.5

The most recent known target involved the Aleksin Chemical Plant in the Tula region on 9 November where eight of ten drones were struck the site causing considerable damage. On 9 November, eight from ten drones directed towards the plant is part of the Rostec corporation and the reason it was targeted as it produces ammunition, gunpowder and materials for the Russian military-industrial complex. Aleksin Chemical Plant also manufactures paints and varnishes, rubber products, household chemicals, and alcohol products. The plant produces paints for the military sector.

Besides numerous false alarms, the latest involving the PVC plant at Volgograd, some mid-sized chemical plants have been damaged by Ukrainian drones over the past few months. These are mostly located in the European parts of Russia. The list includes the Sverdlov Chemical Plant, Efremov Synthetic Rubber Plant, Tambov Biochem and Voronezh Ethanol Plant. The Sverdlov plant was targeted directly due its production of explosives for the military. Ukraine has been focused its drone strategy since the start of 2024 mostly on refineries and oil depots but has started targeting ethanol plants. There is a total

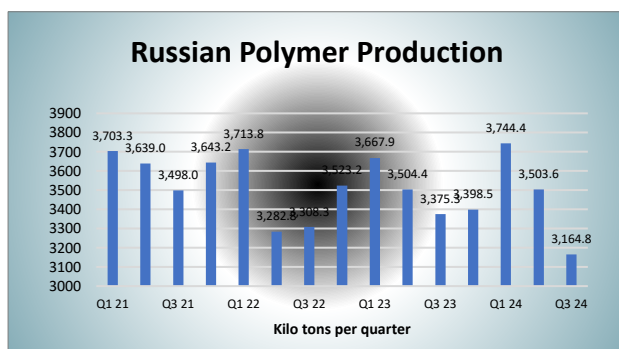
of 45 ethanol plants in total in Russia the reason they are targeted as alcohol is necessary for the production of missiles and some types of ammunition. There is also intelligence stating that these plants are working as undercover military production units.

Chemical production by product Jan-Sep 2024

Regarding production by product, ethylene production increased slightly from 3.287 million tons in the first nine months last year to 3.438 million tons this year whilst propylene dropped fractionally from 1.934 million tons to 1.924 million tons. Styrene production increased from 495,000 tons in the first nine months last year to 534,400 tons in January to September this year, whilst benzene production

increased from 946,500 tons to 1.019 million tons. Toluene production rose from 289,300 tons to 261,400 tons due to demand from the fuel sector.

In the organic chemical sector, methanol production fell from 2.921 million tons in the first nine months in 2023 to 2.829 million tons in 2024, with domestic merchant sales helping to offset the decline in exports. Methanol derivatives such as acetic acid and formaldehyde both recorded increases in the first nine months, although underlying currents suggest a slowdown.



Russian polymer production Jan-Sep 2024

Russian bulk plastics production amounted to 8.183 million tons in the first nine months against 8.013 million tons in the same period last year.

Russian production of polyethylene rose from 1.875 million tons in January to September 2023 to 1.973 million tons in the same period this year.

Propylene polymer production declined from 1.636 million tons in the first nine months in 2023 to 1.577 million tons in the same period in 2024. Polystyrene production increased from 430,272 tons to 452,447 tons whilst PVC production dropped from 725,995 tons to 687,303 tons.

Russian Polymer Production (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
Plastics	8183.1	8013.0
Polyethylene	2564.1	2377.6
Styrene Polymers	452.4	430.3
PVC	687.3	725.6
Propylene Polymers	1577.4	1635.8
Synthetic Rubber	1041.7	1049.0

Russian production of synthetic rubbers amounted to 1.042 million tons in the first nine months in 2024 compared to 1.049 million tons in the first nine months in 2023.

Utilisation levels for bulk polymer plants declined slightly from 92.4% in the first quarter at the start of 2021 to 82.9% in the third quarter in 2024. Synthetic rubber has showed the largest decline in utilisation from 99.0% in the first quarter in 2021 to 73.3% in the third quarter this year. This is largely connected to the constraints on export activity combined with reduced production of tyres in Russia.

Chinese-Russian chemical trade and start-up of EP-600 at Nizhnekamskneftekhim

The increase in Russian Chinese trade over the past two years has been significant, not only for the import of Chinese cars which now dominate many Russian cities but also for the export of chemical products that were previously sent to Europe. Both methanol and synthetic rubber had until the full-scale war formed the dominant part of sales for Russian producers of these products and thus the sanctions introduced in 2022 has to led to a major reorientation towards China.

Both in the organic chemical and plastics sector Russia carries a significant deficit in trade with China, whilst Russian synthetic rubber is the only product area where exports outstrip imports.

Russian Chinese Chemical and Polymer Trade (\$ million)		
Chinese imports from Russia	Jan-Sep 24	Jan-Sep 23
Organic Chemicals	389.1	422.8
Plastics	346.1	367.3
Synthetic Rubber	651.9	519.4
Chinese exports to Russia	Jan-Sep 24	Jan-Sep 23
Organic Chemicals	1927.9	1915.8
Plastics	3109.7	3329.9
Synthetic Rubber	62.5	64.3

Trade with China has required new investments in infrastructure in order to cope with volume. In October the Deng Xiaoping Logistics Centre in the Tukayevsky district of Tatarstan was commissioned which represents a key logistical investment.

The logistics centre will accept cargo, components from China and export polymers and polymer products produced on the territory of the Ethylene-600 industrial park. According to the project, up to eight container trains can be loaded and unloaded per day at the complex, the total cargo turnover is 100,000 containers, or to around 2.4 million tpa of cargo.

Russian petrochemical plant update

Nizhnekamskneftekhim EP 600 Capacities	
Naphtha	1.77 million tpa
Ethylene	600 ktpa
Propylene	270 ktpa
Benzene	247.8 ktpa
Butadiene	89.3 ktpa

Nizhnekamskneftekhim EP-600 cracker

Start-up work on technical systems at Nizhnekamskneftekhim's new EP-600 cracker is actively underway with production of the first commercial products expected in December 2024. This cracker includes ethylene, propylene and benzene, based on naphtha feedstocks if around is 1.8 million tpa.

The launch of the complex will supply Russian consumers with more than 650,000 tpa of polyethylene, polystyrene and ABS plastics.

Amur Gas Chemical Complex-financing

For further financing of the Amur Gas Chemical Complex (AGCC), the issue of bonds on the Russian capital market is being considered, which will cover the entire remaining CAPEX of the project. Construction of the Amur Gas Chemical Complex began in August 2020, but the project required a revision after April 2022 due to sanctions on Russia and the withdrawal of most partners, including the licensor Linde. Alternative solutions, primarily Russian, have been found to replace European and Japanese equipment. It has now appeared that all issues related to the supply of equipment for the construction of the Amur GCC and other investment projects of SIBUR are reported to have been resolved.

