

CIREC monthly NEWS

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

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Czech Republic, Hungary, Poland, Slovakia
South East Europe & Baltic States
Eurasia Russia-Ukraine-Belarus-Kazakhstan-Uzbekistan-Azerbaijan

Product coverage including supply chains from olefins and aromatics to
derivatives, organic chemicals, methanol and intermediates

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Central European petrochemical markets

- From the total of 18.537 million tons of crude imported into Poland in the first eight months in 2024, supplies from Saudi Arabia totalled 8.656 million tons and Norway 7.567 million tons
- Slovakia and Hungary remain the EU countries where Russian oil plays the dominant part in feedstock supplies
- Polish propylene rose from 216,600 tons in the first eight months last year to 274,200 tons. Propylene production is being boosted this year from the Polimery Police plant

Central European polymer and chemical trade

- Polish PP exports increased to 268,438 tons against 146,185 tons in January to August 2023. Homo polymer grades comprised the main category of Polish polypropylene exports
- Polish trade in polyethylene increased in the first eight months this year against the same period in 2023 for both imports and exports
- Imports of PVC into the Czech Republic amounted to 82,132 tons in January to August 2024 versus 81,954 tons in the same period in 2023

Russian methanol markets

- Russia produced 1.296 million tons of methanol in the first eight months in 2024 against 1.313 million tons in the same period in 2023
- Russian methanol exports amounted to 821,213 tons in January to August 2024 versus 1106,290 tons in the same period in 2023
- Russian methanol exports to China amounted to 556,851 tons in the first eight months in 2024 against 534,730 tons in the same period in 2023
- Domestic merchant sales increased in the first eight months in 2024 to 776,800 tons against 736,959 tons in the same period in 2023
- Construction activity of the Nakhodka methanol plant in the Far East is finally seeing some progress and is probably the only Russian project where there is some active development

Russian synthetic rubber production and trade

- Synthetic rubber production in Russia amounted to 718,127 tons in January to August 2024 against 721,957 tons in the same period in 2023
- The largest category of synthetic rubber production in Russia comprises SKS-SKMS which amounted to 98,582 tons in the first eight months this year
- Russian exports of synthetic rubber to China totalled \$457.930 million in the period January to August 2024 against \$370.515 million in the same period in 2023

Russian polymer production and trade

- The production of rubber and plastic products in Russia in August 2024 declined by 1.6% compared August 2023, although overall for the first eight months this year production showed a 2.7% increase from 7.176 million tons to 7.283 million tons
- Russian production of propylene polymers totalled 1.394 million tons in the first eight months in Russia against 1.467 million tons in the same period in 2023
- Kazanorgsintez is currently in the process of increasing ethylene polymer capacity by 20% up to 660,000 tpa

CENTRAL and SOUTH EAST EUROPE

Czech crude imports Jan-Aug 2024

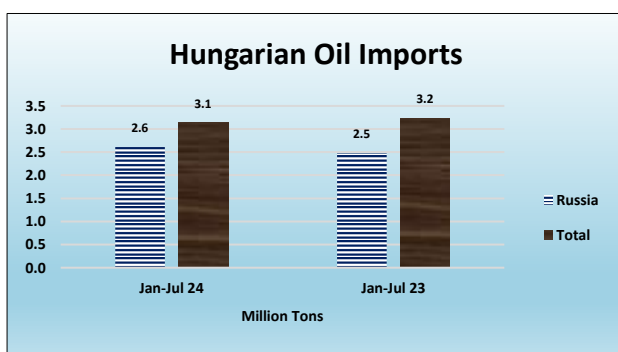
Imports of Russian crude into the Czech Republic dropped from 3.136 million tons in the first eight months in 2023 to 1.544 million tons in the same period in 2024. This means that imports from Russia accounted for 37% of total crude purchases of 4.083 million tons this year, down against 63% of the 4.912 million tons in 2023.

Country	Jan-Aug 24	Jan-Aug 23
Azerbaijan	1712.8	1247.7
Kazakhstan	665.3	346.9
Russia	1544.0	3135.8
US	0.0	181.4
Others	161.2	0.0
Total	4083.3	4911.7
Av Price	592.2	517.4

Azerbaijan has been the largest crude supplier to the Czech Republic this year, supplying 1.713 million tons in the first eight months which is up from 1.248 million tons in January to August 2023.

MOL's oil diversification is now being forced to accelerate

MOL continues its dependence on Russian crude, even slightly increasing its imports in the first seven months this year to 2.6 million tons against 2.5 million tons in 2023. This is despite Ukraine's introduction of sanctions in July against Lukoil on the delivery of crude to Hungary and Slovakia. MOL managed to circumvent the Ukrainian ban imposed on Lukoil deliveries via the Druzhba by taking oil from other intermediaries, and the problem has gone away at least for now.



Slovakia and Hungary remain the EU countries where Russian oil plays the dominant part in feedstock supplies. Poland had the foresight to start developing alternative energy resources even prior to the Russian annexation of Crimea

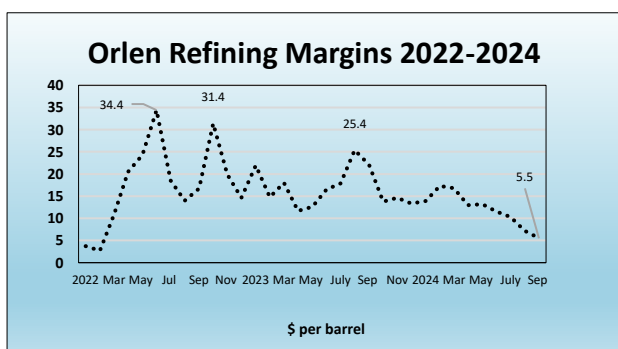
Country	Jan-Aug 24	Jan-Aug 23
Saudi Arabia	8655.5	7951.8
Lithuania	0.0	19.2
Russia	0.0	1149.8
Kazakhstan	235.1	0.0
Nigeria	772.5	1118.1
Norway	7566.5	5351.4
US	815.3	825.0
UK	473.8	705.7
Total	18,537	17,253
Av € per ton	575.0	539.7

but accelerated its investment after 2014 including terminals for LNG and crude imports.

Slovakia and Hungary are more limited due to being landlocked, but at the same time little was done in the eight years between the occupation of Crimea and the full-scale invasion in 2022. This is the argument put forward by the European Commission after both countries asked for further extensions of crude supply cut-of dates from Russia.

Polish crude imports Jan-Aug 2024

From the total of 18.537 million tons of crude imported into Poland in the first eight months in 2024, supplies from Saudi Arabia totalled 8.656 million tons followed by Norway which provided 7.567 million tons. Average prices for Polish crude purchases increased from \$539.7 per ton in the first eight months in 2023 to \$575.0 per ton this year. Margins have been in decline this year, dropping into single digits in the third quarter and ending in September at \$5.5.



BP and Orlen signed a one-year supply contract in August for 6.0 million tpa of crude oil from Norwegian fields in the North Sea. The first delivery was expected in September. This will cover about 15% of the annual demand of the entire Orlen Group for this feedstock.

Central European Olefin Production & Trade

Polish Petrochemical Production (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Ethylene	236.9	246.8
Propylene	274.2	214.6
Butadiene	38.9	39.9
Toluene	0.0	0.5
Phenol	24.8	28.2
Polyethylene	206.4	205.4
PVC	138.5	140.3
Polypropylene	216.4	183.4

Slovnaft petrochemical shutdown

Slovnaft shut down three production units at the start of October, which will be accompanied by more significant accompanying effects on the surroundings of the plant. Resumption of production units is planned for mid-November. The general revisions will relate to the extension of the service life of the ethylene unit. The autumn work will also include the modernization of the Polypropylene 3 (PP3) production unit, associated with an approximately 12% increase in the production capacity of basic plastics.

Polish petrochemical production Jan-Aug 2024

Ethylene production in Poland dropped slightly from 246,800 tons in January to August 2023 to 236,900 tons in the same period in 2024, whilst propylene rose from 216,600 tons to 274,200 tons. Propylene production is being boosted this year through the Polimery Police plant. Butadiene production at Plock dropped to 39,900 tons in the first eight months from 38,900 tons last year.

In the plastics sector polyethylene production increased to 206,400 tons in January to August 2024 versus 205,400 tons in 2023. Polypropylene production at Plock increased from 183,400 tons to 216,400 tons. PVC production fell from 140,300 tons to 138,500 tons.

Investments into Olefiny & Gdansk

Orlen is facing significant cost overruns and governance issues in its Olefiny III project, and there no obvious options on where the project goes from here. The significant budget overrun has led to a scale-back of the project's initial scope and expected efficiency. One of the aspects evaluating the entire investment is the changes in the climate of the petrochemical industry which has changed substantially since the original concept was developed under the previous management.

In addition to the Olefiny III question, Orlen is faced by unfinished plans for a new petrochemical complex at Gdansk as a joint project with Saudi Aramco. A plot of land with an area of 50 hectares, which was to be intended for the construction of a petrochemical complex, remains to be used. Orlen informs that the project has not been abandoned or suspended. However, Saudi Aramco currently appears to be showing greater interest in Asian projects rather than European investments.

Polish Imports of Propylene (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Bulgaria	1.005	12.104
Czech Republic	4.162	10.996
Germany	55.115	38.065
Hungary	0.000	1.323
Serbia	0.000	4.828
Netherlands	0.000	15.876
Others	0.216	1.244
Total	61.220	84.436
Av € per ton	849.2	923.7

Polish propylene imports, Jan-Aug 2024

Poland imported 61,220 tons of propylene in January to August this year against 84,436 tons in January to August 2023. Imports declined this year due to the availability of propylene from the new Polimery Police plant. This has even allowed a surplus of over 11,000 tons to be exported. Average import prices dropped from €923.7 per ton to €849.2 this year. Germany was the main supplier to Poland, shipping 55,115 tons against 38,065 tons in the first eight months last year.

Propylene consumption in Poland amounted to 256,000 tons in the first eight months in 2024 against 226,100 tons in the same period last year.

Polish Butadiene Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Austria	25.029	18.788
Germany	16.500	11.178
Hungary	24.816	15.961
Others	0.953	1.895
Total	66.390	48.731
Av € per ton	976.1	972.8

Polish butadiene imports, Jan-Aug 2024

Butadiene import prices for Poland rose slightly from €972.8 per ton on average in January to August 2023 to €976.1 in January to August this year, with volumes rising from 48,731 tons to 66,390 tons. Hungary was the largest supplier, shipping 24,816 tons in the first eight months to Poland against 15,961 tons in 2023.

Hungarian Propylene Exports (unit-kilo tons)		
	Jan-Jul 24	Jan-Jul 23
Total	62.718	51.430
Av € per ton	1045.5	1113.6

Hungarian Butadiene Exports (unit-kilo tons)		
	Jan-Jul 24	Jan-Jul 23
Total	36.011	28.808
Av € per ton	826.5	876.0

same period in 2023. Shipments into Poland totalled 20,703 tons in January to July against 14,913 tons last year whilst exports to Germany rose from 1,995 tons to 8,211 tons. Average prices for Hungarian butadiene exports fell to €826.5 per ton versus €876.0 in 2023.

Czech Olefin Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Ethylene	3.080	25.918
Propylene	31.747	26.269
Butadiene	31.161	49.073

Czech Olefin Exports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Ethylene	11.637	7.920
Propylene	5.393	14.971

Czech Imports of Propylene (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Germany	23.144	15.987
Bulgaria	0.000	2.712
Poland	8.595	0.000
Romania	0.000	1.048
Others	0.008	7.485
Total	31.747	26,269
Av price per ton	863.6	951.0

Hungarian styrene imports (unit-kilo tons)		
	Jan-Jul 24	Jan-Jul 23
Total	33.466	37.460
Av € per ton	1435.7	1461.1

Czech Styrene Imports		
	Jan-Aug 24	Jan-Aug 23
Kilo tons	11.406	23.551
Av price per ton	1284.2	1064.8

Polish Styrene Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Belgium	16.274	4.081
Czech Republic	7.030	6.229
Finland	0.309	0.662
Netherlands	21.283	21.930
Germany	7.697	8.865
Saudi Arabia	7.707	0.000
Others	4.239	4.884
Total	64.537	46.651
Av € per ton	1390.3	1099.5

Hungarian propylene & butadiene imports, Jan-Jul 2024

Exports of propylene from Hungary amounted to 62,718 tons in January to July this year against 51,430 tons in January to July 2023, most of which went to Slovakia. Prices averaged €1045.5 per ton in the first seven months against €1113.6 per ton last year.

Hungarian butadiene exports amounted to 36,011 tons in the first seven months against 28,808 tons in the same period in 2023. Shipments into Poland totalled 20,703 tons in January to July against 14,913 tons last year whilst exports to Germany rose from 1,995 tons to 8,211 tons. Average prices for Hungarian butadiene exports fell to €826.5 per ton versus €876.0 in 2023.

Czech olefin monomer trade, Jan-Aug 2024

Czech imports of ethylene amounted to 3,080 tons in the first eight months in 2024, against 25,918 tons in the same period in 2023. Imports of propylene increased from 26,269 tons to 31,747 tons, with Germany increasing shipments from 15,987 tons to 23,144 tons. Poland was the second largest supplier of propylene to the Czech market, amounting to 8,595 tons.

Czech exports of ethylene increased in the first eight months to 11,637 tons against 7,920 tons in the same period in 2023. Propylene exports from the Czech Republic amounted to 5,393 tons in the first eight months in 2024 against 14,791 tons in 2023.

Imports of propylene into the Czech Republic dropped from 21,903 tons in January to August 2023 to 18,719 tons, with Germany providing nearly all shipments this year. Czech imports of butadiene dropped to 22,186 tons in January to August 2024 against 43,359 tons in the same period last year. Butadiene prices dropped dropping from €877.4 per ton to €810.6 per ton.

Central European styrene imports Jan-Aug 2024

Styrene imports into Hungary amounted to 33,466 tons in the first seven months this year against 37,460 tons in the same period in 2023. Italy remains the dominant source of styrene imports into Hungary, supplied by Versalis to its polystyrene plant at Szazhalombatta.

Styrene imports into the Czech Republic dropped from 23,551 tons in the first eight months to 11,406 tons in the same period in 2024. At the same time as imports were falling, exports of styrene from the Czech Republic increased from 5,050 tons last year to 6,193 tons.

Synthos imported 64,537 tons of styrene into Poland in January to August 2024 against 46,651 tons in January to August 2023. The Netherlands was the largest supplier shipping 21,283 tons against 21,930 tons in January to August 2023. Saudi Arabia supplied 7,707 tons in the first eight months in 2024, the first time that styrene had been sold into Poland.

Central European Polyolefin Trade

Czech Polyethylene Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
LDPE	74.365	70.131
LLDPE	14.909	16.358
HDPE	81.787	78.808
EVA	7.573	7.237
Other	28.727	29.178
Total	207.361	201.713
Av € per ton	1479.6	1609.0

Czech polyethylene trade Jan-Aug 2024

Czech prices for both imports and exports of polyolefins have trended lower in the first eight months in 2024 against the corresponding period in 2023, but at the same time trade has increased slightly by volume.

For imports of all forms of polyethylene, Czech inward shipments amounted to 207,361 tons in January to August 2024 against 201,713 tons in the same period in 2023, with prices dropping from €1609.0 per ton to €1479.6 per ton. Germany was the largest source of

polyethylene imports, followed by the Netherlands and Belgium.

