CIREC monthly NEWS

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

Telephone: +441202 959770 Email: support@cirec.net **Web:** www.cirec.net

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

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Key points from this issue

Central European petrochemical markets

- Ethylene production in Central Europe amounted to 676,800 tons in the first half this year, down from 840,000 tons in the same period in 2022
- Ethylene production in Poland dropped from 202,400 tons in January to July 2022 to 152,800 tons this year, whilst propylene fell from 196,400 tons to 133,500 tons
- Propylene imports into the Czech Republic rose from 24,007 tons in January to July 2022 to 43,538 tons this year, with main suppliers including Germany, Romania and Poland
- Hungarian TDI exports dropped in the first four months this year to 78,395 tons against 105,489 tons in the same six months in 2022
- MDI exports from Hungary dropped in the first six months to 116,749 tons from 91,725 tons in the same period last year
- Polish polypropylene imports, including homo grade and copolymers, fell in January to July 2023 to a total of 487,085 tons versus 567.337 tons in January to July 2022

Regional methanol markets

- Imports of methanol into Poland totalled 382,308 tons in January to July this year versus 556,017 tons in January to July 2022, with Russia reducing shipments from 421,894 tons to 185,561 tons.
- Exports of methanol from Poland amounted to 184,401 tons in January to July against 248,838 tons in January to July 2022
- Russia produced 2.296 million tons of methanol in the first seven months in 2023 against 2.646 million tons in the same period in 2022
- Shchekinoazot reduced exports from 662,600 tons to 408,000 tons whilst Metafrax Chemicals increased shipments from 246,800 tons to 254,800 tons this year

Russian synthetic rubber production and trade

- Synthetic rubber production in Russia amounted to 838,000 tons in January to July 2023 against 902,000 tons in the same period in 2022
- Russian butadiene production totalled 219,115 tons in the first seven months against 269,559 tons in the same period in 2022
- Russian exports of synthetic rubber to China totalled $444.7 million in the period January to July 2023 against $287.7 million in 2022

Russian chemical industry news

- Renationalisation of Metafrax was confirmed on 8 September after the failure of the appeal by the company's legal shareholders. Owners of many other companies are concerned
- The Arbitration Court of the Volgograd Region approved the so-called renationalisation of Volzhsky Orgsintez
- The Russian Ministry of Industry and Trade has prepared amendments to the legislation allowing the development of ports for the transhipment of methanol and ammonia
- The production of plastics in Russia totalled 6.268 million tons in the first seven months this year against 6.117 million tons in the same period last year.
- The production of polyethylene rose from 2.031 million tons to 2.117 million tons in the first seven months in 2023

CENTRAL and SOUTH EAST EUROPE

Hungarian Crude Imports Jan-Jun 2023		
Country	***Kilo tons***	***€ per ton***
Azerbaijan	90.323	527.4
Croatia	244.569	582.8
Iraq	225.427	439.0
Kazakhstan	480.764	568.9
Russia	2185.022	341.2
Others	0.720	504.0
Total	3226.826	404.3

Polish Imports of Crude Oil Jan-Jul 2023		
Country	***Vol (million tons)***	***€ per ton***
Saudi Arabia	7.241	557.1
Lithuania	0.019	563.1
Russia	1.150	316.4
Nigeria	1.118	606.2
Norway	4.274	545.6
US	0.736	586.2
UK	0.706	599.5
Total	15.244	542.7

Central European Refining Volumes (unit-mil tons)		
Company	***Jan-Jun 23***	***Jan-Jun 22***
INA	1.2	2.1
Orlen Lotos	0.0	4.3
Lukoil Bourgas	1.2	1.2
Lukoil Ploiesti	1.3	1.4
MOL	5.3	5.2
NIS	2.0	2.1
Orlen-Lietuva	4.3	3.3
Orlen-Plock	10.8	8.4
Petrom	2.3	2.2
Rompetrol	2.9	2.5
Slovnaft	1.3	1.3
Orlen Unipetrol	3.3	3.3
Total	35.9	37.2