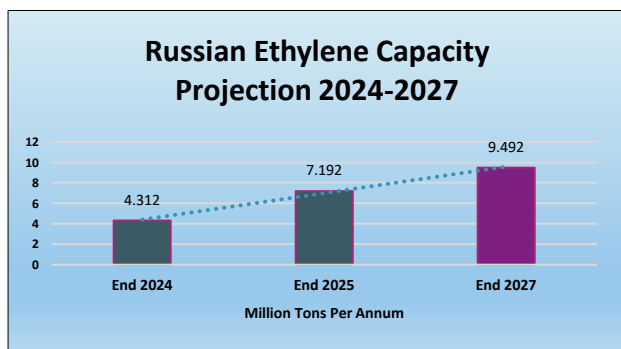
SIBUR is reluctant to mention how outstanding issues have been overcome, including which solutions may have come from domestic sources and which came from abroad or other means. The Amur project was relatively well advanced once sanctions were introduced, and thus as with the Irkutsk and Nizhnekamsk projects a pathway to completion was found. Projects that were in the early development stage, such as Ust Luga for example, have been shelved. The design capacity of the pyrolysis unit of the Amur Gas Chemical Complex is 2.7 million tpa including 2.3 million tpa of polyethylene and 400,000 tpa of polypropylene. The polyethylene production of the Amur Gas Chemical Complex includes four parallel polymerization lines, including three by the gas-phase method, and one by the suspension method.

Irkutsk Polymer Plant-polyethylene plant close to completion

The project to construct a polyethylene plant with a capacity of 650,000 tpa at the Irkutsk Polymer Plant, is expected to complete construction in early 2025 after which it will then start commissioning. The polymer plant is located at Ust Kut in the northern part of the Irkutsk Oblast and will process associated petroleum gas from the fields of Irkutsk Oil Company. This will allow Irkutsk Oil Company to resolve two main problems at the same time: it takes care of the environment as gas is not flared and the production of polyethylene.

There are six pyrolysis furnaces at the Irkutsk Polymer Plant, including in distillation columns which were delivered from South Korea to Ust-Kut along the Northern Sea Route along the Lena river. The feedstock delivery system starts with gas from the fields being sent for treatment to the Ust-Kut Gas Processing Plant. There it is purified from impurities, the target fractions are separated, and ethane is sent to the Irkutsk Polymer Plant. To produce polyethylene, it needs to go through several stages in

a pyrolysis plant. The production chain from gas to polyethylene takes approximately three hours. The process is fully automated from the receipt of ethane to the packaging of finished products on pallets for further shipment.



Russian ethylene capacity, and new feedstock pipelines

The above projects mean that ethylene capacity will more than double between the end of 2024 and 2027, overcoming some of the problems

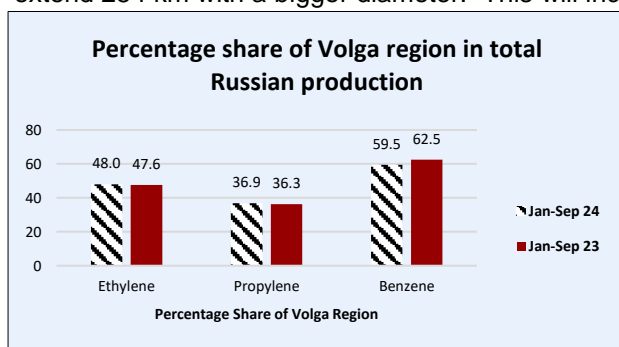
from Western sanctions imposed on technology after the full-scale invasion of Ukraine.

In addition to production capacity SIBUR has developed a new product pipeline for delivering wide fractions of light hydrocarbons from Siberian fields to ZapSibNeftekhim. The project consists of three stages, involving a total length of about 300 km of which 60 km were completed in 2022. The second stage has now been completed allowing progression to the third and final stage. The completion of the project and the phased commissioning of the sections of the new system in Yugra will provide the petrochemical holding with long-term reliability, industrial and environmental safety. It stabilises the feedstock flow to ZapSibNeftekhim which is currently the largest ethylene producer in Russia.

New ethylene pipeline for Volga-Urals, intended for polyethylene production at Kazan

The main Russian ethylene pipeline is located in the Volga-Urals region. The southern branch provides ethylene supply from Nizhnekamskneftekhim to Ufaorgsintez, Bashkir Soda Company, and Gazprom neftekhim Salavat. The northern branch supplies Kazanorgsintez where its own ethylene production is lower than required for polymer capacity. Kazanorgsintez uses ethane technology for the production of ethylene, receiving ethane through a pipeline system from the Orenburg region.

SIBUR is preparing a project to reconstruct the ethylene pipeline between Nizhnekamskneftekhim and Kazanorgsintez. The project is currently at the stage of design and survey work. The current ethylene pipeline between Kazan and Nizhnekamsk has existed since 1976. The new pipeline is expected to extend 254 km with a bigger diameter. This will increase the pumping of ethylene by about 2.5 times up to 500,000 tpa.



The increase in pumping volumes is associated with the expected launch of the Ethylene-600 olefin complex. It will require stable transportation of ethylene from Nizhnekamskneftekhim to Kazanorgsintez. Moreover, Kazanorgsintez requires more ethylene with the launch of production of the second polymerization line (reactor B) after modernisation.

It is expected that all materials and equipment for the construction of the facility will be purchased from Russian manufacturers. This year, the Russian government included the ethylene pipeline in the territorial planning scheme of the Russian Federation in terms of pipeline transport. It is expected that the EP-600 complex in Nizhnekamsk will produce the first ton of products by the end of 2024. The construction of the plant is 1.8 million tpa of products, including 600,000 tpa of ethylene, 480,000 tpa of propylene, about 180-200,000 tpa of benzene and other by-products.

Other shorter pipelines are located in the Irkutsk and Nizhniy Novgorod regions. The Siberian ethylene pipeline Angarsk-Sayansk allows to pump around 130,000 tpa from the Angarsk Polymer Plant to Sayanskkhimplast for the production of PVC suspension grade. Although a new ethylene-polyethylene project is being constructed at Ust Kut in the north of the Irkutsk Oblast the distances to the more southerly locations Angarsk and Sayansk are too far away to consider a pipeline construction.

Russian Monomers

Russian Ethylene Production (unit-kilo tons)		
Region	Jan-Sep 24	Jan-Sep 23
North Caucasus Federal District	248.211	224.270
Volga Federal District	1649.331	1562.769
Ural federal district	1171.894	1163.966
Siberian Federal District	368.293	335.469
Total	3437.729	3286.474

Russian ethylene production Jan-Sep 2024

Russian ethylene production totalled 3.438 million tons in the first nine months in 2024 against 3.286 million tons in the same period in 2023. The largest producer ZapSibNeftekhim at Tobolsk produced 1.172 million tons in January to September 2024, up from 1.164 million tons from January to September 2023. ZapSibNeftekhim is only one of three ethylene plants in Russia that is not

connected to other producers or consumers through pipeline. The other two other stand-alone plants include Stavrolen and SIBUR-Khimprom.