Czech Polyethylene Exports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
LDPE	24.700	16.921
LLDPE	2.851	2.280
HDPE	225.452	245.707
EVA	2.684	2.202
Other	9.595	16.952
Total	265.282	284.062
Av € per ton	1390.9	1293.3

Polyethylene exports from the Czech Republic amounted to 265,282 tons in the first eight months this year against 284,062 tons in 2023. Average prices increased from €1390.9 per ton in 2023 to €1293.3 per ton in 2024.

HDPE export shipments comprised 245,707 tons in the first eight months in 2024 against 225,452 tons in the same period in 2023. Germany was the largest destination for Czech HDPE supplied from Litvinov. Other important markets for Czech polyethylene

exports include Poland, Italy and Belgium.

Polish PE Supply/Demand Balance (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Production	206.4	205.4
Exports	230.5	203.3
Imports	942.0	802.2
Market Balance	917.9	804.3

Polish polyethylene trade Jan-Aug 2024

Polish total foreign trade in polyethylene increased in the first eight months this year against the same period in 2023 for both imports and exports. Overall Poland carries a large deficit in polyethylene supply, which is one of the contributory factors for Orlen's Olefiny III project at Plock. This project is currently under construction but due to rising costs is now under review.

Polish PE imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
LDPE	246.484	217.441
LLDPE	149.449	134.189
HDPE	299.573	277.503
EVA	13.646	9.647
EA0	176.570	130.043
Others	56.253	33.394
Total	941.975	802.217
Av € per ton	1277.4	1393.6

Despite the negative outlook for the European market, polyethylene trade volumes in Poland this year indicate signs of underlying domestic market improvement. Consumption of polyethylene increased in the first eight months in 2024 to 917,900 tons against 804,300 tons in the same period in 2023.

Polish imports of polyethylene totalled 941,975 tons in the first eight months in 2024 against 802,217 tons in the same period in 2023, with average prices falling from €1393.6 per ton to €1277.4 per ton.

HDPE is the largest category of imported polyethylene into Poland, amounting to 299,573 tons in January to August 2024 versus 277,503 tons in January to August 2023. Germany is the largest supplier of HDPE to the Polish market.

LLDPE imports rose from 134,189 tons in January to August 2023 to 149,449 tons in the corresponding period in 2024. Most of the LLDPE imports were sourced mostly from West Europe, including France, the Netherlands and Germany. LDPE imports increased to 246,484 tons versus 217,441 tons last year.

Polish PE Exports (unit-kilo tons)		
Product Group	Jan-Aug 24	Jan-Aug 23
LDPE	42.533	35.425
LLDPE	16.506	11.635
HDPE	144.874	140.101
EVA	3.127	8.267
EAO	18.509	4.114
Other	4.952	3.765
Total	230.502	203.307
€ per ton	1297.3	1113.3

Polish polyethylene exports amounted to 230,502 tons in the first eight months in 2024 against 203,307 tons in the same period in 2023. Average prices for polyethylene exports from Poland increased to €1297.3 per ton against an average of €1113.3 per ton in the period January to August 2023.

Exports of HDPE from Poland amounted to 144,874 tons versus 140,101 tons in the same period in 2023 whilst LDPE exports rose from 35,425 tons to 42,533 tons. Exports of ethylene alpha olefins amounted to 18,509 tons in the first eight months in 2024.

Hungarian polyethylene trade Jan-Jul 2024

Hungarian Polyethylene Exports (unit-kilo tons)		
Product	Jan-Jul 24	Jan-Jul 23
LLDPE	2.922	3.752
LDPE	46.407	54.184
HDPE	132.691	134.720
Total	191.154	200.053
Av € per ton	1238.3	1278.0

Hungarian polyethylene exports amounted to 191,154 tons in January to July this year against 200,053 tons in January to July 2023, whilst average prices dropped from €1278.0 per ton to €1238.3 per ton. Revenues for polyethylene exports in January to July dropped from €255.670 million last year to €236.708 million.

In terms of category HDPE exports dropped from 134,720 tons in January to July last year to 132,691 tons whilst

LDPE exports dropped from 54,184 tons to 46,407 tons.

Hungarian Polyethylene Imports (unit-kilo tons)		
Product	Jan-Jul 24	Jan-Jul 23
LLDPE	18.538	14.090
LDPE	25.245	26.765
HDPE	56.022	51.477
EAO	8.461	5.560
EVA	3.925	2.307
Other	18.223	16.182
Total	130.414	116.382
Av € per ton	1533.7	1697.3

Hungary remains a net exporter of LDPE and HDPE, whilst continues to be a net importer of LLDPE and ethylene copolymers. Imports of all grades of polyethylene into Hungary amounted to 130,414 tons in January to July this year against 116,382 tons in January to July 2023.

Hungarian import prices for polyethylene decreased on average from €1697.3 per ton to €1533.7 in January to July this year. The largest category of polyethylene imports comprised HDPE, which rose from 51,477 tons to 56,022 tons.

Polish PP Supply/Demand Balance (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Production	216.4	183.4
Exports	268.4	146.2
Imports	638.2	597.3
Market Balance	586.1	634.6

Polish PP Trade Jan-Aug 2024

In contrast polyethylene market improvement this year, polypropylene consumption in Poland has been lower this year dropping from 634,600 tons in 2023 to 586,100 tons.

Polish polypropylene imports, including homo grade and copolymers, increased in the first eight months to 638,167 tons against 597,339 tons in the same period in 2023. The market has been expected to receive a boost from the introduction of the Polimery Police plant, increasing the domestic availability of a range of propylene polymers. However there have been some technical issues at the plant which are restricting production.

Polish Polypropylene Imports (unit-kilo tons)		
Category	Jan-Aug 24	Jan-Aug 23
PP homo	403.219	387.239
Polyisobutylene	2.059	1.726
Propylene copolymers	215.102	194.410
Other	17.787	13.964
Total	638.167	597.339
Av € per ton	1340.9	1473.3

Average prices for all types of polypropylene decreased from €1473.3 per ton to €1340.9 per ton. Homo grade polypropylene imports increased from 387,239 tons in January to August last year to 403,219 tons in 2024, whilst copolymer imports increased from

194,410 tons to 215,102 tons. Total import costs of propylene polymers amounted to €882.123 million against €880.023 million in the same eight months in 2023.

Polish Polypropylene Exports (unit-kilo tons)

Category	Jan-Aug 24	Jan-Aug 23
PP homo	197.940	94.848
Polyisobutylene	0.960	0.462
Propylene copolymers	63.507	48.461
Other	6.029	2.413
Total	268.438	146.185
Av € per ton	1299.9	1468.7

Regarding export activity from Poland, shipments increased to 268,438 tons against 146,185 tons in January to August 2023. Homo polymer grades comprised the main category of Polish polypropylene exports, where Germany was the largest destination.

Exports of homo polymer grade more than doubled from 94,848 tons in the first eight months in 2023 against 197,940 tons in the same period this year, mainly due to the start-up of the Polimery Police plant. This plant is

not fully operational yet, but its limited operation has already helped to affect the ratio between imports and exports. For every ton exported in 2023 imports amounted to 4.1 tons whilst this ratio dropped to 2.3 tons in 2024 up to the end of August. When fully operational Polimery Police's target portfolio includes over 30 types of propylene polymers under the Gryfilen brand. Polimery Police suffered a safety issue in October which was resolved without interrupting production. The plant has yet to be signed off fully from Hyundai (the contractor) to the client (Grupa Azoty Polyolefins).

Hungarian Polypropylene Imports (unit-kilo tons)

Product	Jan-Jul 24	Jan-Jul 23
PP homo	82.565	67.621
Propylene copolymers	31.910	30.221
Others	12.192	13.688
Total	126.667	111.530
Total	190.995	181.685
Av € per ton	1507.9	1629.0

Hungarian polypropylene trade Jan-Jul 2024

Exports of all forms of polypropylene from Hungary amounted to 139,800 tons in January to July this year versus 146,970 tons in the corresponding period in 2023, with average prices rising from €1295.5 per ton to €1348.9. Homo-grade PP provides the main category of Hungarian polypropylene exports, amounting to 76,931 tons in the first seven months this year versus 74,891 tons in 2023.

Hungarian Polypropylene Exports (unit-kilo tons)

Product	Jan-Jul 24	Jan-Jul 23
PP homo	76.931	74.891
Propylene copolymers	49.490	64.342
Others	13.378	7.738
Total	139.800	146.970
Total	188.574	190.406
Av € per ton	1348.9	1295.5

For imports of all forms of polypropylene, Hungarian inward shipments increased to 126,667 tons in January to July 2024 from 111,530 tons in 2023, with average prices dropping from €1629.0 per ton to €1507.9 per ton. Imports of propylene copolymers increased slightly from 30,221 tons to 31,910 tons whilst homo grade polypropylene imports increased from 67,521 tons to 82,565 tons.

Czech Polypropylene Exports (unit-kilo tons)

Product	Jan-Aug 24	Jan-Aug 23
PP Homo	157.040	144.441
Propylene Copolymers	31.922	31.526
Other	4.117	3.973
Total	193.078	179.940
Av € per ton	1314.6	1530.7

Czech polypropylene imports (unit-kilo tons)

Product	Jan-Aug 24	Jan-Aug 23
PP Homo	192.389	198.635
Propylene Copolymers	144.305	143.443
Other	12.982	9.679
Total	349.676	351.757
Av € per ton	1577.1	1616.0

Czech polypropylene trade Jan-Aug 2024

Exports of all forms of polypropylene from the Czech Republic amounted to 193,078 tons in January to August this year versus 179,940 tons in the same period in 2023, with average prices dropping from €1530.7 per ton to €1314.6.

Homo-grade PP provides the main category of Czech polypropylene exports, amounting to 157,040 tons in the first eight months this year versus 144,441 tons in 2023.

For imports of all forms of polypropylene, Czech inward shipments amounted to 349,676 tons in January to August 2024 from 351,757 tons in 2023, with average prices dropping from €1616.0 per ton to €1577.1 per ton. Imports of propylene copolymers increased

slightly from 143,443 tons to 144,305 tons whilst homo grade polypropylene imports dropped from 198,635 tons to 192,389 tons.

Central European PVC Trade

Czech PVC Exports		
	Jan-Aug 24	Jan-Aug 23
Vol ktons	51.546	45.705
Value € mil	52.986	53.872

Czech PVC trade Jan-Aug 2024

Czech exports of PVC amounted to 51,546 tons in January to August against 45,705 tons in the same period in 2023. Due to the lower average prices this year export revenues dropped from €53.872 million to €52.986 million. Italy was the largest destination for Czech

exports this year, shipping 13,087 tons in the first eight months. At the same EDC imports rose from 11,191 tons in the first eight months in 2023 to 14,164 tons in 2024, nearly all of which was used by the sole producer of PVC in the Czech Republic Spolana at Neratovice.

Czech PVC Imports		
	Jan-Aug 24	Jan-Aug 23
Vol ktons	82,132	81.954
Value € mil	90.459	110.901

Imports of PVC into the Czech Republic amounted to 82,132 tons in January to August 2024 versus 81,954 tons in the same period in 2023, with import costs dropping from €110.901 million to €90.459 million. Most of the imports into the Czech Republic are sourced from within Europe, with the largest suppliers including Germany,

Hungary and Poland. Germany supplied 26,429 tons in the first eight months this year for €33.900 million.

Polish PVC Production & Trade Balance (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Production	138.5	140.3
Exports	84.28	106.776
Imports	310.569	295.843
Market Balance	364.789	329.367

Polish PVC trade Jan-Aug 2024

PVC demand dropped significantly in 2023 with consumption in all grades dropping by 27% against 2022 but has seen some slight recovery this year. For the first eight months in 2024 PVC consumption amounted to around 365,000 tons against 330,000 tons last year.

PVC production fell in January to August 2024 to 138,500 tons versus 140,300 tons in January to August 2023. After August last year production at Wloclawek was stopped due to weak markets and extended cracker downtime at Plock placed limits on Anwil's production. PVC production is undertaken by Anwil of the Orlen Group.

Polish PVC Exports		
	Jan-Aug 24	Jan-Aug 23
Vol ktons	84.280	106.776
Value € mil	53.653	89.751

This impacted on export activity where shipments dropped from 151,306 tons in the first eleven months in 2022 to 111,398 tons in 2023. This year exports amounted to 84,280 tons in the first eight months against 106,776 tons in the same period last year, with revenues dropping from €89.751 million to €53.653 million. Germany was the largest destination for PVC exports from Poland.

Polish PVC Imports		
	Jan-Aug 24	Jan-Aug 23
Vol ktons	310.569	295.843
Value € mil	352.775	416.517

Hungarian PVC trade Jan-Jul 2024

Hungarian PVC exports declined slightly by volume from 151,132 tons in the first eight months in 2023 to 150,228 tons in the same period in 2024, whilst export revenues dropped from €152.988 million to €126.994 million.

Hungarian PVC Exports		
	Jan-Aug 24	Jan-Aug 23
Vol ktons	150.228	151.132
Value € mil	126.994	152.988

Due to lower feedstock costs combined with lower demand PVC prices dropped from €1040.1 per ton in 2023 to €845.6 in 2024. The largest destination for Hungarian PVC exports

is Poland, taking 31,889 tons in January to July 2024 for revenues of €29.638 million. PVC production is undertaken by BorsodChem.

Regarding import activity, Hungarian inward shipments of PVC amounted to 21,873 tons in Jan-Jul 2024 versus 20,965 tons in the same period in 2022. As Hungary imports higher cost plasticized grades costs are higher than for suspension grade and averaged €1935.8 per ton against €2777.1 per ton in 2023.

Central European Rubber Markets

Czech Rubber Trade (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Exports synthetic rubber	91.521	102.313
Imports synthetic rubber	90.281	82.567
Imports natural rubber	61.468	54.056

Czech synthetic rubber trade Jan-Aug 2024

Exports of synthetic rubber amounted to 91,521 tons in January to August 2024 versus 102,313 tons in the same eight-month period in 2023. At the same time imports increased from 82,567 tons to 90,281 tons in January to August 2023.

Czech butadiene rubber exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
France	2.678	2.675
Germany	4.619	0.000
Hungary	5.271	5.214
India	12.797	8.994
Italy	3.349	0.000
Poland	7.725	10.151
Romania	5.396	0.000
Serbia	4.229	2.144
Slovakia	4.454	8.798
South Korea	4.758	9.985
Spain	3.800	0.000
Turkey	5.872	2.904
US	0.179	0.857
Others	9.593	26.961
Total	74.721	78.684
Revenues €	126.206	136.078
Av € per ton	1692.0	1732.2

Czech butadiene rubber trade Jan-Aug 2024

The Czech Republic exported 74,721 tons of butadiene rubber in the first eight months in 2024 against 78,684 tons in the same period in 2023. Average prices rose from €1732.2 per ton to €1692.0 per ton.

Czech exports of butadiene rubber to India amounted to 12,787 tons in January to August 2024 against 8,994 tons last year. Other important markets included Poland where exports amounted to 7,725 tons against 10,151 tons. Besides exports the Czech Republic also imported 19,874 tons of butadiene rubber in the first eight months in 2024. Imports were sourced largely from Germany and the US.