MOL crude purchases 2023

Despite concerns over crude supply from Russia MOL's purchases of Urals blend accounted for 61% of total oil imports in the first half of 2023. Average prices of €341.2 per ton achieved by MOL from Russia mare much lower than any of the alternative suppliers. Hungary has asked the EU for a one-year extension of an exemption from sanctions against Russia for MOL and also for Slovnaft to export products refined from Russian oil to the Czech Republic. The EU is reluctant to extend the exemption, but MOL claims that it needs one more year to complete investment at its refineries. Last year, only about 5% of Slovnaft's oil intake was non-Russian but this will rise to about 30%-35%, or 2 million tons, by the end of 2023.

MOL has already started transporting crude oil from its oil field in Azerbaijan to Slovnaft in Bratislava via the Adria oil pipeline. MOL and Slovnaft have agreed with JANAF on a fee for the use of the Adria pipeline, which plays an important role in securing alternative oil supplies for the CEE region. Slovnaft has been using the Adria pipeline more actively since February this year. However, both Slovnaft and MOL believe that the current agreement does not create a sustainable long-term basis for supplies via the Adria pipeline to Slovakia.

The Orlen Group in Poland has secured further supplies of crude oil from Norwegian fields in the North Sea. The agreement signed with BP provides for the supply of up to 6 million tons of raw material during the year for the Plock refinery. Supplies from Norway even exceeded supplies from Saudi Arabia in July. From the total of 15.244 million tons of crude imported into Poland in the first seven months, supplies from Saudi Arabia totalled 7.241 million tons at €557.1 per ton and from Norway 4.274 million tons at €545.6 per ton.

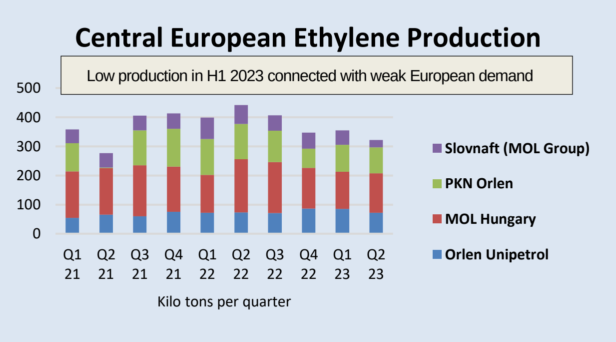
The Czech Republic consumes around 8.0 million tpa of which around two thirds currently is sourced from Russia. In future larger volumes will be steadily ensured by the TAL crude oil pipeline leading from Trieste. The second half of 2024 will be particularly difficult, when the capacity of the TAL pipeline will be temporarily limited due to modifications and expansion to 4.0 million tpa.

Refining Central Europe

Refining volumes in Central and South East Europe were slightly lower in the first half of 2023 against the same period in 2022, due partly to demand side factors and the adaptation of the Gdansk refinery into the Orlen Group. Supply side dynamics has seen the greatest change with the reduction in purchases from Russia and diversification into other sources.

Purchasing crude from Russia is faced with EU sanction deadlines but most countries have come up with diversification strategies even if they have still continued to buy. Bulgaria has been granted an exception to the EU ban on Russian crude by the end of 2024, but there are efforts by the Bulgarian government to stop buying Russian crude sooner than the exception allowed. This could put pressure Lukoil to sell its business in Bulgaria. Paradoxically the Bourgas refinery processes Russian oil and then sells oil products to Ukraine for the armed forces against Russia. Lukoil may also face pressures to sell its assets at the Ploesti refinery in Romania.

Central European Olefin Production, Trade & Projects



Central European ethylene production Jan-Jun 2023

Ethylene production in Central Europe amounted to 676,800 tons in the first half this year, down from 840,000 tons in the same period in 2022. Production falls have been influenced by lower demand combined with higher costs. Both MOL and Orlen groups have undertaken extended maintenance this year and thus all plants have recorded lower production than in the first half of 2022.