Russian Propylene Production (unit-kilo tons)		
Region	Jan-Sep 24	Jan-Sep 23
North Caucasus Federal District	99.575	91.245
Volga Federal District	709.846	702.488
Ural federal district	743.554	791.086
Siberian Federal District	371.022	348.981
Total	1923.998	1933.800

Russian propylene production Jan-Sep 2024

Russian propylene production totalled 1.924 million tons in the first nine months in 2024 against 1.934 million tons in the same period in 2023. ZapSibNeftekhim at Tobolsk produced 743,554 tons rising from 791,086 tons in the first nine months in 2023. The Volga-Urals region accounted for 709,846 tons against 702,488 tons in 2023.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Angarsk Polymer Plant	40.317	14.568
SIBUR-Kstovo	142.720	121.094
Lukoil-NNOS	127.480	161.912
Total	314.031	317.910

Russian propylene domestic sales Jan-Sep 2024

Russian sales of propylene on the domestic merchant market amounted to 314,027 tons in the first nine months this year against 317,910 tons in January to September 2023. The largest propylene supplier to the domestic market was SIBUR-Kstovo, shipping 142,720 tons against 121,094 tons.

Russian Major Propylene Domestic Buyers (unit-kilo tons)		
Consumer	Jan-Sep 24	Jan-Sep 23
Saratovorgsintez	124.539	123.808
Volzhskiy Orgsintez	9.123	8.661
Akriat	21.451	18.344
SIBUR-Khimprom	42.825	30.107
Omsk-Kaucuk	15.941	5.039
Tomskneftekhim	10.949	2.248
ZapSibNeftekhim	60.808	86.817
Moscow Refinery	1.460	1.739
Nizhnekamskneftekhim	9.125	1.577
Ufaorgsintez	6.348	7.453
Kazanorgsintez	3.347	3.477
Khimprom Kemerovo	3.940	5.391
Plant of Synthetic Alcohol	4.140	3.501
Total	314.027	317.910

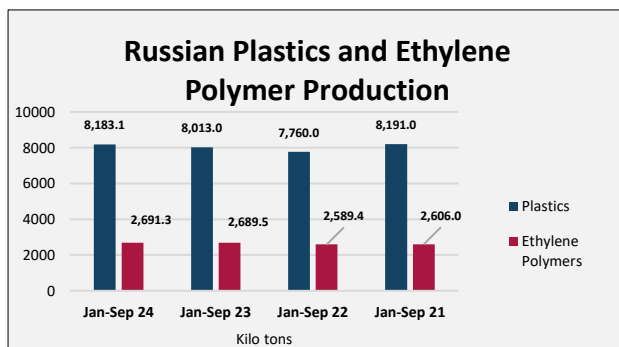
Lukoil-NNOS reduced propylene sales from 161,912 tons in the first nine months last year to 127,480 tons, partly due to the side-effects of the drone attacks on the refinery in the early part of 2024.

ZapSibNeftekhim purchased 60,808 tons of propylene in the first nine months in 2024 against 86,817 tons in the same period in 2023, whilst Saratovorgsintez increased purchases from 123,808 tons to 124,539 tons.

Other significant consumers include SIBUR-Khimprom at Perm where propylene purchases totalled 42,825 tons

against 30,107 tons last year whilst Akriat purchased 21,451 tons

Russian bulk polymers



Russian plastics production Jan-Sep 2024

Russian bulk plastics production amounted to 8.183 million tons in January to September 2024 against 8.013 million tons in the same period in 2023 and 7.760 million tons in 2022. Production still remains lower though than in 2021.

Ethylene polymers remain the leading growth area for polymers in Russia, followed by polypropylene. Production of ethylene

polymers totalled 2.691 million tons in the first nine months in 2024 against 2.690 million tons in the same period in 2023. Polyethylene production broken down by category is dominated by LDPE and HDPE. Other products include LLDPE and ethylene vinyl acetate.

Russian ethylene polymer production by region

ZapSibNeftekhim is the largest producer of ethylene polymers in Russia, located at Tobolsk in the Ural region. Production at Tobolsk amounted to 1.194 million tons in the first nine months against 1.187 million tons in the same period in 2023.

The Volga region accounted for 845,293 tons in the first nine months in 2024 against 862,339 tons in the same period in 2023. The Volga region includes ethylene polymer production at Nizhnekamskneftekhim and Kazanorgsintez in Tatarstan, followed by Ufaorgsintez and Gazprom neftekhim Salavat in Bashkortostan.

Russian Ethylene Polymer Production by Region		
Region	Jan-Sep 24	Jan-Sep 23
Central Federal District	95.460	107.165
NW Federal District	30.403	30.627
Southern Federal District	30.121	25.185
North Caucasus	232.876	211.065
Volga Federal District	845.293	862.339
Ural federal district	1193.679	1187.820
Siberian Federal District	263.394	265.196
Far East	0.027	0.131
Total	2691.225	2689.529

Kazanorgsintez completed the second stage of scheduled shutdown repairs in October, which included work at pyrolysis, polyethylene and power production plants. Kazanorgsintez (part of SIBUR) reduced sales by around 10% in the first three quarters. This follows sales of 322,000 tons in the first half of 2024 against 359,000 tons in the same period in 2023. The decrease in sales of polyethylene was due to the completion of work on reactors for HDPE production. The volume of polycarbonate sales also decreased by 3.5% and amounted to about 50,000 tons.

Kazanorgsintez increased merchant ethylene purchases from Nizhnekamskneftekhim in the first three quarters in 2024, by 12% to 99,000 tons which was caused due to logistical restrictions on LPG feedstocks for its own ethylene. Kazanorgsintez is unable to produce sufficient ethylene from its own pyrolysis plants for the production of ethylene polymers.

South Korean Polyethylene Exports to Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	90.655	66.899
\$ million	115.264	89.391
Av price \$/ton	1271.5	1336.2

Russian polyethylene trade Jan-Sep 2024

Russia imported 90,655 tons of polyethylene from South Korea in the first nine months this year against 66,899 tons in the same period last year, with costs rising from \$89.391 million to \$115.264 million. From the 90,655 tons of polyethylene imported by Russia

from South Korea this year, the largest category comprised ethylene alpha olefins amounting to 30,500 tons.

Although South Korea is considered part of the Western alliance and has imposed a variety of sanctions, they are far less restrictive than European and US sanctions or Japanese sanctions. The longer North Korean troops remain in Russia fighting against Ukraine the more likely that Seoul is likely to impose further sanctions against Russia.

Inward shipments of polyethylene from China into Russia increased in the first nine months to 77,488

Chinese Exports of Polyethylene to Russia (unit-kilo tons)		
Product Category	Jan-Sep 24	Jan-Sep 23
LDPE	15.615	9.916
HDPE	9.689	25.716
LLDPE	20.895	3.965
EVA	9.753	10.570
Ethylene-hexene copolymers	20.908	19.133
Others	0.628	0.248
Total	77.488	69.548

tons against 69,548 tons in the same period in 2023. The most expensive grades of polyethylene included ethylene-vinyl acetate and ethylene-hexene copolymers. Average PE prices fell in the first nine months to \$1402.1 against \$1746.1 in the same period in 2023.