Hungarian synthetic rubber trade Jan-Jul 2024

Hungarian imports of synthetic rubber amounted to 62,050 tons in January to July against 80,459 tons in January to July last year. Average prices increased from €2267.0 per ton to €2468.8 in 2024. Butadiene rubber imports into Hungary dropped from 30,108 tons to 14,805 tons, with the largest source coming from Indonesia. SBR imports rose from 29,659 tons to 32,974 tons. Synthetic rubber exports from Hungary amounted to 35,306 tons in the first seven months of this year of which SBR grades accounted for 30,385 tons.

Hungarian synthetic rubber Imports (unit-kilo tons)		
Product	Jan-Jul 24	Jan-Jul 23
Butadiene Rubber	14.805	30.108
SBR	32.974	29.659
Other	14.274	20.693
Total	62.050	80.459
Revenues € mil	153.188	182.400
Av € per ton	2468.8	2267.0

Synthetic rubber prices Jan-Aug 2024

SBR prices in Europe remained stable over the third quarter with little change. Butadiene prices have stayed relatively low despite supply tightness, whilst demand is making tentative signs of improvement. Butyl rubber prices experienced an increase in both the US and European markets, primarily driven by heightened demand from the downstream automotive sectors. In contrast, the construction sector saw a declining

trend.

Central European Synthetic Rubber Prices (€ per ton)		
Country	Jan-Aug 24	Jan-Aug 23
Czech Export	1692.0	1732.2
Polish Import	1,831.1	2,216.9
Polish Export	1628.1	1620.6
Hungarian Import	2468.8	2267.0

For all types of synthetic rubber imports into Poland average prices dropped from €2216.9 in January to August 2023 to €1831.1 in the first eight months in 2024. Hungarian import prices rose from €2267.0 per ton to €2468.8 per ton, which is higher than elsewhere in Central Europe. This is determined predominantly by the higher value grades imported into Hungary.

Polish rubber trade Jan-Aug 2024

Poland imported a total of 225,605 tons of synthetic rubber in January to August 2024 against 178,489 tons in the same period in 2023. By category, butadiene rubber was the largest product, accounting for 57,631 tons against 37,579 tons in the same period in 2023. Isoprene rubber imports jumped from 9,189 tons in the first eight months last year to 34,132 tons in the same period in 2024. The largest

suppliers of all grades of synthetic rubber in the first eight months in 2024 included Germany, Belgium and Saudi Arabia.

Polish Synthetic Rubber Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
ESBR	23.103	15.127
Block SBR	30.934	24.186
S-SBR	22.033	14.745
Butadiene Rubber	57.631	37.579
Butyl Rubber	2.686	3.287
HBR	5.794	6.787
NBR	7.145	4.416
Isoprene Rubber	34.132	9.189
EPDM	29.097	28.756
Others	13.048	34.416
Total	225.605	178.489
Av € per ton	1,831.1	2,216.9

Imports of halogenated butyl rubber (HBR) into Poland dropped from 6,787 tons in the first eight months in 2023 to 5,794 tons in the same period in 2024. The largest supplier this year has been Belgium followed by the UK. Although Russia has been able to sell HBR into the EU area until June this year, Nizhnekamskneftekhim started reducing shipments to the European market from late 2022 and supplied only 60 tons prior to the June deadline. Nizhnekamskneftekhim has focused predominantly on trade with China in the past two years.

Natural rubber imports into Poland totalled 80,534 tons in the first eight months this year at an average price of €1690 per ton. Natural rubber accounts for around a third of total rubber consumption in Poland.

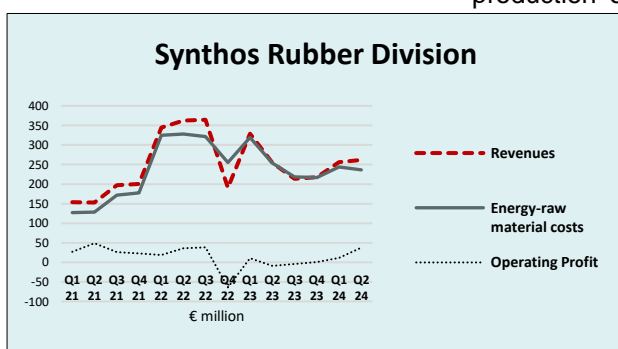
Polish Exports of Synthetic Rubber (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
SBR	143.316	120.442
Butadiene Rubber	54.639	30.720
Isoprene Rubber	30.695	6.861
Others	13.797	23.752
Total	242.446	181.774
Av € per ton	1628.1	1620.6

Synthetic rubber exports from Poland amounted to 242,446 tons in the first eight months in 2024 against 181,774 tons in January to August 2023. Exports of butadiene rubber from Poland amounted to 54,639 tons in January to August versus 30,720 tons in the same period in 2023. The largest category of rubber exports focuses on SBR grades. Prices of synthetic rubber exports from Poland increased from €1620.6 per ton in the first eight months last year to €1628.1 per ton this year. Although both import and export volumes for synthetic rubber have been very similar this year, the prices for imported grades mostly exceed export prices. The trend for all forms of trade have been downward since the start of 2023.

Synthos Production (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Polystyrene	42.0	48.1
EPS	54.1	62.8
Synthetic Rubber	172.4	126.8

Polish synthetic rubber production and domestic market Jan-Aug 2024

Synthetic rubber production at Oswiecim for Synthos amounted to 172,400 tons in January to August 2024 against 126,800 tons in 2023. Synthos has managed to diversify its export markets which has allowed the company to increase production over 2023. At the same time the production of synthetic rubber has been affected by demand side factors which saw a reduction of consumption in 2023 and the first half in 2024.



The rubber division of Synthos saw revenues exceed energy and raw material costs in the first half of 2024, with operating profits achieving the highest amount in the second quarter since 2022. Revenues for Synthos have been boosted by an increase in exports this year rather than domestic sales.

In each of the first eight months in 2024 the production of rubber products in Poland was lower than in the corresponding month in 2023. The amount of rubber, including natural and synthetic, used in the production of tyres in the first eight months in 2024 totalled 290,544 tons against 324,680 tons in the same period last year. Consumption fell in all of the four tyre groups, including cars, lorries, tractors and agricultural vehicles.

Central European aromatics and derivatives

Polish Aromatic Exports (unit-kilo tons)

Product	Jan-Aug 24	Jan-Aug 23
Benzene	116.671	102.490
Bisphenol A	2.083	6.773
P Anhydride	3.483	2.441
PTA	211.067	115.284
Styrene	1.184	0.065
TDI	3.471	3.249
Toluene	1.209	2.605

Polish benzene exports Jan-Aug 2024

Polish exports of benzene totalled 116,671 tons in January to August 2024 against 102,490 tons in the same period in 2023. Exports to Germany increased in the first eight months from 73,252 tons last year to 91,788 tons, with average prices rising slightly from 847.3 per ton to €1109.3 per ton. Benzene exports from Poland stem largely from Petrochemia Blachownia at Kedzierzyn-Kozle.

Polish aromatic imports Jan-Aug 2024

Phenol imports into Poland amounted to 73,366 tons in January to August 2024 which was up from 51,676 tons in 2023. Germany was the dominant supplier of phenol to Poland, shipping 54,713 tons against 37,155 tons in the same period in 2023. Average prices for phenol imported into Poland rose slightly in the first eight months to €1305.2 per ton measured against €1204.8 per ton last year.

Increased phenol imports offset the drop in phenol production at Plock in the first eight months in 2024 to 21,253 tons versus 24,668 tons in the same period in 2023. Overall phenol consumption increased in the first eight months to 94,619 tons against 76,344 tons.

Polish Aromatic Imports (unit-kilo tons)

Product	Jan-Aug 24	Jan-Aug 23
Adipic Acid	9.586	7.372
Bisphenol A	5.655	12.488
Caprolactam	8.410	7.344
Ethylbenzene	64,884	73.393
Paraxylene	30,227	0.000
Phenol	73.366	51.676
Phthalic Anhydride	26,820	20.705
PTA	10.604	4.089
Styrene	64,537	46.551
TDI	50.540	43.870
Toluene	15.282	15.745

Polish Phenol Supply/Demand Balance (unit-kilo tons)

	Jan-Aug 24	Jan-Aug 23
Production	21.253	24.668
Exports	0.000	0.000
Imports	73.366	51.676
Market Balance	94.619	76.344

In other product areas, styrene imports amounted to 64,537 tons in the period January to August 2024 against 46,651 tons in the same period in 2023. Ethylbenzene imports amounted to 64,884 tons against 73,393 tons in the same period last year. All the ethylbenzene was shipped from Kralupy to Oswiecim, all within the structures of the Synthos Group.

period in 2024. Caprolactam production remains idle at Pulawy, operated by Grupa Azoty, although the Tarnow plant is working. The PA6 product chain remains under pressure although logistical constraints caused by attacks in Red Sea resulted in a greater demand for the use of products from Europe.

Caprolactam imports into Poland amounted to 8,410 tons in the first eight months this year versus 7,344 tons in the same period in 2023. Caprolactam production remains idle at Pulawy, operated by Grupa Azoty, although the Tarnow plant is working. The PA6 product chain remains under pressure although logistical constraints caused by attacks in Red Sea resulted in a greater demand for the use of products from Europe.

Polish Exports of PTA (unit-kilo tons)

Producer	Jan-Aug 24	Jan-Aug 23
Belarus	0.000	1.322
Belgium	1.743	0.240
France	2.508	4.064
Germany	203.460	122.941
Lithuania	15.352	1.618
Switzerland	0.000	4.181
Turkey	7.587	6.660
Others	18.801	12.333
Total	249.451	153.358
Av Price €	763.1	852.0

In the first eight months Poland imported over 30,000 tons of paraxylene. France supplied 12,366 tons and the Netherlands 17,861 tons.

Polish PTA exports Jan-Aug 2024

PTA exports increased sharply in the first eight months from 153,358 tons last year to 249,451 tons in the same period in 2024. Exports to Germany increased from 122,941 tons to 203,460 tons. Average prices for PTA changed from €852.0 per ton in the first eight months in 2023 to €763.1 per ton.

Revenues from PTA sales for Orlen, including export or domestic, amounted to €103.5 million in the first half of 2024 against €101.2 million in the same period last year. By volume sales rose from 200,000 tons in January to June 2023 to 276,000 tons in January to June 2024. Exports accounted for 57.5% of total sales.

Czech Aromatic Exports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Aniline	68.161	47.514
Benzene	5.276	15.197
Toluene	6.935	7.360
Ethylbenzene	59.905	85.798
Styrene	8.655	7.938
Caprolactam	16.085	14.566
P Anhydride	5.677	6.317
Czech Aromatic Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Benzene	33.495	19.366
Toluene	3.765	4.682
Styrene	11.768	24.673
Bisphenol A	21.477	18.951

Czech aromatic trade Jan-Aug 2024

Regarding Czech trade in aromatic monomers and derivatives, styrene exports from Kralupy amounted to 8,655 tons against 7,398 tons in January to August 2023. At the same time imports of styrene dropped from 24,673 tons to 11,768 tons. Styrene prices increased from €1064.8 per ton to €1284.2 this year.

Benzene imports into the Czech Republic increased in the first eight months in 2024 to 33,495 tons against 19,366 tons in January to August 2023, whilst toluene imports dropped from 4,682 tons to 3,765 tons. Benzene imports are sourced from Poland, Hungary and Serbia. Czech benzene exports decreased to 5,276 tons in January to August 2024 against 15,197 tons in the same period in 2023, whilst toluene exports dropped from 7,360 tons to 6,935 tons. Imports of bisphenol A rose from 18,951 tons to 21,477 tons.

Aniline exports amounted to 68,161 tons in the first eight months in 2024, of which 58,876 tons were shipped to Hungary. This represented an increase against 42,822 tons in January to August 2023 from the total of 42,718 tons. All of the aniline shipped from the Czech Republic is produced at Ostrava by BorsodChem-MCHZ, and most of the exports are shipped to BorsodChem in Hungary.

Czech caprolactam exports increased from 14,566 tons to 16,085 tons, with prices rising from €1507.0 per ton to €2035.2 in 2024. Italy was the largest destination for Czech caprolactam exports, amounting to 7,438 tons. Other end destinations included Slovenia, taking 3,413 tons in the first eight months in 2023. The Czech Republic exported 5,667 tons of phthalic anhydride in the first eight months in 2024 for €7.342 million. This compares against 6,137 tons in January to August 2023 for €9.176 million. Phthalic anhydride is supplied by the Czech Republic from the Deza plant at Valasske Mezirici.

Czech Bisphenol A Imports		
Product	Jan-Aug 24	Jan-Aug 23
Total Ktons	21.477	18.951
Av Price per ton	1356.3	1516.0
Czech Epoxy Resin Exports		
Product	Jan-Aug 24	Jan-Aug 23
Total Ktons	33.750	29.068
Av Price per ton	2527.2	3325.7

Czech Bisphenol A imports & epoxy resin exports

Bisphenol A imports into the Czech Republic totalled 21,477 tons in January to August 2024 against 18,951 tons in the same period in 2023. South Korea increased shipments from 7,958 tons to 16,658 tons. The largest user of bisphenol A in the Czech Republic is Spolchemie at Ust nad Labem, where epoxy resins are produced.

Czech exports of epoxy resins amounted to 33,750 tons in the first eight months in 2024 against 29,068 tons in 2023. Prices fell sharply from €3,325.7 per ton to €2527.2 per ton this year. Germany remains the largest market for Czech epoxy resins, accounting for 12,417 tons in the first eight months in 2024 which was down from 12,873 tons in 2023. Spolchemie's capacity for epoxy resin production amounts to 100,000 tpa.

Hungarian Benzene Exports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Czech Republic	3.259	11.900
Germany	5.935	1.995
Poland	15.352	14.913
Others	6.310	0.000
Total	30.856	28.808
Av € per ton	753.7	876.0

Hungarian aromatic trade Jan-Jul 2024

Hungarian benzene exports amounted to 30,856 tons in January to July against 28,808 tons last year. Exports of €8.832 million. Exports dropped from 30,702 tons in the first seven months last year, with shipments to the Czech Republic dropping from 11,900 tons to 3,259 tons and shipments to Poland rising from 14,913 tons to 15,352 tons.

Toluene imports into Hungary amounted to 24,484 tons in January to July this year for costs of €26.520 million. This increased from 20,418 tons in the first seven months in 2023 for costs of €22.676 million.

Central European isocyanates & polyols

Hungarian TDI Exports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Austria	1.858	1.762
Belgium	24.209	20.534
Germany	6.849	6.068
Italy	19.282	17.146
Poland	17.026	15.476
Portugal	4.290	6.562
Romania	7.804	8.118
Spain	6.381	6.752
Turkey	23.959	19.267
Others	42.547	38.000
Total	154.205	139.685
Av € per ton	1958.8	2750.9

Hungarian TDI-MDI exports Jan-Jul 2024

Hungarian TDI exports rose in January to July to 154,205 tons against 139,685 tons in January to July 2023. Average prices dropped from €2750.9 per ton to €1958.8 per ton. Multiple factors have influenced the decline in prices thus year such as polyurethane demand and feedstock costs.

Exports of TDI from Hungary to Belgium rose from 20,534 tons in the first seven months last year to 16,865 tons in January to July, whilst volumes to Italy increased from 17,146 tons to 19,282 tons. In Central Europe shipments to Poland increased from 15,476 tons to 17,026 tons and rose to Turkey from 19,267 tons to 23,959 tons. Shipments to Romania dropped from 8,118 tons to 7,804 tons.