PKN Orlen Production (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Ethylene	215.4	279.2
Propylene	185.6	266.0
Butadiene	35.5	37.1
Toluene	0.5	5.2
Phenol	24.7	25.3
Polyethylene	180.1	190.2
Polypropylene	160.5	207.2
PVC	120.3	183.2

Polish petrochemical production Jan-July 2023

Ethylene production in Poland dropped from 279,200 tons in January to July 2022 to 215,400 tons this year, whilst propylene fell from 266,000 tons to 185,600 tons. Butadiene production at Plock dropped to 35,500 tons from 37,100 tons. In the plastics sector polyethylene production dropped to 180,100 tons in January to July 2023 versus 190,200 tons in corresponding period last year and polypropylene dropped from 207,200 tons to 160,500 tons.

Orlen Group Petrochemicals Jan-Jun 2023

The Orlen Group reported strong overall results in the first half of 2023 although profits were limited by the petrochemical division which recorded operating losses in each of the first two quarters. Whilst costs of energy and raw materials have declined in the first half of 2023 sales revenues from petrochemicals have declined at a greater rate, thus resulting in operating losses of €146 million in the first half in 2023. This compares against an operating profit of €385 million in the first half of 2022.

Orlen Petrochemical Divisional Performance (€ million)					
€ million	**Q2 22**	**Q3 22**	**Q4 22**	**Q1 23**	**Q2 23**
Sales revenues	2,009	1,612	1,446	1,271	1,071
External revenues	1,623	1,283	1,150	1,002	826
Inter-segment revenues	386	329	296	269	245
Total operating expenses	(1,751)	(1,542)	(1,419)	(1,365)	(1,194)
Profit/(Loss) from operations	306	79	42	(46)	(100)
Sales (thousand tons)	306	252	255	252	257

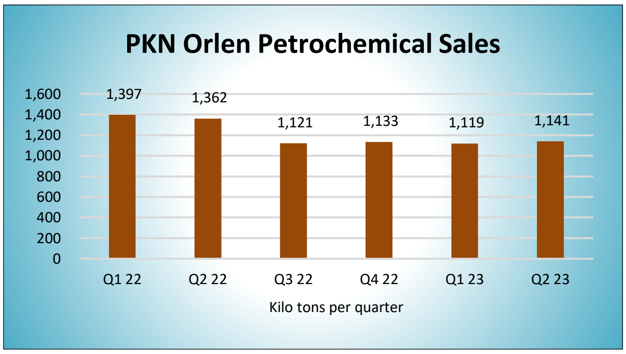
Sales revenues for the entire Orlen Group's petrochemical activities dropped in the second quarter of 2023 to €1071 million against €2009 in the same quarter in 2022 whilst costs dropped from €1751 million to €1194 million.

Orlen Petrochemical Margins (€ per ton)						
	Q1 22	***Q2 22***	***Q3 22***	***Q4 22***	***Q1 23***	***Q2 23***
Ethylene	664	810	639	606	668	664
Propylene	679	820	598	514	564	554
Toluene	155	450	619	428	413	455
Benzene	333	422	429	115	312	393
Butadiene	410	547	614	489	396	369
PX	262	586	586	593	544	481

Orlen's petrochemical divisions mostly reflected lower rates in the first half of 2023. Lower margins were recorded on olefins, polyolefins and fertilisers. For PTA, lower sales were recorded by 37% over the same period in 2022, whilst olefin sales dropped by 23%, polyolefins by 9% and fertilisers by 1%.

Petrochemical margins for PKN Orlen remain relatively high despite the weaker performance in the past few quarters. Positive margins helped to offset the high energy costs in 2022 which affected European petrochemical producers.

Although olefin margins for ethylene and propylene were lower in the second quarter against the corresponding period last year, it should be noted that April to June 2022 was an exception to the historical average margin levels. In the second quarter this year ethylene margins amounted to €664 per ton in the second quarter against €810 in Q2 2022 whilst propylene dropped from €820 per ton to €554 per ton.