Export grades from Russia to China comprise HDPE, LLDPE and LDPE.

HDPE shipments from Russia to China amounted to 120,760 tons in the first nine months in 2024 against 66,504 tons in the same period in 2023.

Chinese Imports of Polyethylene from Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	248.501	221.009
\$ million	230.449	193.286
Av price \$ per ton	927.4	864.9

prices lower Chinese consumers are in a strong negotiating position with Russian suppliers. March 2024 saw an increase in prices to \$1262.0 per ton but had fallen to \$903.6 per ton in May.

Russian Propylene Polymers Production by Region (unit-kilo tons)		
Region	Jan-Sep 24	Jan-Sep 23
Central Federal District	112.293	101.425
Northwestern Federal District	0.455	0.809
Southern Federal District	9.574	9.703
North Caucasus Federal District	95.395	90.132
Volga Federal District	308.174	319.526
Ural federal district	798.703	853.570
Siberian Federal District	252.738	264.319
Total	1577.332	1635.835

S Korean Exports of Propylene Copolymers to Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	24.496	13.445
\$ million	34.375	17.477
Av price \$/ton	1403.3	1299.9

Chinese Exports of PP to Russia		
	Jan-Sep 24	Jan-Sep 23
\$ million	59.888	86.571
Ktons	30.084	31.032
Av price \$ per ton	1990.7	2789.7

tons in the first nine months in 2024 against 31,032 tons in the first nine months last year. Values dropped from \$86.571 million to \$59.888 million.

Chinese Imports of PP from Russia		
	Jan-Sep 24	Jan-Sep 23
\$ million	51.395	104.443
Ktons	60.674	133.163
Av price \$ per ton	846.8	818.2

Russian PVC Production by Region (unit-kilo tons)		
Region	Jan-Sep 24	Jan-Sep 23
Volga Federal District	452.902	436.586
Siberian Federal District	196.982	188.635
Total	723.060	712.651

The Volga region accounted for the largest share of production, followed by Siberia. The Volga region includes RusVinyl at Kstovo and Kaustik at Sterlitamak, whilst Siberian production takes place at Sayansk in the Irkutsk Oblast.

Chinese Exports of PVC to Russia (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
PVC Total	93.984	106.123
PVC S	47.436	63.901
PVC E	46.548	42.222

PVC suspension imports from China into Russia decreased from 63,901 tons in the first nine months in 2023 to 47,436 tons in the same period in 2024, whilst emulsion grade imports increased from 42,222 tons to 46,548 tons.

Russian polyethylene exports to China in total increased from 221,009 tons in January to September 2023 to 248,501 tons in the same period this year, with values rising from \$193.286 million to \$230.449 million. Average prices rose from \$864.9 per ton to \$927.4 per ton. Apart from market factors driving

Russian polypropylene production Jan-Sep 2024

Russian production of propylene polymers totalled 1.577 million tons in the first nine months in 2024 versus 1.636 million tons in the same period in 2023. Most of the production in Russia is focused on homo grade product whereas most copolymers are imported currently from China and South Korea.

Russia's largest producer ZapSibNeftekhim at Tobolsk reduced production from 853,570 tons in the first nine months in 2023 to 798,703 tons in the same period in 2024. This was due to scheduled maintenance in the second quarter. The second largest producers

Russian-polypropylene trade Jan-Sep 2024

Imports of propylene copolymers from South Korea totalled 24,496 tons in the first nine months this year against 13,445 tons in January to September 2023. Costs of imports almost doubled from \$17.477 million to \$34.375 million.

Chinese exports to the Russian market dropped to 30,084 tons in the first nine months in 2024 against 31,032 tons in the first nine months last year. Values dropped from \$86.571 million to \$59.888 million.

Exports of polypropylene from Russia to China amounted to 60,674 tons in the first nine months in 2024 against 133,163 tons in the same period in 2023. Export revenues dropped from \$104.443 million to \$51.395 million. Most of the Russian exports to China consisted of homo grade polypropylene.

Russian PVC market 2024

Production of all types of PVC in Russia totalled 723,060 tons in the first three quarters in 2024 against 712,651 tons in the same period in 2023.

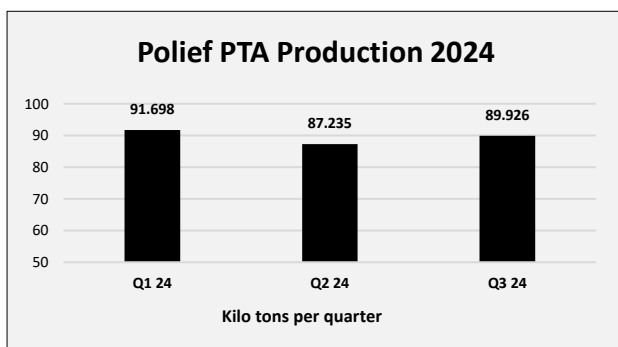
Paraxylene-PTA-PET

Russian Paraxylene Production by Region		
Producer	Jan-Sep 24	Jan-Sep 23
Kirishinefteorgsintez	40.087	31.814
Ufaneftekhimi	92.985	96.492
Gazprom Neft	53.258	49.288
Total	186.330	177.594

Russian paraxylene production Jan-Sep 2024

Russian paraxylene production totalled 186,330 tons in the first nine months in 2024 against 177,594 tons in the same period in 2023. Whilst Gazprom Neft at Omsk increased production from 49,288 tons to 53,258 tons, Ufaneftekhimi reduced production from 96,492 tons to 92,985 tons. Most of the paraxylene production in Russia was consumed internally, and almost exclusively

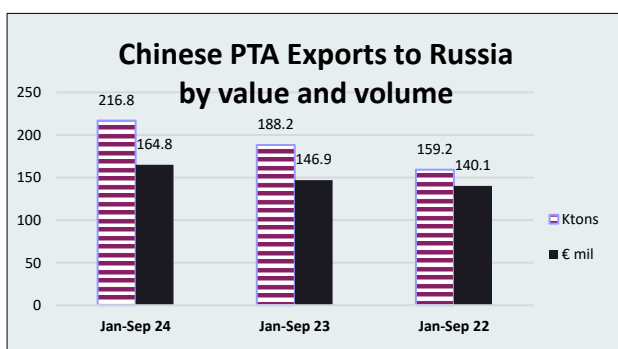
for PTA production at Polief.



Paraxylene exports from were traditionally sent to Europe, but since 2022 hardly any volumes have been exported. In the first three quarter this year Russia supplied 11,814 tons of paraxylene to the Chinese market for \$10.800 million.

Polief's PTA production this year totalled 268,859 tons in the first three quarters this year with stable plant operating rates and no maintenance shutdowns. Polief consumed

around 180,000 tons of paraxylene in the first three quarters in 2024.