MDI exports from Hungary amounted in January to July to 137,724 tons against 91,725 tons in January to July last year. MDI export prices have undergone a different cycle to TDI in the past two years but have reached similar levels standing at €1930.6 per ton in 2024 against €1958.8 for TDI.

Hungarian MDI Exports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Belgium	10.353	5.972
Czech Republic	5.951	3.880
Germany	14.697	10.543
Algeria	2.774	0.709
Italy	7.220	5.707
France	5.099	5.838
Spain	2.913	2.661
UK	5.336	2.558
Netherlands	3.478	2.133
Poland	23.211	17.889
Romania	10.807	9.736
Turkey	16.420	7.608
Others	29.465	16.491
Total	137.724	91.725
Av € per ton	1930.6	2106.1

Poland was the largest destination for Hungarian MDI exports, taking 23,211 tons in the first seven months in 2024 versus 17,889 tons in January to July 2023. Exports to France dropped from 5,838 tons to 5,099 tons whilst to Germany exports increased from 10,543 tons to 14,697 tons.

Central European isocyanate trade Jan-Aug 2024

TDI prices in Europe have been relatively stable this year until the first part of June when prices dropped slightly due to subdued demand and stable supplies. The demand for TDI was sluggish from the downstream polyurethane industries. Car sales in Germany fell by 2.7% in May 2024 indicating weakness in the polyurethane market and thus demand for TDI.

Against the backdrop of weak demand, the strength of the supply side has placed pressure on pricing. Toluene supplies attributed to a decline in cost support from upstream oil prices.

TDI imports into Poland amounted to 49,734 tons in January to August 2024 against 43,962 tons in

Polish TDI Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Belgium	4.712	1.579
Germany	12.991	11.008
Hungary	19.395	18.288
Netherlands	4.712	3.011
Saudi Arabia	0.282	1.692
South Korea	4.588	5.230
Others	2.347	3.154
Total	49.734	43.962
Av € per ton	1996.4	2788.0

January to August 2023. Prices of TDI imported into Poland dropped from €2788.0 per ton last year to €1996.4 per ton. Further erosion in toluene prices in the third quarter could allow producers scope for lowering TDI prices, with the aim to reduce inventories. Hungary was the largest supplier in the first eight months in 2024, shipping 19,395 tons to Hungary versus 18,288 tons in January to August 2023.

The MDI price trend remained firm at the beginning of Q3 of 2024, and quotations rose by almost 1% in July 2024 which was due in part to shortages. In the first half of 2024, electric vehicle (EV) sales in Germany declined by 16.4%, with Tesla experiencing a substantial sales drop of 41.6%. At the same time the production

of non-EV vehicles is performing relatively well and this helping to maintain demand for polyurethane foam. The construction sector in Europe would probably need to improve significantly to drive MDI demand higher, although for the time being prices are being held up with pressures on supply.

Polish MDI Imports (unit-kilo tons)

Country	Jan-Aug 24	Jan-Aug 23
Germany	32.768	25.259
Netherlands	14.059	15.815
Hungary	26.502	23.871
Belgium	24.235	16.635
South Korea	5.900	5.448
Others	7.552	9.259
Total	111.017	96.287
Av € per ton	1926.8	2144.6

MDI imports into Poland totalled 111,017 tons in January to August 2024, up against 96,287 tons in January to August 2023. Average prices dropped from €2144.6 per ton to €1926.8 in January to August 2023. MDI prices dropped to €1632.0 per ton in October last year but recovered and in June 2024 were recorded at €2055.4 per ton.

Czech MDI imports (unit-kilo tons)

	Jan-Aug 24	Jan-Aug 23
Total	27.038	24.633
Av Price € per ton	2094.5	2319.5

Germany increased MDI shipments to Poland to 32,768 tons in the first eight months in 2024 against 25,259 tons in January to August 2023, whilst imports from Hungary amounted to 26,502 tons against 23,871 tons. Belgium increased shipments of MDI to 24,235 tons in this year from 16,635 tons in the same eight months in 2023. Other suppliers included the Netherlands and South Korea.

MDI imports into the Czech Republic totalled 27,038 tons in January to August 2024 against 24,633 tons in the same period in 2023. Average prices dropped from €2319.5 per ton to €2094.5 per ton. The leading supplier so far in 2024 was Belgium which shipped 6,908 tons against 6,190 tons in January to August 2023. Imports from Hungary dropped from 7,124 tons to 5,631 tons. MDI prices were increased slightly by European producers in the second half of September. At the end of September 2024, MDI Polymeric Grade FD Hamburg prices hovered at \$2560 per ton.

Czech Polyol Imports (unit-kilo tons)

	Jan-Aug 24	Jan-Aug 23
Total	29.736	39.322
Av € per ton	2310.1	2566.1

Czech polyol imports Jan-Aug 2024

Czech polyol imports amounted to 29,736 tons in the first eight months this year against 39,322 tons in the same period in 2023, with average prices dropping from €2566.1 per ton to €2310.1 per ton. Polyol prices in Europe continue to suffer from weak demand. The leading supplier to the Czech Republic this year was Belgium shipping 8,972 tons in the period January to August against 11,601 tons last year, followed by Germany which exported 5,149 tons which was down from 7,585 tons.

Hungarian Polyol Imports (unit-kilo tons)

C	Jan-Jul 24	Jan-Jul 23
Total	22.492	31.400
Av € per ton	2193.2	2364.6

Hungarian polyol imports Jan-Aug 2024

Imports of polyols into Hungary dropped in the first seven months this year to 22,492 tons against 31,400 tons in the same period in 2023. Average prices dropped to €2193.2 per ton versus €2364.6 in 2023. After the official start-up of the MOL plant at Tiszaújváros in May, Hungary is starting to sell on the domestic market whilst exporting thus far only small volumes. Relatively low domestic consumption means that MOL will have to export around 75% of its polyol production at full capacity.

Polish Polyol Exports		
	Jan-Aug 24	Jan-Aug 23
Total volume (ktons)	36.413	37.347
Av € per ton	2126.7	2275.8
Polish Polyol Imports		
	Jan-Aug 24	Jan-Aug 23
Total volume (ktons)	92.401	96.704
Av € per ton	1825.0	2109.3

Polish Polyol Imports (unit-kilo tons)

Country	Jan-Aug 24	Jan-Aug 23
Belgium	14.641	11.904
China	4.024	4.825
France	3.525	3.465
Germany	21.664	21.907
Netherlands	24.119	20.935
Romania	9.892	9.986
South Korea	5.110	10.876
Others	8.239	10.607
Total	92.401	96.704
Av € per ton	1825.0	2109.3

Polish polyol trade Jan-Aug 2024

Polish polyol imports amounted to 92,401 tons in the first eight months in 2024 against 96,704 tons in the same period in 2023. The Netherlands supplied 24,119 tons in January to August 2024 against 20,935 tons last year, whilst Germany supplied 21,664 tons against 21,907 tons. Polyol import prices into Poland dropped from €2109.3 per ton to €1825.0 per ton.

Exports of polyols from Poland in the first eight months in 2024 amounted to 36,413 tons against 37,347 tons in the same period in 2023. Destinations for deliveries were focused mostly on Europe, led by Italy taking 5,460 tons in the first eight months followed by Germany with 4,304 tons. Average export prices dropped from €2275.8 per ton to €2126.7 per ton.

Central European organic chemical trade

Hungarian maleic anhydride exports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Austria	0.290	1.821
Germany	1.459	0.838
Italy	2.046	1.783
Poland	4.486	1.654
Slovenia	1.121	1.192
Others	5.019	3.906
Total	14.421	11.195
Av € per ton	1187.1	1249.7

Hungarian maleic anhydride exports Jan-Jul 2024

Hungary exported 14,421 tons of maleic anhydride in January to July against 11,195 tons in January to July 2023. Average prices dropped from €1249.7 per ton to €1187.1 per ton. Exports of maleic anhydride to Poland from Hungary increased from 1,654 tons in the first seven months last year to 4,486 tons this year.

Hungarian organic chemical exports Jan-Jul 2024

Exports of organic chemicals from Hungary totalled 375,865 tons in the first seven months this year, up from 346,924 tons in the same period in 2023. The largest commodity in the organic chemical sector is TDI, accounting for 41% of Hungarian organic

chemical exports in January to July this year by volume and 33% by value. Overall, the value of organic chemical exports from Hungary amounted to €942.735 million in the first seven months which was down from €1030.192 million last year.

Hungarian aniline imports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Belgium	7.942	18.650
China	0.000	11.067
Czech Republic	59.773	42.799
Total	67.740	72.516
Av € per ton	1423.5	1467.6

Imports of organic chemicals into Hungary amounted to 420,410 tons in the period January to July against 407,210 tons in 2023, with values dropping from €1061.500 million to €903.580 million. The major organic chemical imports include toluene, aniline and acrylonitrile.

Hungarian aniline & acrylonitrile imports Jan-Jul 2024

Aniline imports into Hungary dropped from 72,516 tons in January to July 2023 to 67,740 tons January to July this year. Inward shipments from BorsodChem-MCHZ in the Czech Republic amounted to 59,773 tons against 42,799 tons in January to July 2023. Belgium supplied 7,942 tons against 18,650 tons in January to July 2023. Cost prices of aniline imports dropped from €1467.6 per ton to €1423.5 per ton.

Polish Organic Chemical Trade		
Exports	Jan-Aug 24	Jan-Aug 23
Vol (kilo tons)	1,060.2	1,007.7
Value (€ million)	861.6	803.5
Imports	Jan-Aug 24	Jan-Aug 23
Vol (kilo tons)	2,614.3	2,655.7
Value (€ million)	1,817.0	1,747.7

Acrylonitrile imports into Hungary dropped from 13,596 tons in the first seven months last year to 6,340 tons in the period January to July 2024. Imports from the Netherlands dropped from 6,914 tons to 4,289 tons. Average prices for acrylonitrile imports dropped from €2166.7 per ton to €1686.2 this year.

Polish organic chemical trade Jan-Aug 2024

Exports of organic chemicals from Poland increased by volume to 1.060 million tons in January to August 2024 to 1.008 million tons in the same period in 2023, whilst imports dropped from 2.656 million tons to 2.614 million tons.

Export values increased from \$803.5 million to \$861.6 million, whilst import values rose from \$1.748 million to \$1.817 million. Overall trade remains lower than before the Ukrainian war started but shows a relative improvement over 2023.

Polish Organic Chemical Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Acetic Acid	23.220	23.064
Acetone	4.716	4.877
Butadiene	65.050	48.730
DINP/DOP	16.608	13.220
Ethyl Acetate	11.518	11.457
Isopropanol	8.336	6.900
Maleic Anhydride	7.427	7.908
Methanol	436.381	440.408
Propylene	14.008	11.140
VAM	8.336	6.900

Methanol imports into Poland totalled 436,381 tons in January to August 2024 against 440,408 tons in the same period in 2023. Methanol imports this year remain relatively high despite the absence of Russian imports into the market. For other organic chemical imports Poland imported 23,220 tons of acetic acid in January to August against 23,064 tons in January to August 2023. The UK provided 11,016 tons in the first eight

months this year against 4,780 tons in the same period in 2023. The UK has replaced the US this

year as the largest supplier. Acetic acid prices dropped to €734.5 per ton in the first eight months this year against €817.0 per ton last year.

Ethyl acetate imports into Poland amounted to 11,518 tons in January to August 2024 against 11,457 tons in January to August 2023. Belgium provided the largest share of imports. VAM imports into Poland amounted to 8,336 tons versus 6,900 tons in January to August 2023.

Maleic anhydride imports into Poland amounted to 7,427 tons in January-August 2024, down from 7,908 tons in the previous year. Imports are currently sourced from Germany, Hungary and South Korea. Isopropanol imports into Poland amounted to 8,336 tons in January-August 2024, up from 6,900 tons in the previous year. Aside Germany, imports come from the Netherlands and South Africa.

Polish EO/PO Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
DEG	19.112	20.326
Ethylene Glycol	37.171	69.743
Ethylene Oxide	14.086	10.922
Propylene Glycol	14.206	11.989
Propylene Oxide	4.418	0.101

Ethylene glycol imports into Poland dropped in the first eight months in 2023 from 69,743 tons to 37,171 tons in the same period this year. Belgium is the main supplier of glycols to the Polish market. DEG imports increased to 19,112 tons against 20,326 tons.

Polish Organic Chemical Exports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Acetone	6.718	9.251
Ethylene Glycol	15.086	13.064
Formaldehyde	14.385	15.321
Glycerol	23.081	26.725
Methanol	112.203	200.713
Monochloroacetic Acid	21.267	24.628
N-Butyl Acetate	5.078	6.886
Propylene Glycol	7.473	9.521

Ethylene oxide imports into Poland totalled 14,086 tons in January to August 2024 versus 11,989 tons in January to August 2023. Germany currently represents the main source of inward shipments. Ethylene oxide consumption in Poland should increase after the completion of PCC Exol's second line of the Ethoxylates II plant at Plock.

Regarding export activity in organic chemicals, Polish shipments of monochloroacetic acid (MCAA) amounted to 21,267 tons in the first eight months against 24,628 tons in the same period in 2023. MCAA production is undertaken by the PCC Group at Brzeg Dolny.

Czech Organic Chemical Trade		
Exports	Jan-Aug 24	Jan-Aug 23
Vol (kilo tons)	381.9	376.8
Value (€ million)	837.3	1,007.7
Imports	Jan-Aug 24	Jan-Aug 23
Vol (kilo tons)	472.4	475.1
Value (€ million)	888.1	944.9

Other organic chemical exports from Poland include acetone where shipments amounted to 6,718 tons in January-August 2024 versus 9,251 tons in January to August 2023. The main markets for Polish acetone exports included Italy, Germany, Romania and Lithuania.

Czech Organic Chemical Imports (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Acetone	3.774	4.028
DEG	1.594	1.037
DINP	5.320	3.286
2-EH	15.153	13.085
Ethyl Acetate	2.203	2.180
Ethylene Glycol	4.291	4.471
Methanol	48.517	49.824
N-Butanol	5.323	7.954
Propylene Glycol	2.429	2.727

Czech organic chemical trade Jan-Aug 2024

Czech organic chemical exports amounted in value to €837.3 million in the first eight months this year, whilst imports dropped from €944.9 million to €888.1 million. Import volumes declined from 475,100 tons to 472,400 tons, whilst export volumes rose from 376,800 tons to 381,900 tons. One of the main organic chemical exports from the Czech Republic comprises DINP plasticizers where shipments totalled 26,406 tons in the first eight months in 2024 against 25,443 tons in the same period last year.

Czech imports of organic chemicals are led by methanol where volumes amounted to 48,517 tons in the first eight months this year against 49,824 tons in the same period in 2023. Other products imported include oxo alcohols, both in butanols and

2-EH. Normal butanol imports amounted to 5,323 tons this year versus 7,954 tons whilst 2-EH imports increased from 13,085 tons to 15,153 tons. Oxygenated solvent imports include acetone and ethyl acetate, amounting to 3,774 tons and 2,203 tons in the first eight months this year respectively.