Butadiene margins amounted to €369 per ton in the second quarter this year, after peaking at €614 in the third quarter last year. In the aromatics sector benzene, toluene and paraxylene margins showed a gradual declining trend in the first two quarters although historically in line with average numbers.

The main problem for Orlen Group's petrochemical sales in 2023 has been lower sales due to weaker economic trends. The first half of 2022 saw sales of 2.759 million tons drop to 2.260 million tons in 2023. The slowdown started abruptly in the third quarter in 2022 and this trend is expected to stay the same for the rest of this year.

Orlen Group Petrochemical Plant Utilisation Rates %		
Division	***Q1 23***	***Q2 23***
Olefins (Płock)	78	70
BOP (Płock)	70	67
Metathesis (Płock)	51	18
Fertilisers (Wloclawek)	81	60
PVC (Wloclawek)	64	42
PTA (Wloclawek)	66	51
Olefins (Orlen Unipetrol)	85	49
PPF Splitter (Orlen Lietuva)	81	80

Orlen Group utilisation rates

Utilisation rates this year have been affected by a combination of demand side factors and maintenance. The olefins complex at Plock operated at 78% of capacity in the first three months in 2023, which then dropped to 70% in the second quarter. Orlen has scheduled a shutdown at the Olefin 11 plant at Plock from 4 October to 13 October, although these dates are provisional.

Lower olefin production in the first half was partly influenced by the production problems at Anwil's PVC plant, which only ran at 64% in the first quarter and then 42%. Utilisation in the second quarter was also affected by other shutdowns. Other facilities at Plock such as the BOP division ran at 67% in the second quarter due to weak demand from polyolefins after running at 70% in the first quarter. The Metathesis plant at Plock ran at only 18% in the second quarter due partly due to maintenance on the FCC 11 unit.

In other areas of Orlen Group's petrochemical division, PTA production at Wloclawek at 66% of capacity in the first quarter which then dropped to 51% in the second quarter due to weak demand and maintenance downtime. In the Czech Republic Orlen Unipetrol's olefin complex operated at 85% in the first quarter but then dropped to 49% in the second quarter due to a steam cracker maintenance shutdown and fire on polypropylene installation on 23 May. In Lithuania the PPF Splitter reported 80% utilisation in the second quarter due to the lack of downtime.

Orlen petrochemical investments

The construction of the Olefiny III Complex is a interpreted as a necessary step towards transforming the group's existing refining and petrochemical assets at Plock. Introducing new petrochemical assets at Gdansk could also help the integration of petrochemical processes within the Orlen Group and unlock operational synergies. Orlen is in the early stages of foundation work on its Olefiny III investment but the process will accelerate by the end of the year. By the end of 2023 up to 10,000 workers could be employed on the project.

Regarding other investments, Orlen is currently assessing the construction of a new ethylene pipeline is to run from Płock to Wloclawek, allowing the shipment of ethylene to Anwil. The route of the pipeline has been defined in the environmental impact report of the project, as well as in the draft local spatial development plans of individual municipalities. Anwil uses ethylene for the production of PVC supplied by pipeline directly from Orlen's petrochemical installations in Płock. Chlorine produced in Anwil in the process of brine electrolysis, is supplied by pipeline from IKS SOLINO.

Polish Monomer Import Costs (€ per ton)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Propylene	943.5	1344.6
Butadiene	955.4	1094.9
Styrene	1251.2	1693.6

Polish propylene & butadiene imports, Jan-Jul 2023

Poland imported 74.464 tons of propylene in January to July against 86,810 tons in January to July 2022. Market sources of propylene imports into Poland have changed significantly in the past year. To replace imports from traditional suppliers Russia and Ukraine, imports this year apart from Germany have been sourced from Bulgaria, the Czech Republic, the Netherlands and Serbia. Although volumes overall declined slightly, average prices dropped from €1344.6 per ton in January to July last year to €969.3 this year. Prices for propylene started falling in the latter part of the 2022 following feedstock trends. Whilst feedstock prices have fluctuated this year, the weak demand has been one of the main factors affecting prices.