Russian PTA imports Jan-Sep 2024

Russian PTA imports from China amounted to 216,845 tons in the first nine months in 2024 against 188,154 tons in the same period in 2023. Values of imports amounted to \$164.839 million against \$146.928 million in 2023. Nearly all of the PTA imports from China were shipped to Ekopet at Kaliningrad by rail. PTA import prices averaged \$760.2 in 2024, down from \$780.9 in 2023. In addition to PTA, Russia imported 67,702 tons of MEG in the first nine months in 2024 for \$39.391 million to less than

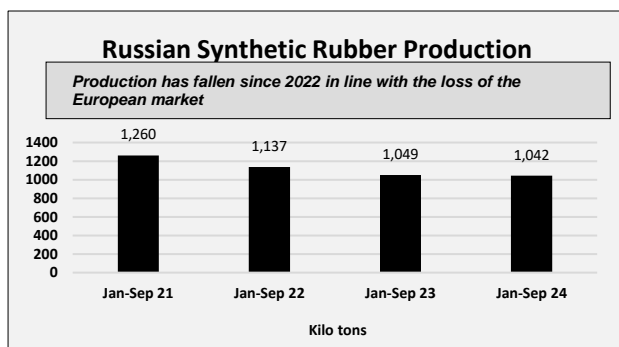
a thousand tons in the same period last year. MEG shipments from China to Russia started to rise from October 2023.

Russian PET Production by Region (unit-kilo tons)				
Region	Q1 24	Q2 24	Q3 24	Total
SIBUR-PETF & Senezh	48.734	52.994	45.145	146.873
Ekopet	51.123	58.138	56.833	166.094
Polief	54.686	55.403	53.740	163.829
Total	154.542	166.535	155.718	476.795

Russian PET production-trade Jan-Sep 2024

PET production in Russia totalled 476,795 tons in the first nine months in 2024, of which Ekopet at Kaliningrad produced 166,094 tons and Polief produced 163,829 tons. The largest month for Russian PET production this year was in January when volumes totalled 56,423 tons and the smallest in February at 48,213 tons.

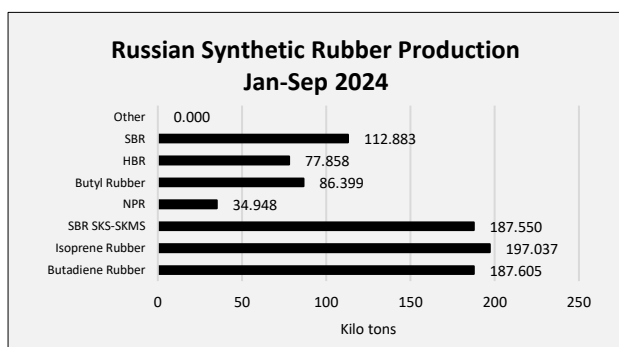
Russian PET imports from China in January to September rose to 221,345 tons against 174,488 tons in the same period in 2023 and 199,856 tons in 2022. Average prices dropped from \$923.8 per ton to \$893.0 in 2024. Russian import costs of PET from China amounted to \$197.652 million in the first nine months in 2024 against \$161.184 million in the same period in 2023 and \$223.689 million in 2022. Russian PET imports from China in the whole of 2023 amounted to a total of 237,500 tons, versus 276,500 tons in 2022. As a result, the share of Chinese PET in total Russian imports increased from 84% to 95%.



Russian Synthetic Rubber Production by Region (unit-kilo tons)		
Region	Jan-Sep 24	Jan-Sep 23
Central	223.975	208.215
NW Russia	1.269	0.379
Privolzhsky	733.181	758.820
Siberia	83.453	81.601
Total	1041.878	1049.015

consumption.

For synthetic rubber production the Volga region accounted for the largest share, amounting to 733,181



Siberian production of synthetic rubber takes place at the Omsk Kaucuk plant in West Siberia, where butadiene rubbers are produced, and Krasnoyarsk Synthetic Rubber Plant which produces nitrile butadiene rubber.

Broken down by product, isoprene rubber was the largest category of Russian synthetic rubber production in the first nine months amounting to 197,037 tons. Butadiene rubber production was the second largest category with 187,605 tons followed by SKS-SKMS rubber (butadiene-styrene and butadiene-methylstyrene rubbers) with 187,550 tons.

Chinese Synthetic Rubber Imports from Russia (\$ million)		
Product	Jan-Sep 24	Jan-Sep 23
SBRs	106.839	76.525
Butadiene Rubber	130.943	100.040
Butyl Rubber	119.076	108.097
HBR	128.943	84.093
NBR	32.387	34.161
Isoprene Rubber	82.415	62.021
Others	51.319	54.509
Total	651.922	519.447

increased from \$519.447 million in the first three quarters in 2023 to \$651.922 in the same period this year. This represents a 24% increase over 2023 and reflects the vital significance of Chinese consumers to Russian synthetic rubber producers.

Synthetic rubber

Russian synthetic rubber production Jan-Sep 2024

Synthetic rubber production in Russia amounted to 1.042 million tons in the first nine months this year against 1.049 million tons in the same period in 2023 and 1.137 million tons in 2022. The domestic market has tended to stabilise this year with tyre manufacturing increasing by around 12% over 2023. Despite the rise

However, total production remains at a lower level than at the height of the COVID pandemic.

On the domestic market the main hopes of companies are associated with the full launch of tyre plants and displacing imports. The company also sees prospects in the development of the rubber goods segment. Fundamental changes have taken place in the domestic tyre market, which accounts for around two thirds of Russian synthetic rubber

consumption. The central Russian region, largely based on production at Voronezhskintezkavuk, accounted for 223,975 tons in the first nine months in 2024 against 208,215 tons in 2023. The only other producer in the Central region is Efremov Synthetic Rubber Plant in the Tula Oblast.

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Nizhnekamskneftekhim is the largest producer of synthetic rubber in Russia, followed by Togliattikavuk. Both producers produce butyl rubber which in total amounted to 86,399 tons in the first nine months in 2024 whilst halogenated butyl rubber production (only undertaken at Nizhnekamskneftekhim) amounted to 77,858 tons.

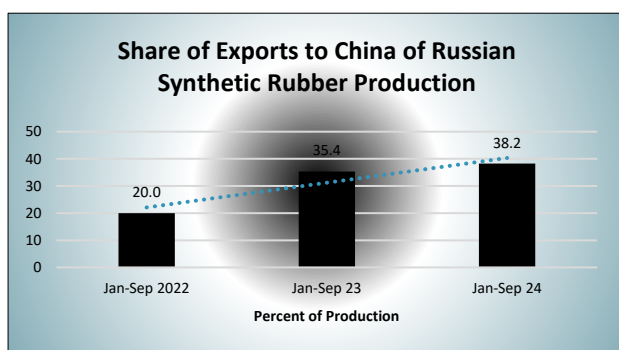
Russian Chinese rubber trade Jan-Sep 2024

Russian exports of synthetic rubber to China

The production of synthetic rubbers in Russia has traditionally been export-oriented, historically around 60-70% of the total output was exported and almost half of the exports went to European countries. The situation has changed dramatically in the last few years. With the introduction of sanctions against Russia's after the full-scale invasion of Ukraine started in February 2022, Russia has lost access to the European market and reoriented trade towards China.