Central European methanol markets

Czech Methanol Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Germany	4.574	4.289
Estonia	5.173	0.000
Russia	0.000	6.237
Poland	35.238	34.716
Others	3.435	3.695
Total	48.517	49.824
Av € per ton	387.3	389.7

Czech methanol imports Jan-Aug 2024

Czech imports of methanol amounted to 48,517 tons in the first eight months in 2024 against 49,824 tons in the same period in 2023. Prices per ton for methanol imports dropped from €389.7 per ton to €387.3 per ton. Poland supplied 35,238 tons to the Czech Republic in the first eight months against 34,716 tons in the same period in 2023, whilst the second largest source of supply came from Germany supplying 4,289 tons.

Hungarian methanol imports Jan-Jul 2024

Methanol imports into Hungary in January to July increased to 61,370 tons against 54,474 tons in January to July 2023. Imports from Germany increased from 16,166 tons to 37,192 tons, replacing sources from Poland and Slovakia last year. Imports from Slovenia amounted to 11,801 tons in the first seven months this year, against 1,862 tons in the same period in 2023. Average prices amounted to €435.1 per ton against €445.8 per ton last year.

Hungarian methanol imports (unit-kilo tons)		
Country	Jan-Jul 24	Jan-Jul 23
Germany	37.192	16.166
Netherlands	9.727	17.264
Poland	1.139	10.234
Slovenia	11.801	1.862
Slovakia	0.000	4.591
Others	1.286	3.440
Total	61.370	54.474
Av € per ton	435.1	445.8

Polish methanol trade Jan-Aug 2024

Polish imports of methanol amounted to 436,381 tons in the first eight months in 2024 against 440,408 tons in January to August 2023. Average prices amounted to €319.2 per ton against €291.7 per ton last year. Poland has been developing alternative sources to Russian methanol before the full embargo took full effect in June.

Polish Methanol Imports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Azerbaijan	5.000	4.981
Belgium	112.559	41.745
Estonia	5.278	0.000
Germany	66.976	40.825
Netherlands	51.632	20.787
Norway	45.421	70.666
Russia	0.000	188.185
US	4.969	22.257
Trinidad	23.947	28.823
Venezuela	112.172	20.765
Others	8.426	1.374
Total	436.381	440.408
Av € per ton	319.2	291.7

Belgium has been the largest supplier of methanol to Poland in the first eight months in 2024, shipping 112,559 tons against 41,745 tons. Venezuela follows closely having supplied 112,172 tons in the period January to August 2024 against 20,765 tons in the same period in 2023. Imports from Trinidad have been slightly lower this year, dropping to 23,947 tons from 28,823 tons. Imports from Norway have also dropped in 2024, from 70,666 tons last year to 45,421 tons.

Exports of methanol from Poland amounted to 131,635 tons in January to June declining from 200,833 tons in January to August 2023. Exports declined in 2023 due to lower imported volumes after the sanctions imposed on Russia took full effect after 18 June last year.

Poland Methanol Exports (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Austria	1.389	30.100
Czech	28.451	38.866
Germany	65.948	55.949
Romania	0.000	18.927
Slovakia	18.524	29.152
Ukraine	16.465	15.366
Hungary	0.212	12.284
Others	0.647	0.187
Total	131.635	200.833
Av € per ton	382.5	368.8

The largest destination for Polish exports was Germany which took 65,948 tons in the first eight months in 2024 against 55,949 tons in the same period in 2023. Ukraine imported 16,465 tons of methanol from Poland in the first eight months 2024 against 15,366 tons in 2023.

Polish methanol export prices dropped from €368.8 per ton to €332.0 per ton. Shipments from Poland to Austria, Hungary and Romania have almost completely stopped in 2024.

Company news

Grupa Azoty's Financial Performance (€ million)		
	Jan-Jun 24	Jan-Jun 23
Total sales revenue	2,809.8	3,383.4
EBITDA margin	-13.0%	+14.1%

Grupa Azoty Financial Overview (€ million)		
	Fertilisers	Total
Total revenues	1,330,050	2,809,756
Operating costs	-1,397,206	-2,949,476
Total revenues	1,524,707	3,383,384
Operating costs	-1,756,996	-3,763,426

Grupa Azoty is fertilisers which continues to make losses even if production was higher this year.

Grupa Azoty Financial Overview (€ million)			
	Plastics	Chemicals	Total
Total revenues	308,020	436,771	2,809,756
Operating costs	-336,750	-481,752	-2,949,476
Total revenues	217,401	538,263	3,383,384
Operating costs	-280,130	-641,052	-3,763,426

from Asia. However, the chemicals segment's EBITDA margin was minus 9.4% in the second quarter even if sales were up by zł 189 million on the previous quarter.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Caustic Soda Liquid	223.3	221.3
Caustic Soda Solid	27.8	43.1
Caprolactam	70.0	58.9
Acetic Acid	1.5	1.3
Ammonia (Gaseous)	1344.0	1070.0
Ammonia (Liquid)	64.2	54.9
Pesticides	36.8	31.1
Nitric Acid	1410.0	1165.5
Nitrogen Fertilisers	1127.0	932.1
Phosphate Fertilisers	146.5	111.1
Potassium Fertilisers	170.0	116.2

Police Seaport.

The aim of the Police Seaport is to increase the port's accessibility both on land and sea, as well as to increase handling capacity. The port could be very important for Grupa Azoty, but also for the entire Polish chemical industry. Currently, rail freight transport takes place only to the Police Chemia station, which serves Grupa Azoty Police.

Grupa Azoty Police-Russian fertilisers

Grupa Azoty Police is faced with huge problems in the fertiliser sector from unrestricted imports from Russia. Large volumes of Russian fertilisers are currently being held at the ports of Szczecin, Gdansk and Gdynia. Poland has become the largest importer of fertilisers from Russia and Belarus in the EU.

Grupa Azoty financial performance 2024

Grupa Azoty is faced by a range of challenges that require decisive management in restructuring personnel and businesses against the backdrop of a substantial debts. Production has stabilised in the first eight months in 2024, certainly against 2023, but the group continues to incur losses.

In the first half of 2024, the group's total revenues of €2.809 million were exceeded by operating costs of €2.950 million, with an EBITDA margin of minus 2.7%. The net loss for the first half of this year amounted to zł 748 million compared to a loss of zł 1,098 billion for the first half of 2023. The most important sector for

The EBITDA of the chemicals segment's did improve in the second quarter this year but was still minus 9.4%. The segment's results were mainly affected by weak economic situation, high stock levels customers and the import of cheaper products to the European market. Melamine production at Grupa Azoty Puławy was carried out at only one of the three units. Chemical sales were helped by logistical difficulties of imports through the Red Sea, slowing down imports

The plastics segment recorded an increase in production and sales volumes, as well as an increase in the prices of purchased phenol and sold polyamide. The plastics segment's EBITDA margin was minus 6.6% in the second quarter in 2024 against 13.4% in the first quarter and was up on the second quarter last year. Performance also includes production and sales of Grupa Azoty Polyolefins, which is at the start-up stage of installation and commissioning tests).

Grupa Azoty-Police Seaport investment

The Police Seaport has received more than €33 million in funding from the EU, according to Grupa Azoty. The co-financing will be used for the construction of a railway junction with the necessary technical infrastructure as part of the construction of railway line No. 437 to the

Whilst petrochemicals and polymers have felt the brunt of sanctions, Russian fertilisers have been exempted and are allowed to enter European markets without restriction. Polish fertiliser production has improved this year against 2023, but still remain below 2021 levels. Sales prior to the war were quite profitable, but losses incurred by Grupa Azoty have placed extreme pressure on the economic survival of the group.

Azoty-Orlen cooperation

Azoty signed a letter of intent with Orlen in connection with its intention to start analysing strategic options aimed at making decisions on potential transactions involving the plastics business. These include Polimery Police, in addition to caprolactam and polyamide 6 production units, and elements of the port infrastructure of the Gdansk subsidiary Fosfory.

The selection of the areas that were included in the letter of intent was preceded by a detailed analysis of potential synergies between the parties. For the time being, Orlen has avoided making any clear declarations as to whether it is considering a complete acquisition of Polimery Police and the production of caprolactam and polyamide.

commercialisation will be started in 2025.

Azoty unlikely to sell Polimery

Azoty is not expected to relinquish control of Polimery Police, at least for the time being. This is partly due to the price it could achieve in the current climate may not be very attractive. However, it may be looking for extra support, without losing control. Orlen's takeover of Lotos in 2022 brought a 17.3% stake in Grupa Azoty Polyolefins (formerly PDH Polska) and potentially this share could be increased. Orlen's jv with LyondellBasell for polypropylene production at Plock probably means that a full takeover of Polimery Police is not an option

Polimery Police-overinvestment

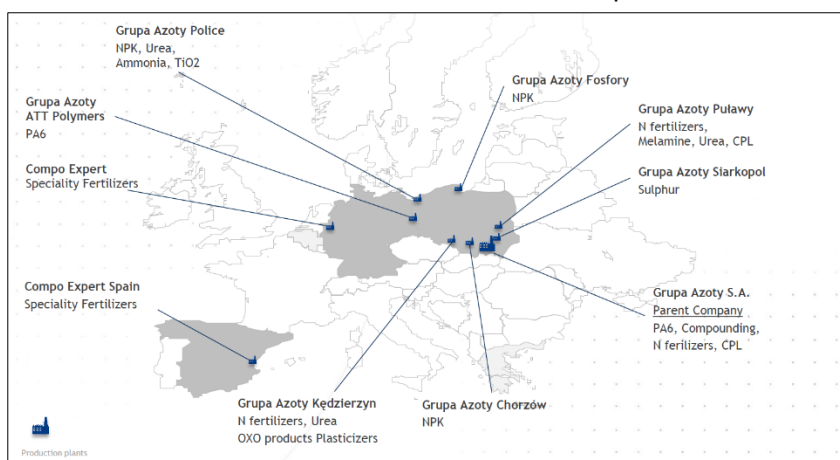
The investment in Polimery Police has had the greatest impact on the situation currently faced by Grupa Azoty. The investment in Polimery Police has deflected capital away from vital spending on other sectors with the group. Polimery Police can be viewed as an overinvestment considering the group's capabilities, although if Russia had not embarked on a full-scale invasion of Ukraine the impact could have been much lower.

Up to 170,000 tons of polypropylene were produced at the plant up to the end of September and delivered to customers both domestic and for export. The current picture involves negotiating with the general contractor (Hyundai) for a final agreement, the so-called annex no. 5. After the completion of this process and the signing of Annex No. 5, the entire installation will be managed by the company and the stage of the so-called full

Polimery Police has put a heavy burden on Grupa Azoty's financial and investment capabilities and impedes the ability of the group to respond to the challenges related to fertiliser imports. Even Azoty has had insufficient funds to tackle some technical issues in Polimery Police.

Azoty-Caprolactam

One of the challenges facing Grupa Azoty is deciding what to do with caprolactam and melamine installations (plastics segment). Only one of the four units is working, and thus critical decisions need to be made. The two caprolactam lines at Pulawy and Tarnow operate on two different feedstocks, benzene and toluene, and thus each plant faces two different production costs.



At the moment, the caprolactam installation at Puławy is not working, only caprolactam in Tarnow is working.

Giving up either plant can generate problems for other products such as melamine and polyamide. In the case of the caprolactam installation in Puławy, much will depend on the results of detailed analyses. Overall,

though, the sale of the caprolactam and polyamide plants at Pulawy and Tarnow do not appear a good option for Grupa Azoty and possibly not for Orlen.

RUSSIA

Russian chemical production Jan-Aug 2024

Russian production for petrochemicals and polymers slowed slightly in the third quarter this year but volumes continue to exceed 2023 levels. Fertiliser production has risen over this year, driven by

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Ethylene	3085.5	2655.2
Propylene	1713.9	1716.4
Benzene	912.1	848.8
Toluene	260.8	236.9
Xylenes	291.2	297.5
Orthoxylene	84.3	80.4
Paraxylene	124.4	132.7
Styrene	476.9	449.8
Ethylbenzene	551.1	497.2
Methanol	2563.6	2674.6
Isopropanol	46.6	42.8
Butanols	82.0	92.1
Phenol	164.1	163.6
Acetic Acid	176.258	139.026
Phthalic Anhydride	66.6	59.9

export activity. As long as the domestic market continues to benefit from military spending most petrochemical plants can expect to operate at close to full capacity for the rest of the year. Falling oil prices seem to be the biggest concern for the Russian government at present, already impacting on the value of the rouble. Devaluation is a possibility in the next few months as the government is trying strategies to keep the economy working.

Ethylene production rose from 2.655 million tons in the first eight months last year to 3.086 million tons whilst propylene production dropped slightly from 1.716 million tons to 1.714 million tons. Benzene production increased from 848,800 tons in the first eight months last year to 912,100 tons this year.

Ethylbenzene production rose from 497,200 tons to 551,100 tons, whilst toluene increased from 236,900 tons to 260,800 tons. Of the major chemical products, only methanol has faced lower volumes with limitations in market sales. This meant that production dropped from 2.582 million tons to 2.482 million

tons. The third quarter has seen some slowdown in certain product areas, which if it was not for the anomalous position of the militarized Russian economy, might be seen purely in cyclical terms.

Russian Polymer Production (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
Plastics	7283.4	7176.0
PE	2287.804	2117.062
Styrene Polymers	401.952	385.728
PVC	636.808	650.327
PP	1393.887	1466.964
Polyamide	91.758	89.337
Synthetic Rubber	934.141	934.745

Russian polymer production Jan-Aug 2024

The production of rubber and plastic products in Russia in August 2024 declined by 1.6% compared August 2023, although overall for the first eight months this year production showed a 2.7% increase from 7.176 million tons to 7.283 million tons. Almost all sectors in the plastics industry showed a decline in August, particularly the manufacture of pipes which fell 9.1% against August 2023.

Russian production of polyethylene increased slightly to 2.287 million tons against 2.117 million tons in January to August 2023. Polypropylene production dropped from 1.394 million tons to 1.467 million tons, whilst styrene polymer production rose from 385,728 tons to 401,952 tons. PVC production dropped from 650,327 tons in January to August 2023 to 636,808 tons in the same period in 2024. The production of polyamide in Russia showed a minor increase to 91,758 tons from 89,337 tons. Russian production of synthetic rubbers dropped slightly to 934,141 tons in January to August 2024 compared to 934,745 tons in 2023.

Technology challenges for Russian chemical industry

Sanctions on chemical technology sales from the West were imposed by the EU and other governments fairly soon after Russia's full-scale invasion of Ukraine. Whilst these sanctions have created some problems, they have also forced Russian companies to become more innovative in replacing previously imported components, catalysts, etc. In order to tackle some of the large number of outstanding issues SIBUR is constructing a new R&D centre at Kazan, aimed at tackling some of the shortages in technology. The project is intended to be completed in 2026, and the centre will include a full development cycle from laboratory research to scaling up and ensuring product production.

Russian petrochemical projects

Amur Gas-Chemical Complex-technology changes after sanctions

SIBUR states that it had received the rights from Linde for the Amur Gas Chemical Complex, as well as all the main equipment, before Linde left the Russian market in 2022. Due to the withdrawal of Western partners from the Russian market, the project was thrown into question. Although much delayed SIBUR claims that it can now see a path to conclusion.