Polish Imports of Propylene (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Bulgaria	11.139	3.983
Czech Republic	7.487	1.958
Germany	34.540	38.307
Russia	0.000	21.625
Ukraine	0.000	17.018
Serbia	4.828	0.000
Netherlands	13.903	0.000
Others	2.567	3.918
Total	74.464	86.810
Av € per ton	943.5	1344.6

Butadiene import prices for Poland dropped from €1094.9 per ton in January to July 2022 to €955.4 in January to July this year, with volumes declining from 60,998 tons to 43,538 tons.

Czech propylene & butadiene trade Jan-Jul 2023

Propylene imports into the Czech Republic rose from 24,007 tons in January to July 2022 to 29,109 tons this year, with main suppliers including Germany, Romania and Poland. Average prices for propylene imports dropped in the first seven months in 2023 to €906.2 per ton against €1373.0 per ton.

Czech Imports of Propylene (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Germany	23.351	12.089
Bulgaria	3.742	0.000
Poland	0.000	3.926
Romania	1.048	5.251
Russia	0.000	1.220
Slovakia	0.066	0.993
Ukraine	0.000	0.524
Others	0.901	0.004
Total	29.109	24.007
Av € per ton	906.2	1373.0

Exports of propylene are rarely possible from the Czech Republic, but in May this year a surplus allowed shipments of 4,928 tons to Poland, 1,033 tons to Germany and 594 tons to Slovakia.

Imports of butadiene into the Czech Republic amounted to 48,036 tons in January to July 2023, all of which was supplied by Germany and Hungary. Imports increased this year from 43,972 tons in the first seven months in 2022.

Hungarian propylene exports Jan-Jun 2023

Exports of propylene from Hungary were slightly up in the first six months, amounting to 42,599 tons versus 40,673 tons in the same period in 2022.

Hungarian Propylene Exports (unit-kilo tons)		
Country	***Jan-Jun 23***	***Jan-Jun 22***
Germany	0.000	3.184
Poland	1.019	2.915
Slovakia	41.580	34.574
Total	42.599	40.673
Av € per ton	1132.7	1300.3

Export prices from Hungary dropped from €1300.3 per ton to €1132.7 per ton. Exports to Slovakia from MOL to Slovnaft rose from 34,574 tons to 41,580 tons in January to June 2023. Slovnaft uses propylene for the production of polypropylene. Although MOL currently produces more propylene than it consumes it is currently building a new propylene plant with a capacity of 100,000 tpa.

Hungarian Butadiene Exports (unit-kilo tons)		
Country	***Jan-Jun 23***	***Jan-Jun 22***
Czech Republic	11.900	4.088
Germany	1.995	5.035
Poland	14.913	15.099
Total	28.808	24.222
Av € per ton	876.0	1048.6

Hungarian butadiene exports amounted to 28,808 tons in the first six months in 2023 against 19,380 tons in the same period in 2022. Shipments into Poland totalled 14,913 tons in January to June 2023 against

15,099 tons in the same period in 2022. Exports to Germany dropped from 5,035 tons to 1,995 tons and to the Czech Republic rose from 4,088 tons to 9,906 tons. Average prices for Hungarian butadiene exports fell to €1048.6 per ton versus €876.0 in 2023.

Polish Styrene Imports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Belgium	4.193	8.041
Czech Republic	5.327	4.040
Netherlands	24.225	38.623
Germany	9.335	11.421
Others	3.468	0.561
Total	47.060	63.378
Av € per ton	1251.2	1693.6

Central European styrene trade Jan-Jul 2023

Poland imported 47,060 tons of styrene in January to July against 63,378 tons in January to July last year. The Netherlands provided 24,225 tons in the first seven months versus 38,623 tons in the same period in 2022. The Czech Republic has also been an important supplier this year. Styrene import costs dropped from €1693.6 per ton last year to €1251.2 in the first seven months in 2023.