Nizhnekamskneftekhim, Voronezhskintezkaucuk and Togliattikaucuk were all previously major exporters to Europe, although smaller producers such as Sterlitamak Petrochemical, Omsk Kaucuk and Krasnoyarsk Synthetic Rubber Plant have historically been focused on the Asia-Pacific region. Less than 1% of the exports from Omsk Kaucuk in the period in 2021-2022 were accounted for by sales to the EU countries. The main export market for synthetic rubber for the Titan Group of Companies has been and remains the Asian market.

Faced with problems in the European market in 2022, Russian producers began to prepare for the trade redirection in advance of the end-date for European business established under EU law. Moreover, the Asia-Pacific region consumes more than half of the world's total volume of synthetic rubbers of various types.



The significance of exports to China has risen in the past three years from a 22.2% share of production in 2022 to 36.0% in 2023 and now 39.0% of 2024. The share this year compares against the 38.0% share of the EU in 2021 as a destination point for Russian exports of synthetic rubber.

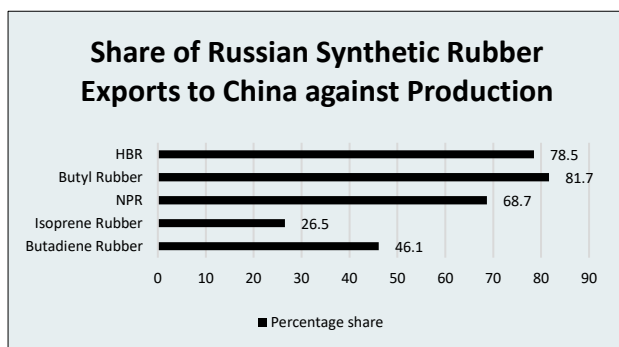
By volume Russian shipments of synthetic rubber to China amounted to 398,264 tons in the first nine months, which was up from 370,840 tons in January to September 2023.

Butadiene rubber exports represented the largest category, rising from 78,887 tons last year to 86,547 tons.

Exports of halogenated butyl rubber showed the largest percentage increase, rising from 41,741 tons to 61,141 tons this year which has been partially facilitated by the increase in production at Nizhnekamskneftekhim. Exports of halogenated butyl rubber jumped from \$84.093 million to \$119.076 million, whilst butadiene rubber export values jumped from \$100.040 million to \$130.943 million.

Chinese Synthetic Rubber Imports from Russia (unit-kilo tons)		
Product	Jan-Sep 24	Jan-Sep 23
SBRs	71.316	65.750
Butadiene Rubber	86.547	78.887
Butyl Rubber	70.567	71.267
HBR	61.141	41.741
NBR	24.012	24.290
Isoprene Rubber	52.282	42.292
Others	32.399	46.613
Total	398.264	370.840
Av price \$/ton	1636.9	1400.7

Butyl rubber exports from Russia to China decreased slightly in the first nine months to 70,567 tons from 71,267 tons in the same period in 2023. As a share of total production, exports to China accounted for 81% reflecting the importance of this trade route.



Halogenated butyl exports accounted for 78.5% of total production that takes place at Nizhnekamskneftekhim, one of the four global producers of this product. Nitrile butadiene rubber is produced at Krasnoyarsk Synthetic Rubber Plant and 68.7% of production in the first three quarters this year went to China.

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Shchekinoazot	842.860	936.674
Gazprom Methanol	489.335	518.820
Metafrax Chemicals	804.195	821.690
Akron	79.491	65.492
Azot, Novomoskovsk	61.839	9.320
Angarsk Petrochemical	19.386	18.897
Azot, Nevinnomyssk	89.365	82.803
Tomet	341.233	320.203
Ammoni	67.154	55.843
Novatek	49.801	49.416
Total	2844.659	2879.158

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	Jan-Sep 24	Jan-Sep 23
Belarus	92.569	108.975
China	613.033	606.605
Finland	0.000	106.441
Germany	0.000	5.265
Kazakhstan	43.241	35.175
Latvia	0.000	1.230
Lithuania	0.000	9.019
Netherlands	0.000	20.814
Poland	0.000	126.002
UAE	13.022	6.188
Turkey	157.234	180.124
Others	0.110	0.000
Total	919.209	1205.838

Russian Methanol Market (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
Production	2758.112	2879.158
Exports	919.137	1205.777
Domestic merchant	1154.921	1113.143
Captive/Inventory	631.748	560.239

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Azot Nevinnomyssk	11.638	6.630
Azot Novomoskovsk	48.035	48.947
Metafrax Chemicals	163.773	282.800
Gazprom Methanol	220.333	286.325
Tomet	100.252	92.410
Shchekinoazot	375.107	488.725
Total	919.139	1205.838

Methanol

Russian methanol production Jan-Sep 2024

Russia produced 2.845 million tons of methanol in the first nine months in 2024 against 2.879 million tons in the same period in 2023. The three largest producers all reported lower production volumes, whilst increased volumes were reported by all of the smaller producers. Production totalled 275,805 tons in September against 335,000 tons in August.

Azot at Novomoskovsk produced 61,839 tons against 9,320 tons last year whilst Azot at Nevinnomyssk increased production from 82,803 tons to 89,365 tons. Ammoni in Tatarstan increased production from 55,843 tons to 67,154 tons. Tomet produced 341,233 tons in the first nine months this year versus 320,203 tons in January to September 2023.

Gazprom Methanol reduced production from 518,820 tons in the period January to September 2023 to 489,335 tons whilst Metafrax Chemicals reported a fall from 821,690 tons to 804,195 tons. Russia's largest producer Shchekinoazot reduced production from 936,674 tons to 842,860 tons.

The dynamics of the Russian market was helped in the first nine months by an increase in domestic merchant sales and also internal processing into formaldehyde, acetic acid, etc. Both domestic merchant sales and internal processing helped offset the decline in exports. Domestic merchant sales increased from 1.113 million tons in January to September 2023 to 1.154 million tons, whilst internal processing at methanol plants increased from 560,239 tons to 631,748 tons.

Russian methanol exports Jan-Sep 2024

Russian methanol exports amounted to 919,139 tons in the first three quarters versus 1.206 million tons in the same period in 2023. Metafrax Chemicals reduced exports from 282,800 tons to 163,773 tons, Shchekinoazot reduced exports from 488,725 tons to 375,107 tons and Gazprom Methanol reduced exports from 286,325 tons to 220,333 tons.

Exports to China amounted to 613,033 tons in the first nine months in 2024 against 606,604 tons in the first nine months in 2023. By percentage shares China accounted for 70% of Russian methanol exports in the first nine months this year versus 37% last year. Prior to 2022 Russian export trade to China was non-existent due to such a range of factors as distances, terminal facilities, and profit margins.