The project configuration still had to be adjusted with the help of equipment supplied from the countries of the Asia-Pacific region (APR) and even from Russia. The supplier of the key electrical equipment of the pyrolysis plant was the Samara enterprise Electroshield, whilst the air separation station was prepared by Cryogenmash and may have previously gone to a Western company such as Air Products. In addition to the above, a fleet of ball tanks for intermediate gas storage at the Amur site is being built by Uralkhimash.

Svobodny in the Amur Oblast.

Amur Gas-Chemical Complex-export sales targets

The external markets where SIBUR intends to sell polymers produced at the Amur Gas Chemical Complex include China, Vietnam, Indonesia and Malaysia. India is also being considered, but there is no solution to logistical issues to that market at this stage.

Amur Gas-Chemical Complex-domestic sales targets

More than 100,000 tpa of polymers from the Amur Gas Chemical Complex are intended for sale on the domestic market. However, this will depend on the development of plastics processing in the Far Eastern region. Only 37,000 tons of basic polymers were processed in the Far East in 2023, but the level of processing in this region is rising faster than anywhere else in Russia. The acceleration in consumption has been significantly influenced by all kinds of incentives for the development of production capacities, both public and private. For SIBUR alone, for 2023 and early 2024, new capacities for 8,500 tpa were launched. Two new projects were added in second half of 2025 including the production of plastic pipes by Primorsky Polymer Pipe Plant and Far Eastern Plastic Pipe Plant.

Pipes and fittings in the Far East account for more than half (53%) of the production of finished plastic products in the region. The next segment is flexible packaging (19% of the total). On average, per capita consumption of polymers comprises 4.7 kg per annum in the Far East which is much lower than the 30 kg per annum for the whole of Russia.

600,000 tpa of HDPE. In 2027 the aim is to launch two more LLDPE lines as well as a polypropylene line with a capacity of 400,000 tpa. The total design capacity of the complex will eventually comprise 2.7 million tpa of polyolefins (PP and PE).

Amur Gas Chemical Complex-equipment delivery

The Amur Gas Chemical Complex, which is a joint venture project being undertaken by SIBUR and Sinopec, has fulfilled the plan for the delivery of large-sized equipment for the navigation period of 2024.

Over a distance of 5,000 km, equipment and cargo has been delivered this year from the Chinese ports of China to the Russian seaport of De-Kastri and then inside Russia by river transport. Equipment from China has largely replaced Western equipment that was sanctioned after the invasion of Ukraine.

Transshipment was carried out on river barges, which were then towed along the Amur and Zeya rivers to the berth near the city of

In 2024 a total of 54 units of oversized and heavy cargo were delivered by water to the project site of the gas chemical complex. The equipment included units for polyethylene production and pyrolysis plants. By comparison, 162 units of oversized and heavy cargo with a total weight of more than 15 thousand tons were delivered in navigation 2023. The delivery of large-tonnage cargo for the Amur Gas Chemical Complex will be fully completed in 2025.

Amur Gas-Chemical Complex-construction progress

The site of the future Amur Gas Chemical Plant (AGCC) is still a construction site, where almost 19,000 people are currently working, rising to 25,000 in 2025. Most of the infrastructure should be ready by the end of 2024 or beginning of 2025. Electricity has already been supplied to the main production sites, with a tie-in into the Power of Siberia main gas pipeline. Up to 55% of the project had been completed by the end of September which is expected to rise to 60% by the end of 2024.

At present SIBUR hopes that polymer capacity of 1.1 million tpa should be ready by 2026. This could include 500,000 tpa of LLDPE and

Russian Monomers

Russian Ethylene Production (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
North Caucasus Federal District	219.464	189.815
Volga Federal District	1502.856	1290.844
Ural federal district	1038.169	905.878
Siberian Federal District	325.060	268.620
Total	3085.549	2655.156

Russian Propylene Production (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
North Caucasus Federal District	88.285	85.906
Volga Federal District	633.823	629.267
Ural federal district	660.636	693.446
Siberian Federal District	331.150	307.810
Total	1713.894	1716.429

Russian Major Propylene Domestic Buyers (unit-kilo tons)		
Consumer	Jan-Aug 24	Jan-Aug 23
Saratovorgsintez	113.489	116.977
Volzhskiy Orgsintez	8.128	7.655
Akriyat	19.611	17.846
SIBUR-Khimprom	38.128	24.480
Omsk-Kaucuk	14.386	5.039
Tomskneftekhim	10.949	1.706
ZapSibNeftekhim	55.438	78.904
Moscow Refinery	1.084	1.739
Nizhnekamskneftekhim	9.125	1.577
Ufaorgsintez	6.348	7.453
Kazanorgsintez	3.115	0.896
Khimprom Kemerovo	3.198	4.888
Plant of Synthetic Alcohol	1.977	3.436
Total	284.980	288.096

last year to 113,751 tons this year, after production was affected by Ukrainian drone strikes on the Kstovo refinery. Sales from Lukoil-NNOS were affected in the first part of 2024 by to the side-effects of the drone attacks on the refinery.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Angarsk Polymer Plant	37.270	13.941
SIBUR-Kstovo	130.445	108.121
Akriyat	0.000	6.644
Lukoil-NNOS	113.751	148.187
Others	3.514	3.167
Total	284.980	288.096

by Omsk Kaucuk was required to provide feedstock for the production of isopropanol. The other isopropanol producer in Russia is located at Orsk, where propane-propylene fractions are used in the production process.

Russian ethylene production Jan-Aug 2024

Russian ethylene production totalled 3.086 million tons in the first eight months tons in 2024 against 2.655 million tons in the same period in 2023. ZapSibNeftekhim at Tobolsk produced 1.038 million tons in January to August 2024, up from 905,878 tons from January to August 2023. Stavrolen increased production from 189,815 tons in the first eight months last year to 219,464 tons in the same period in 2024.

Russian propylene production Jan-Aug 2024

Russian propylene production totalled 1.714 million tons in the first eight months tons in 2024 against 1.716 million tons in the same period in 2023. ZapSibNeftekhim at Tobolsk produced 660,636 tons against 693,446 tons in the same period in 2023. The Volga-Urals region increased from a total of 629,267 tons in January to August 2024 against 633,823 tons in January to August 2023.

Russian propylene domestic sales Jan-Aug 2024

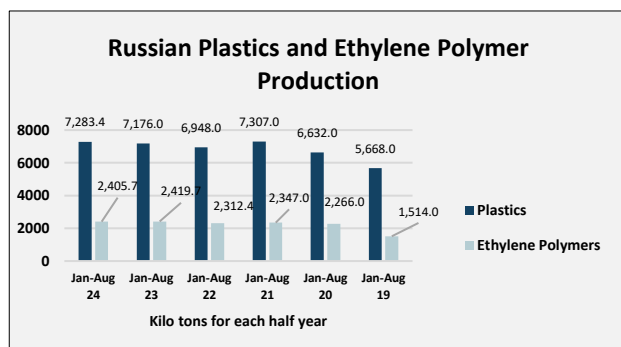
Russian sales of propylene on the domestic merchant market amounted to 284,980 tons in the first eight months this year against 288,096 tons in January to August 2023. The largest propylene supplier to the domestic market was SIBUR-Kstovo, shipping 130,445 tons against 108,121 tons in January to August 2023.

Lukoil-NNOS reduced propylene sales from 148,187 tons in the first eight months

ZapSibNeftekhim purchased 55,438 tons of propylene in the first eight months in 2024 against 78,904 tons in the same period in 2023, whilst Saratovorgsintez reduced purchases from 116,977 tons to 113,489 tons.

SIBUR-Khimprom at Perm increased purchases from 24,480 tons to 38,128 tons whilst Omsk Kaucuk increased purchases from 5,039 tons to 14,386 tons. The increase in propylene purchases

Russian bulk polymers



Russian plastics production Jan-Aug 2024

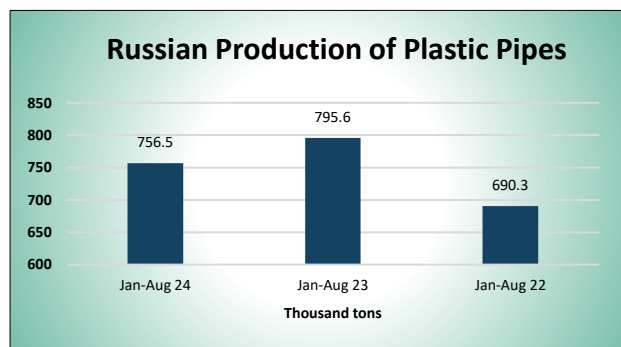
Russian bulk plastics production amounted to 7.283 million tons in January to August 2024 against 7.176 million tons in the same period in 2023 and against 6.948 million tons in 2022.

Production of ethylene polymers amounted to 2.406 million tons in the first eight months in 2024, down from 2.420 million tons in the same period in 2023. ZapSibNeftekhim is the largest Russian producer, increasing production polyethylene grades from 1.045 million tons to 1.060 million tons in January to August 2024, nearly all of which comprised main polyethylene grades HDPE and LLDPE.

Russian Ethylene Polymer Production by Region (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
Central Federal District	84.539	94.898
Northwestern Federal District	27.621	27.310
Southern Federal District	26.179	22.814
North Caucasus Federal District	206.862	199.081
Volga Federal District	766.934	798.951
Ural federal district	1060.413	1044.858
Siberian Federal District	233.125	231.678
Far East	0.023	0.122
Total	2405.674	2419.711

Kazanorgsintez-increase in polymer capacity

Kazanorgsintez is currently in the process of increasing ethylene polymer capacity by 20% up to 660,000 tpa. The raw material for reactor B and investment projects under development at Kazanorgsintez is intended to be supplied by ethylene from the EP-600 complex of Nizhnekamskneftekhim under construction in Tatarstan.



The current production capacities of Kazanorgsintez consist of 654,000 tpa of ethylene, 540,000 tpa of HDPE, including bimodal polyethylene (type PE-100), 230,000 tpa of LDPE, including metallocene linear low-density polyethylene (m-LDPE), as well as medium-density polyethylene (LDPE).

Domestic polyethylene market driven by pipe demand

The pipe market has been the main driver of Russian polyethylene consumption in the past two years and the slowdown in the third quarter this year has been somewhat a surprise. Consumption increased by 3.6% in the first half of 2024 against 8% in the same period in 2023 and it appears that the growth rate has started to fall.

Production of pipes based on thermoplastics dropped from 795,600 tons in the first eight months last year to 756,100 tons in 2024. The third quarter has seen a slowdown due in part to completed projects, and also due to high interest rates which is preventing some programmes from being started. In 2023 fourteen new production facilities were commissioned or modernised which was necessary for the growth from the pipe boom in 2022-2023.

Chinese Imports of Polyethylene from Russia		
	Jan-Aug 24	Jan-Aug 23
Kilo tons	224.196	195.738
\$ million	209.494	221.745
Av \$ per ton	934.4	858.8

Russian polyethylene trade Jan-Aug 2024

Russian polyethylene exports to China increased from 195,735 tons in January to August 2023 to 224,196 tons in 2024, with both HDPE and LDPE showing rises. Average prices for Russian polyethylene exports to China rose from \$858.8 per ton to \$934.4 per ton this year.

Chinese Exports of Polyethylene to Russia (unit-kilo tons)			
Product Category	Jan-Aug 24	Jan-Aug 23	Jan-Aug 22
LDPE	10.630	7.747	2.666
HDPE	9.086	25.716	4.758
LLDPE	18.138	3.965	0.654
EVA	8.560	10.570	4.686
Ethylene-hexene	18.078	19.133	15.610
Others	0.594	0.248	0.000
Total	65.087	67.380	28.373
Av \$ per ton	1384.9	1719.4	1703.1

Inward shipments of polyethylene from China into Russia amounted to 65,087 tons in the first eight months against 67,380 tons in the same period in 2023. Average prices fell in 2024 to \$1384.9 per ton from \$1719.4 in the same period in 2023.

The largest volume of Chinese exports in the first eight months this year was LLDPE where shipments amounted to 18,138 tons, followed by ethylene-hexene copolymers where shipments totalled 18,078 tons.

South Korean Polyethylene Exports to Russia		
	Jan-Aug 24	Jan-Aug 23
Ktons	83.959	59.048
\$ per ton	1272.9	1208.3

Imports of polyethylene shipments into Russia from South Korea surpassed Chinese volumes in the first eight months this year, amounting to 83,959 tons against 59,048 tons in January to August 2023. Average prices rose from \$1208.3 per ton to \$1272.9 per ton.

Russian Propylene Polymers Production by Region (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
Central Federal District	99.239	96.495
Northwestern Federal District	0.447	0.723
Southern Federal District	8.497	8.726
North Caucasus Federal District	85.416	85.219
Volga Federal District	267.849	286.087
Ural federal district	703.879	751.551
Siberian Federal District	228.559	238.163
Total	1393.887	1466.964

Russian polypropylene production Jan-Aug 2024

Russian production of propylene polymers totalled 1.394 million tons in the first eight months in Russia against 1.467 million tons in the same period in 2023. ZapSibNeftekhim reduced production from 751,551 tons to 703,879 tons in January to August 2024, whilst Stavrolen at Budyennovsk increased production from 85,219 tons to 85,416 tons. The Moscow refinery increased polypropylene production from 96,495 tons to 99,239 tons. The Volga region, including Nizhnekamskneftekhim and Ufaorgsintez,

produced 267,849 tons against 286,087 tons. The Siberian region, which includes Tomsneftekhim and Polyom at Omsk, reduced production slightly to 228,559 tons from 238,163 tons.

Production of propylene polymers in Russia is mostly focused on homo grade product and thus most copolymers are imported which is currently from China. The construction of another Russian polypropylene plant at Tobolsk is intended to address some of the shortages for higher grades. The new 570,000 tpa plant at Tobolsk, which started construction in 2023 and should be completed by 2027, should increase the capacity of ZapSibNeftekhim to a total of 1.5 million tpa.

Chinese Imports of PP from Russia		
	Jan-Aug 24	Jan-Aug 23
\$ million	48.385	99.237
Ktons	57.107	126.477
Av \$ per ton	846.8	818.2

The assumption is that instead of selling hydrocarbons that products with high added value are exported from Russia. This assumes global demand will continue to grow and that Russia will have access to international markets.

Chinese Exports of PP to Russia		
	Jan-Aug 24	Jan-Aug 23
\$ million	48.989	80.464
Ktons	24.732	28.812
Av \$ per ton	1980.8	2792.8

Russian-Chinese polypropylene trade Jan-Aug 2024

Both Russian exports of propylene polymers to China and imports from China into Russia dropped in the first eight months after rises recorded in trade since the middle of 2022. Exports of polypropylene from Russia to China dropped from 126,477 tons in the first eight months in 2023 against 57,107 tons in the same period in 2024. Revenues dropped from \$99.237 million to \$48.385 million.

At the same time imports from China dropped from 28,812 tons in the first eight months in 2023 to 24,732 tons in 2024, whilst costs dropped from \$80.464 million to \$48.989 million. Imports from South Korea increased to 28,919 tons against 20,363 tons in 2023.

Russian PTA-PET

Russian PX-PTA-PET production Jan-Aug 2024

Russian paraxylene production amounted to 158,147 tons in the first eight months in 2024 against 163,778 tons in the same period in 2023. Gazprom Neft at Omsk increased production from 47,288 tons to 51,312 tons whilst Ufaneftekhim reduced production from 89,297 tons to 72,618 tons.