Italy remains the dominant source of styrene imports into Hungary, supplied by Versalis to its polystyrene plant at Szazhalombatta. Imports of styrene into Hungary totalled 34,659 tons in January to June 2023, down from 49,878 tons in the same period in 2022. Prices for styrene imports into Hungary dropped from €1599.8 per ton in January to June 2022 to €1461.1 per ton in 2023.

Hungarian styrene imports (unit-kilo tons)		
Country	***Jan-Jun 23***	***Jan-Jun 22***
Italy	34.659	49.878
Netherlands	1.898	2.080
Others	2.173	0.063
Total	37.460	53.713
Av € per ton	1461.1	1599.8

Czech petrochemical trade, Jan-Jul 2023

Ethylene exports from the Czech Republic amounted to 6,814 tons in January to July 2023 versus 8,566 tons in the same period last year. Czech imports of ethylene amounted to 25,869 tons in January to July 2023, down from 15,025 tons in January to July last year.

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Ethylene	6.814	8.566
Propylene	8.921	0.027
Butadiene	0.403	1.100
Benzene	12.834	29.186
Toluene	6.831	4.835
Ethylbenzene	73.249	55.986
Styrene	5.713	0.000

Propylene imports into the Czech Republic rose from 22,828 tons in January to July 2022 to 29,090 tons this year, with main suppliers including Germany, Romania and Poland. Czech imports of butadiene amounted to 43,359 tons in January to July 2023, all of which was supplied by Germany and Hungary. Czech exports of ethylbenzene amounted to 73,249 tons against 55,986 tons in January to July 2022. All the ethylbenzene was shipped from Kralupy to Oswiecim, all within the structures of the Synthos Group. Imports of benzene into the Czech Republic dropped from 49,624 tons in January to July last year to 19,366 tons in January to July 2023.

Czech Petrochemical Imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Ethylene	25.869	15.025
Propylene	29.090	22.828
Butadiene	48.036	43.972
Benzene	19.366	49.624
Toluene	4.249	4.373
Styrene	22.139	11.232

Central European Polyolefin Production, Trade & Projects

Polish polyolefins production Jan-Jul 2023

Production of polyethylene in Poland fell from 190,200 tons in the first seven months in 2022 to 180,100 tons in the same period this year. Production has been down this year partly due to lower demand.

Polish Polyolefin Production (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Polyethylene	180.1	190.2
Polypropylene	160.5	207.2

Polypropylene production fell by a greater margin than polyethylene, falling from 207,200 tons in the same period in 2022. Currently polypropylene production in Poland takes place at Plock, but in the near future production will start at the new Polimery Police plant. This plant was expected to start in August or September, but Hyundai Engineering announced at the end of August an extension of the project by 2-3 months. Problems with the equipment during the start-up phase of some installations as the reason for the delay. The new Grupa Azoty unit is expected to produce 437,429 tpa of polypropylene and 430,000 tpa of propylene.

Overall, for Central Europe polypropylene production amounted to 527,300 tons in the first half of 2023 against 579,722 tons in the same period in 2022. Hungary reduced production of polypropylene in the first half of 2023 to 127,000 tons against 186,000 tons in January to June 2022. Slovakia produced 130,000 tons in the first half this year and the Czech Republic 126,000 tons.

Polish PP Imports (unit-kilo tons)		
Category	***Jan-Jul 23***	***Jan-Jul 22***
PP homo	308.224	373.795
Polyisobutylene	1.600	2.532
Propylene copolymers	166.095	179.302
Other	11.165	11.708
Total	487.085	567.337
Av €/ton	1500.5	1878.6

Polish polpropylene trade Jan-Jul 2023

Polish polypropylene imports, including homo grade and copolymers, fell in January to July 2023 to a total of specifically 487,085 tons versus 567.337 tons in January to July 2022. Average prices per ton decreased from €1878.6 to €1500.4 per ton. Homo grade polypropylene imports specifically dropped from 373,795 tons in the first seven months in 2022 to 308,224 tons in the same period this year, whilst copolymer imports dropped from 179,302 tons to 166,095 tons.