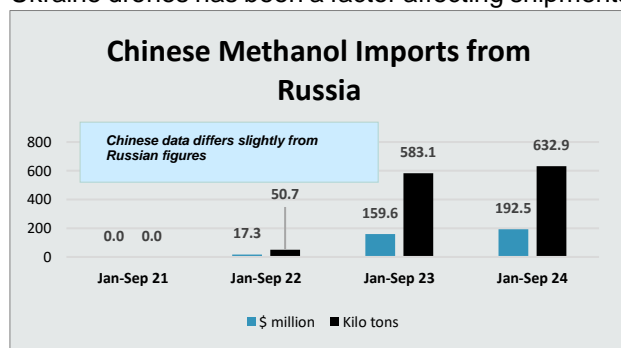
Average prices for Russian methanol exports to China in the first nine months this year dropped to \$287.6 per ton against \$298.2 per ton in January to September 2023. Prices paid by Chinese consumers for Russian methanol peaked this year in June at \$308.0 per ton in June against the lowest price in January at \$267.1 per ton. Overall, for 2023 the average price paid for Russian methanol

amounted to \$280.9 per ton. Freight costs mean that even the most furtherly eastern producer Gazprom Methanol at Tomsk is confronted with tight margins, even if there is some subsidisation from the government for export deliveries. Gazprom Methanol is faced with rail costs in the range of \$140 per ton which is obviously higher for the other Russian plants.

Russian Methanol Exports to China by Producer		
Exporter	Jan-Sep 24	Jan-Sep 23
Metafrax Chemicals	128.915	154.988
Gazprom Methanol	220.205	284.499
Tomet	62.149	66.382
Shchekinoazot	201.764	100.735
Total	613.033	606.604

All of Gazprom Methanol's exports are sent to China whilst other producers sent methanol to Belarus, Kazakhstan and Turkey. Metafrax Chemicals also sends product to the UAE.

Russian methanol exports to Belarus decreased to 74,168 tons in January to September 2024 against 96,410 tons in January to September 2023. Exports to Kazakhstan increased to 36,528 tons from 26,116 tons in the first nine months in 2023. The two Azot plants at Nevinnomyssk and Novomoskovsk, are concentrated mostly on shipments to Turkey through the ports of Kavkaz and Temyruk. However, Turkey has been receiving increased volumes from Azerbaijan this year, whilst the possibility of the Kavkaz and Temyruk ports being struck by Ukraine drones has been a factor affecting shipments. This is one of the factors explaining why exports to Turkey have dropped this year.



Prior to 2022 Russian methanol exports to China were non-existent and only started in 2022 through expediency and the need to replace European volumes. Export shipments to China may have peaked for the time being. This is due to a range of factors such as available rail cars, profit margins on methanol shipments and ultimately Chinese purchasing trends which can fluctuate.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Azot Nevinnomyssk	5.721	5.069
Azot Novomoskovsk	20.997	1.760
Metafrax Chemicals	364.366	355.357
Gazprom Methanol	247.736	227.293
Tomet	188.848	220.974
Shchekinoazot	302.843	286.954
Ammoni (Mendeleevsk)	24.451	20.334
Total	1154.962	1117.741

Russian methanol domestic sales, Jan-Sep 2024

Domestic merchant sales increased from 1.117 million tons in the first nine months last year to 1.155 million tons in the same period this year. These sales helped producers offset lower exports enabling producers to operate at reasonable levels of utilisation. Metafrax Chemicals increased domestic merchant sales to 364,366 tons in 2024 against 355,357 tons in the same period in 2023. Metafrax increased formaldehyde production in the first nine months this year to 100,180 tons against

71,096 tons in January to September 2023. Gazprom Methanol increased domestic shipments from 227,293 tons in January to September 2023 to 247,736 tons in the first nine months in 2024.

Shchekinoazot increased domestic methanol sales slightly from 286,954 tons in the first nine months in 2023 to 302,843 tons in January to September 2024. Sales for Tomet on the domestic market fell from 220,974 tons in January to September 2023 to 188,848 tons in the same period in 2024. The largest domestic consumer for Tomet is Togliattiazot where methanol is used for the production of urea-formaldehyde concentrate.

Volgograd methanol project postponed

The project to create a 1.0 million tpa methanol plant at Volgograd has been postponed. Potentially it could be revived in the event of significant political changes. The project was being planned at the former site of the Khimprom chemical plant at Volgograd, which was closed in 2014. After the exit of Western companies from the project in 2022 the AEON Group, responsible for the project, announced a new agreement on a joint project worth \$1.4 billion with a Chinese company. The project has now been postponed due to market factors, both concerning exports and domestic sales.

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Angarsk Petrochemical Company	19.256	23.281
Azot Nevinnomyssk	11.579	12.802
Gazprom Neftekhim Salavat	43.188	48.168
SIBUR-Khimprom, Perm	27.653	22.964
Total	101.676	104.154
Russian Isobutanol Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Angarsk Petrochemical Company	15.351	20.178
Gazprom Neftekhim Salavat	24.182	15.126
SIBUR-Khimprom, Perm	67.485	54.331
Total	107.018	89.635
Russian Acetone Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Ufaorgsintez	24.148	26.274
Kazanorgsintez	35.411	42.422
Novokuibyshevsk Petrochemical	17.059	22.719
Omsk Kaucuk	36.604	28.413
Total	113.222	119.828

economy.

Russian solvent production Jan-Sep 2024

Russian acetone production dropped from 119,828 tons in the first nine months in 2023 to 113,222 tons in the same period in 2024. Omsk Kaucuk produced 36,604 tons against 28,413 tons in the previous year whilst Kazanorgsintez produced 35,411 tons against 42,422 tons.

Russian Acetic Acid Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Azot Nevinnomyssk	134.226	128.693
Others	44.264	25.012
Total	178.490	158.145

Russian acetic acid production amounted to 158,158 tons in January to September 2024 against 133,477 tons in 2023. The largest producer in Russia, Azot at Nevinnomyssk, reduced production from 98,834 tons to 96,818 tons. Azot also produces methanol which makes the plant fully integrated through to solvents.

Russian Isopropanol Production (unit-kilo tons)		
Producer	Jan-Sep 24	Jan-Sep 23
Plant of Synthetic Alcohol	23.086	23.267
Omsk Kaucuk	26.151	25.524
Total	49.237	48.790

Isopropanol production in Russia amounted to 49,237 tons in the first nine months in 2024 against 48,790 tons in January to September 2023. Omsk Kaucuk increased production from 25,524 tons to 26,151 tons whilst the Plant at Synthetic Alcohol at Orsk reduced production from 23,267 tons to 23,086 tons.

Phthalic anhydride production in Russia totalled 60,028 tons in the first nine months this year against 52,508 tons in the same period in 2023. Kamteks-Khimprom at Perm is the largest producer followed by Gazprom neftekhim Salavat, and together these two plants produced 55,298 tons in the first nine months in 2024. Maleic anhydride production in Russia totalled 17,825 tons in the first nine months in 2024.