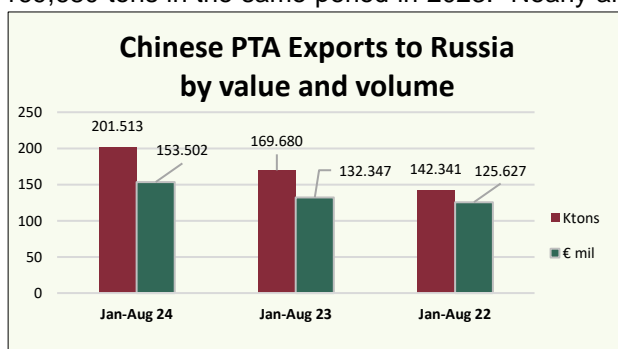
Russian Paraxylene Production (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
Kirishinefteorgsintez	34.217	27.193
Ufaneftekhim	72.618	89.297
Gazprom Neft	51.312	47.288
Total	158.147	163.778

PTA production at Polief amounted to 211,748 tons in the first eight months in 2024, combined with 147,303 tons of PET at Blagoveshchensk in Bashkortostan. Polief is currently Russia's largest producer of PET, surpassing Ekopet at

Kaliningrad. Ekopet produced 144,786 tons of PET in the first eight months in 2024, whilst the combined plants of Senezh and SIBUR-PETF produced 138,365 tons.

Russian PTA imports Jan-Aug 2024

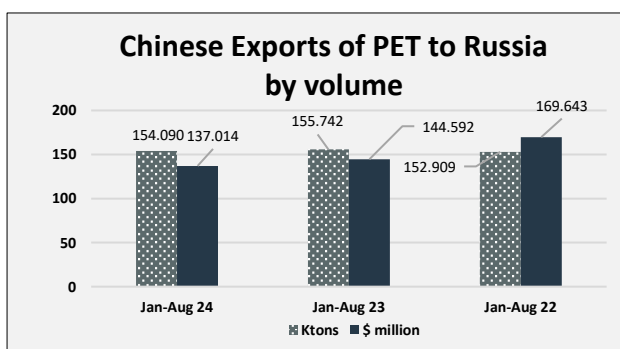
Russian PTA imports from China amounted to 201,513 tons in the first eight months in 2024 versus 169,680 tons in the same period in 2023. Nearly all of the PTA imports from China were shipped to



Ekopet at Kaliningrad by rail. PTA import prices averaged \$759.735 in the first eight months in 2024, down from \$779.758 in 2023. Values of PTA imports amounted to \$153.502 million against \$132.347 million in 2023 and \$125.627 million in the first eight months in 2022.

Tatneft's PTA project planned for Nizhnekamsk is intended to resolve a large part of the import dependency on China, but this new plant is not expected to be completed

for several years. In the meantime, Chinese PTA capacity continues to grow. China is planning three major projects for PTA which if completed would mean that capacity increases by 10.6 million tpa by the end of 2026.



Chinese shipments of PET to Russia amounted to 154,090 tons in the first eight months in 2024 against 155,742 tons in the same period in 2023. Costs of Chinese PET import shipments into Russia dropped from \$144.592 million to \$119.587 million, which meant that average prices fell from \$935.3 per ton to \$887.4 per ton.

Titan-Polymer-Mogilevkhimvolokno

Titan-Polymer and Mogilevkhimvolokno signed an agreement on the supply of PET to Pskov by the end of 2025. The volume of PET is

expected to amount to 15,000 tons.

These contract arrangements are likely to extend into 2026 or as long as Titan-Polymer needs to buy PET for its BOPET production. Chinese company Polytex Engineering Group is expected to be involved in Titan-Polymer's own PET project which will also include capacity for PBT granules. PET production is targeted for launch in 2026, but it may depend on access to all the equipment and components required to construct the plant. Titan believes that the produced granulate will completely cover the plant's need for raw materials for the production of BOPET films and will 100% replace the PBT market in Russia by imports.

Synthetic rubber



Russian synthetic rubber production Jan-Aug 2024

Synthetic rubber production in Russia amounted to 934,141 tons in January to August 2024 against 934,748 tons in the same period in 2023. Production tended to stabilise in the latter part of 2023 but is still much lower than prior to the full-scale Russian invasion of Ukraine.

Russian Butadiene Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
ZapSibNeftekhim	178.195	154.763
Nizhnekamskneftekhim	121.980	120.417
Togliattikaucuk	27.340	30.755
Sterlitamak Petrochemical Plant	17.378	13.940
Omsk Kaucuk	26.224	28.570
Total	371.117	348.445

Russian butadiene production Jan-Aug 2024

Russian butadiene production increased from 348,445 tons in the first eight months in 2023 to 371,117 tons in the same period in 2024. The largest producers ZapSibNeftekhim and Nizhnekamskneftekhim both showed higher production, rising respectively from 154,763 tons to 178,195 tons and from 120,417 tons to 121,980 tons. ZapSibNeftekhim is the only Russian butadiene producer which does not process its own

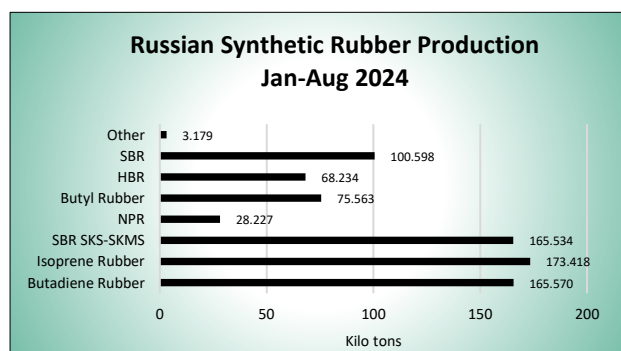
monomer production or extend into the production of synthetic rubber.

Russian Synthetic Rubber Production by Region (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
Central Federal District	199.814	183.516
Northwestern Federal District	1.325	0.224
Volga Federal District	658.497	675.823
Siberian Federal District	74.315	75.182
Total	933.952	934.745

Regional production of synthetic rubber

In terms of regional production, the Volga region is the most important for Russian synthetic rubber production.

This region includes Nizhnekamskneftekhim, Togliattikaucuk, and Sterlitamak Petrochemical Plant, accounting for around 70% of total production. In the first eight months this year the Volga region accounted for 658,497 tons of synthetic rubber against 675,823 tons in the same period in 2023.



Voronezhskintezkaucuk is the main producer of synthetic rubber in the Central Federal District of Russia, where volumes amounted to 199,814 tons in the first eight months against 183,516 tons in the same period last year. This region accounts for around 20% of total production.

Isoprene rubber production amounted to 173,418 tons in the first eight months this year followed by butadiene rubber with 165,570 tons and SKS-SKMS rubber with 165,534 tons. The highest value rubber sold by Russia is halogenated butyl rubber where production totalled 68,234 tons in the first eight months this year.

The Sterlitamak Petrochemical Plant (SNHZ) plans to increase the production of neodymium polyisoprene from the current 28,000 tpa to 96,000 tpa. This increase will take place in several steps, rising to 40,000 tpa in the first stage. Sintez-Kauchak is the only Russian manufacturer of isoprene rubber based on a neodymium catalytic system. The company produces neodymium polyisoprene grades: SKI-5 for the production of tyres and rubber goods, as well as SKI-5PM which is designed for the manufacture of food and medical products.

Russian rubber consumption 2024

Tyre production in Russia required 222,500 tons of synthetic and natural rubber in the first eight months in 2024 against 194,900 tons last year but still lower than the 239,600 tons in the first eight months in 2022. Manufacturers have never fully recovered from the downturn associated with production restrictions due to the COVID-19 pandemic which was then followed in 2022 with the exodus of Western companies from the market.

Russian Tyre Production (unit-kilo tons)			
Product	Jan-Aug 24	Jan-Aug 23	Jan-Aug 22
Car Tyres	186.1	153.2	202.2
Lorry tyres	31.3	35.3	30.7
Agricultural tyres	5.1	6.4	6.7
Total	222.5	194.9	239.6

SIBUR is working with tyre companies to replace natural rubber with synthetic rubber in car tyres. Synthetic rubber produced in Russia is almost all consumed by the tyre industry, while natural rubber is partially used in tyres.

Omsk Kaucuk is short of staff in many areas from the commercial department to the technical sector, and it is becoming increasingly difficult to fill these posts even with higher salary offers.

The significance to Russian synthetic rubber sales on the domestic market stems from SIBUR's agreement with Russian tyre manufacturer Cordiant to replace natural rubber with synthetic rubber.

The aim is to replace natural rubber with isoprene rubber, which is commonly assessed as being the closest analogue. Tyre manufacture in Russia is based on around 25% of natural rubber which is imported from Asia, from Thailand, Indonesia and Vietnam. SIBUR aims to replace around 80% of natural rubber with isoprene rubber which it produces at Nizhnekamskneftekhim.

Isoprene rubber is also produced in Russia by Togliattikaucuk and Sterlitamak Petrochemical Plant. SIBUR claims in the past two years to have replaced most of the synthetic rubber grades where Russia was previously dependent on imports.

Chinese Imports of Synthetic Rubber from Russia (\$ million)		
Product	Jan-Aug 24	Jan-Aug 23
SBRs	92.563	67.423
Butadiene Rubber	118.087	90.507
Butyl Rubber	111.271	99.647
HBR	120.507	75.061
NBR	30.026	31.437
Isoprene Rubber	68.259	57.367
Others	47.278	53.644
Total	587.991	475.087
Av \$ per ton	1627.6	1427.2

Chinese Imports of Synthetic Rubber from Russia (unit-kilo tons)		
Product	Jan-Aug 24	Jan-Aug 23
SBRs	62.304	58.327
Butadiene Rubber	79.378	71.040
Butyl Rubber	66.210	65.103
HBR	56.984	37.198
NBR	22.593	21.815
Isoprene Rubber	43.700	38.928
Others	30.081	40.488
Total	361.251	332.899
Av \$ per ton	1627.6	1427.2

Russian Chinese rubber trade Jan-Aug 2024

Russian exports of synthetic rubber to China totalled \$587.991 million in the period January to August 2024 against \$475.087 million in the same period in 2023. The largest cost to China was achieved in the shipment of halogenated butyl rubber which totalled \$120.507 million in the first eight months in 2024, up from \$75.061 million in January to August 2023.

By volume Russian shipments amounted to 361,251 tons in the first eight months in 2024 versus 332,899 tons in the same period in 2023. By volume butyl rubber exports from Russia to China increased from 65,103 tons in January to August to 66,210 tons in the same period this year.

Butadiene rubber exports increased from 71,040 tons to 79,378 tons whilst halogenated butyl rubber exports recorded a significant increase, rising from 37,198 tons to 56,984 tons. Isoprene rubber exports increased from 38,928 tons to 43,700 tons. Nitrile-butadiene rubber exports to China amounted to 22,593 tons in the first eight months in 2024 against 21,815 tons in the same

period in 2023. The sole producer in Russia is Krasnoyarsk Synthetic Rubber Plant which is owned by SIBUR.

Methanol

Russian Methanol Production (unit-kilo tons)		
Region	Jan-Aug 24	Jan-Aug 23
Central Federal District	402.721	432.627
Northwestern Federal District	35.058	28.794
North Caucasus Federal District	32.675	28.506
Volga Federal District	557.520	528.580
Ural federal district	22.592	22.569
Siberian Federal District	245.649	271.725
Total	1296.215	1312.801

Russian methanol production Jan-Aug 2024

Russia produced 1.296 million tons of methanol in the first eight months in 2024 against 1.313 million tons in the same period in 2023. The largest producer Shchekinoazot decreased production from 432,627 tons to 402,721 tons. The Volga region increased production from 528,580 tons to 557,520 tons, whilst the Siberian Federal District (including Gazprom Methanol and Angarsk Petrochemical) reduced production from 271,725 tons to 245,649 tons.

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Azot Nevinnomyssk	9.839	5.205
Azot Novomoskovsk	48.035	48.032
Metafrax Chemicals	144.245	258.495
Gazprom Methanol	197.734	265.115
Tomet	93.540	70.894
Shchekinoazot	327.819	458.548
Total	821.213	1106.290

Regarding some of the smaller producers, Azot at Nevinnomyssk increased production from 28,506 tons to 32,675 tons which correlated with the increase in acetic acid production. Other plants where methanol is consumed internally include Akron, Angarsk Petrochemical and Novatek. Akron uses methanol for formaldehyde production, Angarsk Petrochemical uses methanol for MTBE and Novatek uses methanol for gas processing.

Russian methanol exports Jan-Aug 2024

Russian methanol exports amounted to 821,213 tons in January to August 2024 versus 1106,290 tons in the same period in 2023. Shchekinoazot reduced exports from 458,548 tons to 327,819 tons in the first eight months this year, whilst Metafrax Chemicals reduced shipments from 258,495 tons to 144,245 tons. Tomet exported 93,540 tons versus 70,894 in January to August 2023. Gazprom Methanol reduced exports in 2024 to 197,734 tons from 265,115 tons.

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Belarus	81.684	102.502
China	556.851	534.730
Finland	0.000	106.441
Germany	0.000	5.265
Kazakhstan	39.671	31.818
Latvia	0.000	1.230
Lithuania	0.000	9.019
Netherlands	0.000	20.814
Poland	0.000	126.002
UAE	13.022	4.146
Turkey	129.945	164.322
Others	0.110	0.000
Total	821.213	1106.290

Azot at Novomoskovsk exported 48,035 tons in January to August shipped mostly through the Temyruk and Kavkaz ports to Turkey. Metafrax Chemicals reduced exports from 258,495 tons to 144,245 tons.

Exports to China amounted to 556,851 tons in the first eight months in 2024 against 534,730 tons in the same period in 2023. Volumes to Turkey dropped from 164,322 tons to 129,945 tons.

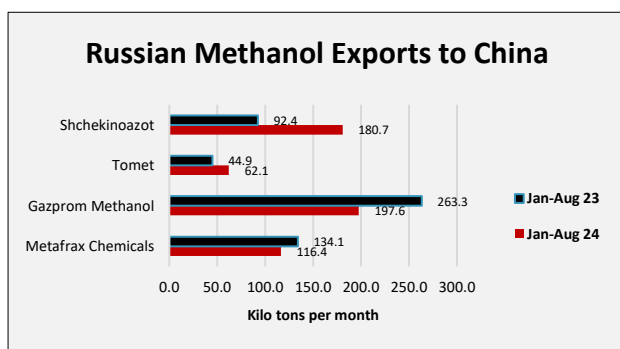
Although China has replaced Finland as Russia's main export destination for methanol exports, most of the Russian methanol plants are located in the western

parts of the country which means that the freight distances are much larger and costlier than to the EU markets.