Polish Polyethylene Trade		
Exports	***Jan-Jul 23***	***Jan-Jul 22***
Vol (kilo tons)	172.853	208.826
Value (€ million)	238.978	355.060
Av € per ton	1382.6	1700.3
Imports	***Jan-Jul 23***	***Jan-Jul 22***
Vol (kilo tons)	682.771	796.107
Value (€ million)	973.944	1483.636
Av € per ton	1427.4	1863.6

Germany supplied 49,363 tons of propylene copolymers to Poland in the first seven months for €80.763 million followed by the Netherlands with 25,967 tons for €40.531 million and Belgium supplying 23,984 tons for €40.470 million.

Regarding export activity from Poland, shipments amounted to 130,697 tons against 179,206 tons in January to July 2022. Homo polymer grades comprised the main category of Polish polypropylene exports, where Germany was the largest destination taking 21,461 tons in the first seven months for €29.085 million. Germany was followed by the Czech Republic taking 16,707 tons from Poland for €21.126 million.

Polish PE imports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
LDPE	185.821	211.594
LLDPE	115.255	150.616
HDPE	236.535	271.302
EVA	8.344	10.640
EAO	106.888	116.365
Others	29.929	35.590
Total	682.771	796.107
Av € per ton	1427.4	1863.6

Polish polyethylene trade Jan-Jul 2023

Polish trade in polyethylene was down in the first seven months for both imports and exports, both in volume and value. Economic conditions affected both demand and pricing. Overall Poland carries a large deficit in polyethylene supply, which is part of the reason behind Orlen's Olefiny 111 project at Plock which is now under construction.

Czech polyethylene imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
LDPE	60.075	72.808
LLDPE	13.702	12.839
HDPE	68.248	72.712
EVA	6.293	5.976
Other	26.113	25.251
Total	174.430	189.586
Av € per ton	1655.7	1996.9

Polish imports of polyethylene totalled 682,771 tons in January to July this year against 600,481 tons in January to July 2022, with average prices falling from €1863.6 per ton to €1427.4 per ton. Imports of polyolefins and all types of plastics from Russia into Poland saw a progressive decline in 2022, with other suppliers from Europe taking more market share.

Total costs of polyethylene imports into Poland amounted to €973.944 million in the first seven months against €1483.636 million in January to July last year. HDPE is the largest category of imported polyethylene into Poland, amounting to 236,535 tons in January to July versus 271,302 tons in January to July 2022. Germany was the largest supplier of HDPE to the Polish market in the first seven months this year.

Polish polyethylene exports amounted to 172,853 tons in the first seven months in 2023 against 208,826 tons in the first seven months in 2022. Average prices for polyethylene exports from Poland declined to €1382.6 per ton against an average of €1700.3 per ton in the period January to July from last year.

Czech polyethylene exports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
LDPE	14.551	47.532
LLDPE	1.952	2.100
HDPE	210.969	210.579
EVA	1.968	2.005
Other	6.105	7.391
Total	235.546	241.322
Av € per ton	1371.1	1738.2

Revenues from exports decreased from €355.060 million to €238.978 million in January to July 2023. In the first seven months this year exports of HDPE from Poland amounted to 121,003 tons versus 142,432 tons in January to July 2022.

Czech polyethylene trade Jan-Jul 2023

Czech prices for both exports and imports of polyolefins were lower in the first seven months this year against the same period in 2022. Polyethylene exports amounted to 235,546 tons in the first seven months of which HDPE comprised 210,969 tons. Germany was the largest destination for Czech HDPE supplied from Litvinov this year, amounting to 84,844 tons in January to July for €103.717 million. Other important markets for Czech polyethylene exports include Poland, Italy and Belgium.