Organic chemicals

Russian butanol production Jan-Sep 2024

Russian normal butanol production fell from 104,154 tons in January to September 2023 to 101,676 tons in January to September 2024. Gazprom neftekhim Salavat was the largest Russian producer, producing 43,188 tons in the first nine months, followed by SIBUR-Khimprom with 15,390 tons. The Volga region in Russia is the largest for butanol production, including both the Salavat and Perm plants.

Isobutanol production increased from 89,635 tons in the first three quarters last year to 107,018 tons in the same period in 2024. Despite maintenance in August Gazprom neftekhim Salavat increased production to 24,182 tons against 15,126 tons in the same period in 2023, whilst SIBUR-Khimprom at Perm increased from 54,331 tons to 67,485 tons. Sales of isobutanol have been strong this year, but there are signs of lower consumption in the second half of the year in line with the slowing

Russian polyurethane raw materials

Russian aniline investments

Orgsintez at Novocheboksarsk is planning to construct a new aniline plant. The location of the new production plant on the territory of the Novocheboksarsk SEZ was chosen based on logistics and the

technological process. Aniline is used as the raw material for the production of acetanilid at the same site. Aniline is used in Russia for the production of dyes and pigments, as well as for the production of vulcanization accelerators, polyurethanes, photographic materials, medicines and pesticides.

Pigment at Tambov launched a new line for the production of monomethylaniline in November, with a capacity of 25,000 tpa. The construction of the unit began in September 2023. MMA is an octane-boosting additive that is used to increase the knock resistance of motor gasoline. Pigment calls itself one of the key manufacturers of this fuel additive in Russia.

South Korean Exports of TDI to Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	23.383	4.883
\$ million	44.491	10.394
Av Price \$/ton	1902.7	2128.4

Isocyanate/polyol imports from China into Russia

TDI imports into Russia from South Korea increased in the first nine months this year to 23,383 tons against 4,883 tons in the same period last year. TDI prices from South Korea fell from \$2128.4 per ton in January to September 2023 to \$1902.7 per ton in 2024.

Chinese Exports of TDI to Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	21.475	21.184
\$ million	42.643	55.024
Av Price \$/ton	1985.7	2597.4

TDI imports from China into Russia dropped slightly from 21,184 tons in January to September 2023 to 21,475 tons in the same period in 2024. TDI prices from China fell from \$2597.4 per ton in January to September 2023 to \$1985.7 per ton in 2024.

Chinese Exports of MDI to Russia		
	Jan-Sep 24	Jan-Sep 23
Kilo tons	68.585	95.940
\$ million	144.452	185.573
Av Price \$/ton	2102.1	1966.7

MDI costs for Chinese shipments exported to Russia dropped from \$185.573 million in the first nine months in 2023 to \$144.452 million in the same period in 2024 as volumes fell from 95,940 tons to 68,585 tons. Overall, throughout 2024 prices for MDI imports have risen gradually, starting at \$1980.8 per ton in January to \$2305.1 per ton in September.

Chinese Exports of Polyols to Russia			
	Jan-Sep 24	Jan-Sep 23	Jan-Sep 22
Kilo tons	74.733	65.365	23.568
\$ million	88.351	101.905	70.675
Av Price \$/ton	1409.8	1565.0	2353.1

Chinese polyol exports to China Jan-Jul 2024

Polyol imports into Russia from China increased slightly from 65,365 tons in the first nine months last year to 74,733 tons in this year. Import costs declined from \$101.905 million in 2023 to \$88.351 million. Average prices fell from \$1565.0 per ton to \$1409.8 per ton.

Kazakhstan-Azerbaijan

Kazakh chemical production targets 2024

Kazakhstan aims to increase petrochemical product output by 75% in 2024 over 2023, including rises in paraxylene and benzene production. An overall target production volume of 628,300 tons of petrochemical products has been set, up from 358,700 tons produced last year. From January to September, Kazakhstan refined 8.9 million tons of oil and produced 7.3 million tons of petroleum products.

The polyethylene joint venture between KPI, SIBUR and Sinopec forms the largest investment being undertaken in Kazakhstan. This project involves the production of polyethylene and a steam cracking unit producing ethylene and hydrogen. The polyethylene facilities include units for the production of LLDPE and HDPE by the gas-phase method; a unit for the production of HDPE by the suspension method and a linear alpha olefin (LAO) production unit.

Kazakh Aromatics Exports 2024		
Product	Kilo tons	\$ million
Benzene	21.137	13.775
Paraxylene	107.344	88.347

KazMunayGaz aromatics production 2024

At the Atyrau refinery benzene production for KazMunayGaz totalled 22,651 tons in the first nine months in 2024 and paraxylene totalled 107,617 tons. Exports of benzene totalled 21,137 tons in the first three quarters and paraxylene 107,344 tons.

Kazakh Exports of PP Jan-Sep 2024		
Country	Kilo tons	\$ mil
Russia	56.38	61.671
China	80.908	50.362
Turkey	18.414	14.794
Others	15.872	12.947
Total	171.574	139.774

Kazakh exports of polypropylene increased in the first three quarters to 171,574 tons against 139,774 tons in the same period in 2023. Exports to China increased from 50,362 tons last year to 80,908 tons whilst shipments to Russia dropped from 61,671 tons to 56,380 tons.

After the launch of the enterprise in 2022, the import of polypropylene homopolymer decreased from 63% to 27% in the first half of 2024. Now every second polymer product made

of polypropylene homopolymer in country is produced from KPI raw materials.

Development logistics infrastructure is another important aspect of a KPI strategy. Discovery warehouse in Almaty reduced the delivery time of products to customers in the south of the country from 10-14 days to 1-2 days. This significant improvement in logistics contributes to the stable supply of the domestic market.

SOCAR Methanol Jan-Sep 2024

SOCAR Methanol produced 387,700 tons of methanol in January-September 2024, 10.7% more than in the same period in 2023. SOCAR Methanol exported 367,096 tons of methanol in January-September which was 6.8% upon 2023. At the same time, the value of the volume of export products

Azerbaijan Methanol Market (unit-kilo tons)		
	Jan-Sep 24	Jan-Sep 23
Production	387.7	350.3
Exports	367.1	421.7
Value (\$ million)	75.3	65.7

increased by 14.6%, amounting to \$75.302 million.

In January-September 2024, Azerbaijan exported 823,499 tons of chemical products, which is 37.9% more than in the same period last year. The value of the volume of export products increased by 20.8%,

amounting to \$211.832 million. In the structure of chemical products, the export of nitrogen fertilisers for 9 months of this year amounted to 408,662 (an increase of 2.1 times) worth \$89.946 million (an increase of 1.8 times). For 2023, the total volume of exports of chemical products amounted to 938,810 tons (an increase of 0.3% compared to 2022) in the amount of \$248.222 (a decline of 35.9%).

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