Russian Methanol Exports to China (unit-kilo tons)		
Exporter	Jan-Aug 24	Jan-Aug 23
Metafrax Chemicals	116.384	134.138
Gazprom Methanol	197.606	263.289
Tomet	62.149	44.927
Shchekinoazot	180.712	92.376
Total	556.851	534.730

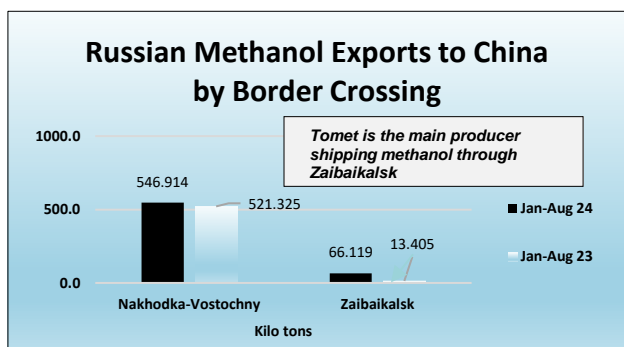
Despite the geographical factors Shchekinoazot increased exports to China in the first eight months in 2024 to 180,712 tons against 92,376 tons in the same period last year. Gazprom

Methanol remained the largest Russian supplier, shipping 158,047 tons in the first eight months although this was reduced from 206,530 tons last year.



Metafrax Chemicals reduced exports from 117,194 tons to 95,524 tons whilst Tomet increased shipments from 15,672 tons to 62,149 tons.

Most of the exports to China are conducted through the port of Nakhodka-Vostochny, accounting for 99.9% of shipments in the first eight months in 2023. However, this share has declined to 85.7% in the first half of 2024 with Zabaikalsk playing a more important role. Tomet is the main user of the Zabaikalsk route but has reduced shipments in the third quarter. Notwithstanding, for the first eight months this year Tomet shipped 62,149 tons through Zabaikalsk. The only other producer to use this route was Metafrax Chemicals which shipped 3,970 tons in June.



Regional distribution of Russian methanol imports into China fluctuates over a period of a few months. In the first eight months in 2024 the Zhejiang Province imported 173,914 tons of methanol from Russia, accounting for 31% of

total imports. This measures against 237,744 tons in January to August 2023, accounting for 44% of total imports. The Shanghai province accounted for 246,714 tons of imports from Russia in the first eight months this year, accounting for 44% of total imports against zero last year.

Chinese prices paid for Russian methanol imports has only exceeded \$300 per ton once since the start of 2023, and price levels below that threshold present challenges to all producers shipping product to China. According to Chinese statistics imports of methanol from Russia totalled 538,602 tons in the

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Azot Nevinnomyssk	5.191	4.479
Azot Novomoskovsk	13.560	0.000
Metafrax Chemicals	243.945	217.346
Gazprom Methanol	175.481	157.675
Tomet	136.813	148.147
Shchekinoazot	184.958	193.032
Ammoni (Mendeleevsk)	16.852	16.280
Total	776.800	736.959

first eight months in 2024 against 559,751 tons in the same period in 2023, with costs rising from \$123.733 million to \$160.028 million.

Russian methanol domestic sales, Jan-Aug 2024

Domestic merchant sales of methanol increased in the first eight months in 2024 to 776,800 tons against 736,959 tons in the same period in 2023. Domestic merchant sales have helped methanol producers offset lower exports. This has enabled plants to operate at technically manageable levels

of utilisation.

Metafrax Chemicals increased domestic merchant sales to 176,279 tons in January to August 2024 against 131,195 tons in 2023, whilst Gazprom Methanol increased domestic merchant sales to 126,081 tons in January to August 2024 against 111,838 tons. From 1 February 2024, Metafrax became part of the Roskhim state holding which has since solidified its control of the company by acquiring all the shares through an auction.

Russian Formaldehyde Production (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Total	629.019	545.592

tons in the first eight months last year to 258,420 tons whilst Akron at Novgorod increased production from 87,748 tons to 111,607 tons. Nizhnekamskneftekhim is the largest non-producing methanol consumer in Russia.

Nakhodka methanol project-equipment delivery

Construction activity of the Nakhodka methanol plant in the Far East is finally seeing some progress and is probably the only Russian project where there is some active development. Columns for the methanol synthesis unit at the project site arrived at the port of Nakhodka in the early part of October, although it is not clear from where they were sourced. Preparations for the installation of the columns at the construction site are reported to be almost complete. For the largest, 80-metre raw methanol stabilisation column, a crane with a capacity of 1700 tons has been specially made whilst a foundation has also been prepared for the column.

Nakhodka Plant of Mineral Fertilisers plans to start installing the main equipment this year. Over 5,000 people are working on the project and more than 200 units of equipment are involved. Most of the contractors are local businesses. The methanol plant is being designed with a capacity of 1.8 million tpa, most of which is intended for export to China. The second stage of the project involves the construction of a urea plant with a capacity of 3.0 million tpa.

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Angarsk Petrochemical company	16.664	20.276
Azot Nevinnomyssk	9.917	11.141
Gazprom neftekhim Salavat	36.191	44.431
SIBUR-Khimprom, Perm	24.312	20.598
Total	87.084	93.385
Russian Isobutanol Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Angarsk Petrochemical Company	13.411	17.057
Gazprom neftekhim Salavat	20.243	13.465
SIBUR-Khimprom, Perm	63.526	48.789
Total	97.180	79.311

Russian butanol production Jan-Aug 2024

Russian normal butanol production dropped from 93,385 tons in January to August 2023 to 87,084 tons in the same period in 2024. Gazprom neftekhim Salavat was the largest Russian producer, reducing volumes to 36,191 tons from 44,431 tons.

Isobutanol production in Russia increased from 79,311 tons to 97,180 tons in January to August 2024. Gazprom neftekhim Salavat increased production from 13,465 tons to 20,243 tons, whilst SIBUR-Khimprom increased production from 48,789 tons to 63,526 tons.

Russian solvent production Jan-Aug 2024

Russian acetone production dropped from 107,785 tons in the first eight months last year to 102,195 tons in 2024. Omsk Kaucuk produced 32,113 tons of acetone against 25,874 tons in the previous year whilst Kazanorgsintez reduced production from 37,683 tons to 31,809 tons. The other two producers Ufaorgsintez and Novokuibyshevsk Petrochemical Combine both increased production.

Russian Acetone Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Ufaorgsintez	21.214	23.780
Kazanorgsintez	31.809	37.683
Novokuibyshevsk Petrochemical	17.059	20.448
Omsk Kaucuk	32.113	25.874
Total	102.195	107.785

Russian acetic acid production amounted to 176,258 tons in January to August 2024 against 139,026 tons in the same period in 2023.

The largest producer in Russia, Azot at Nevinnomyssk, increased production from 113,544 tons to 114,918 tons. Aside using acetic acid for the production of butyl acetate and methyl acetate Azot supplies merchant acetic to the Russian domestic market. The two largest customers include Polief

Russian Acetic Acid Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Azot Nevinnomyssk	114.918	113.544
Others	61.340	25.482
Total	176.258	139.026

which purchases acetic acid for PTA and Stavrolen which uses acetic acid in the production of vinyl acetate monomer (VAM).

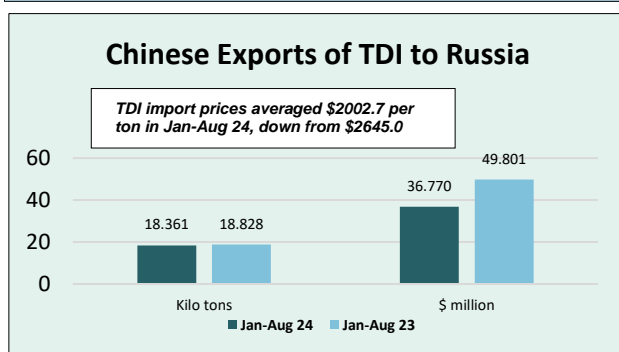
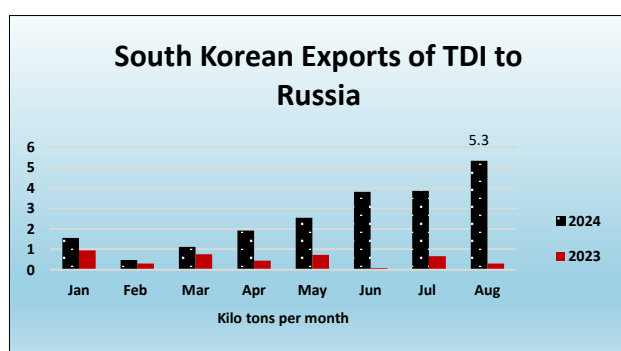
Stavrolen produced 13,746 tons of VAM in the first eight months this year from the country total of 16,163 tons. VAM is exported from Stavrolen in quantities of around 2,000 tons per month, most of which goes to Turkey.

Isopropanol production in Russia amounted to 46,323 tons in January to August 2024 against 43,501 tons in the same period in 2023. Omsk Kaucuk increased production from 22,710 tons to 28,456 tons whilst the Plant at Synthetic Alcohol at Orsk reduced production from 20,792 tons to 17,867 tons. Omsk Kaucuk only started isopropanol production in 2020 and only achieved high utilisation rates in 2023.

Russian Isopropanol Production (unit-kilo tons)		
Producer	Jan-Aug 24	Jan-Aug 23
Plant of Synthetic Alcohol	17.867	20.792
Omsk Kaucuk	28.456	22.710
Total	46.323	43.501

SIBUR-Neftekhim has resumed the production of ethyl acrylate at its plant in Dzerzhinsk, with a capacity of 32 tons per day. The light ether production unit is capable of producing two products, either ethyl acrylate or methyl acrylate. SIBUR has chosen to increase the production of ethyl acrylate for the domestic market, providing the biggest opportunity for sales. Currently the company is the only producer of these light esters in Russia, as well as the heavy ester of 2-ethylhexyl acrylate.

Russian polyurethane raw materials



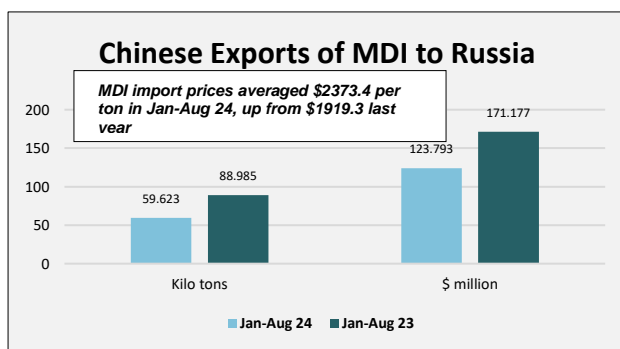
Isocyanate/polyol imports into Russia

TDI imports into Russia from South Korea have increased this year, rising from 4,216 tons in January to August 2023 to 20,614 tons in January to August 2024, including 5,313 tons alone in August. The increase has taken place in 2024 as China has been unable to supply more TDI to compensate for the loss of Western imports. Prices of imports from South Korea amounted to \$1941.3 per ton in the first eight months in 2024 against \$2205.0 per ton in 2023.

TDI imports from China into Russia amounted to 18,361 tons in January to August 2024 against 18,828 tons in the same period in 2023. Due to much lower prices, costs of Chinese imports dropped from \$49.801 million to \$36.770 million in 2024.

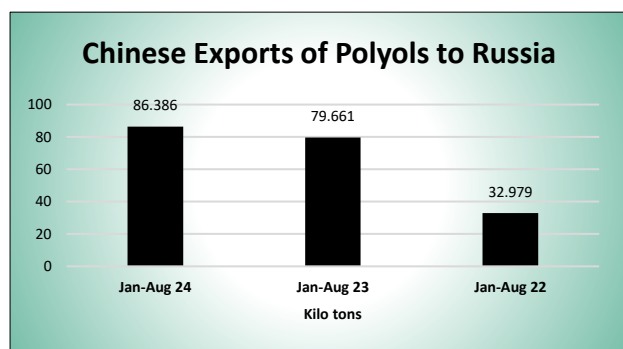
The main isocyanate imported into Russia is MDI, which accounted for 75.4% of all imports in this segment in 2023. The share of

Chinese MDI in imports increased from 22.7% in 2021 to 53.5% in 2023. However, imports from China fell from 88,985 tons in the first eight months in 2023 to 59,423 tons in January to August 2024. Costs of imports fell from \$171.177 million to \$123.793 million.



The shortage of critical imported MDI has put some Russian companies into some difficulty. Isocyanates are not produced in Russia, almost 100% of the consumed volume was previously imported from Europe, the US and Japan.

Polyol imports into Russia from China increased from 79,661 tons in January to August 2023 to 86,386 tons in the same period in 2024. Import costs rose from \$122.700 million in the first eight months in 2023 to \$122.336 million this year. Average prices increased from \$1565.0 per ton in 2023 to \$1617.9 in 2024.



Not only Chinese companies have started to refuse to supply raw materials to Russia and Belarus, but Saudi Arabia has also been unwilling to offer MDI. The only way out is for Russia to build its own production, it has been highlighted at government level as without it many supply chains are affected.

Polyurethane consumption in Russia is stable, although sellers of foam are concerned about the implications of inflation and almost inevitably lower volumes. Investments into

polyurethanes continue even if they are quite modest.

Kazakhstan-Central Asia

Kazakh production of PP Jan-Aug 2024

Kazakhstan Petrochemical Industries produced 165,000 tons of polypropylene in the first eight months in 2024, of which 13,000 tons were sold on the domestic market and around 150,000 tons were exported. KPI produces eight grades of polypropylene, five of which have not been previously produced in Kazakhstan. Products are exported to Europe, China, Russia and Turkey, with a special focus on supporting Kazakh processors.

Kazakh Exports of PP to China		
	Jan-Aug 24	Jan-Aug 23
Kilo tons	64.127	57.197
\$ million	48.796	45.204

Chinese Exports of PET to Uzbekistan and Kazakhstan (unit-kilo tons)		
Country	Jan-Aug 24	Jan-Aug 23
Kazakhstan	34.0	36.3
Uzbekistan	77.8	59.5

Kazakh exports of polypropylene to China amounted to 64,127 tons in the first eight months in 2024 against 57,197 tons in the same period in 2023, with revenues rising from \$45,204 million to \$48.796 million.

Kazakh polyethylene project-construction

A joint venture between Técnicas Reunidas SA and Sinopec Engineering Group Co. has been awarded a contract by KazMunayGaz worth about €2.3 billion. Under the terms of the agreement, the company will design and build an ethane cracker for Silleno's ethylene and polyethylene complex in Atyrau. According to Técnicas, the capacity of the steam plant will be 1.3 million tpa of ethylene. Its construction is expected to be completed by the end of 2028, and then launched in January 2029. The total duration of construction is 45 months with the start taking place in May 2025.

Uzbek polyethylene exports Jan-Aug 2024

Uzbekistan exported 174,100 tons of polyethylene in the first eight months, with revenues of \$141.1 million. Polyethylene exports increased by 11,700 tons compared to the corresponding period in 2023. The largest recipient of Uzbek exports was Turkey, taking 80,200 tons in the first eight months. This was followed by Latvia with 27,400 tons, Russia with 23,500 tons and China 20,100 tons. Production of polyethylene in Uzbekistan increased by 7.3% in the first eight months in 2024 to 285,300 tons, meaning that 61% goes to export.

Azerbaijan Methanol Market (unit-kilo tons)		
	Jan-Aug 24	Jan-Aug 23
Production	336.6	302.0
Exports	322.3	294.8
Value \$ mil	65.3	59.2

SOCAR Jan-August 2024

In the first eight months in 2024 methanol exports amounted to 322,262 tons which is 9.3% higher than the same period in 2023. The value of exports increased by 10.4% to \$65.308 million. Production increased from 302,000 tons to 336,600 tons, with methanol inventories at the start of September amounting to 13,800 tons.

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