Hungarian Polyethylene Imports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
LLDPE	12.498	10.540
LDPE	23.094	29.877
HDPE	43.109	51.785
Other	24.373	20.556
Total	109.968	122.216
Av € per ton	1682.2	1910.7

Hungarian Polyethylene Exports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
LLDPE	3.232	2.857
LDPE	47.689	42.362
HDPE	115.509	112.857
Other	6.373	14.033
Total	172.804	172.109
Av € per ton	1306.1	1645.4

For imports of all forms of polyethylene, Czech inward shipments amounted to 174,430 tons in January to July against 189,586 tons in the same period in 2022, with prices dropping from €1996.9 per ton to €1655.7. Germany was the largest source of polyethylene imports, amounting to 39,249 tons for €60.726 million, followed by Belgium with 21,617 tons for €34.886 million.

Hungarian polyethylene trade Jan-Jun 2023

MOL's polyethylene exports rose slightly from 172,109 tons in January to June 2022 to 172,804 tons in the same period this year whilst revenues fell from €283.744 million to €226.245 million in 2023. Average prices dropped from €1583.8 per ton in 2022 to €1342.1 per ton.

HDPE shipments from Hungary increased from 112,857 tons in January to June 2022 to 115,509 tons in the same six months in 2023, whilst exports of LDPE increased from 42,362 tons to 48,059 tons.

Czech polypropylene exports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
PP Homo	128.044	142.796
Propylene Copolymers	27.822	29.882
Other	3.817	1.949
Total	159.683	174.627
Av € per ton	1530.7	1792.3

Czech polypropylene imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
PP Homo	177.364	180.527
Propylene Copolymers	126.186	114.731
Other	8.604	10.339
Total	312.153	305.597
Av € per ton	1631.1	1952.8

Hungary remains a net exporter of LDPE and HDPE and still a net importer of LLDPE and ethylene copolymers. In the first six months in 2023 imports of all grades of polyethylene into Hungary amounted to 109,968 tons against 122,216 tons in the same period in 2022. Imports costs for polyethylene fell to €173.393 million against €215.449 million in the same period last year.

Hungarian import prices for polyethylene decreased on average from €1920.7 in January to June 2022 to €1682.2 in the first six months in 2023 with gradual price declines since the start of the year.

Czech polypropylene trade Jan-Jul 2023

Exports of all forms of polypropylene from the Czech Republic amounted to 159,683 tons in January to July versus 174,627 tons in January to July 2022, with average prices dropping from €1814.6 per ton to €1530.7. Homo-grade PP provides the main category of Czech polypropylene exports, amounting to 128,044 tons in January to July this year versus 142,796 tons in the same period in 2022.

For imports of all forms of polypropylene, Czech inward shipments fell from 305,597 tons in January to July 2022 to 315,153 tons in January to July this year, with average prices dropping from €1952.8 per ton to €1631.1.

Hungarian polypropylene trade Jan-Jun 2023

Regarding Hungarian polypropylene exports, MOL shipped 65,746 tons of homo grade polypropylene (valued at €91.453 million) in January to June 2023 which was up from 60,551 tons in the same period in 2022 (€109.487 million in value), whilst copolymer exports dropped from 50,910 tons (€99.473 million in value) tons to 46,790 tons (€67.393 million).

Hungarian Polypropylene Exports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
PP homo	65.746	60.551
Propylene copolymers	46.790	50.910
Others	7.738	11.861
Total	120.274	123.323
Av € per ton	1398.3	1782.7

The most important destinations for Hungarian polypropylene exports include Poland, Italy, Germany and the Czech Republic. Export revenues dropped for all grades of polypropylene from €219.843 million to €168.174 million, with average prices dropping from €1782.7 per ton to €1398.3.

Polypropylene imports into Hungary amounted to 97,554 tons in the first six months in 2023 versus 112,590 tons in the same period in 2022, with costs falling in January-June 2023 to €158.876 million from €206.253 million last year.

Hungarian Polypropylene Imports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
PP homo	58.503	62.514
Propylene copolymers	26.502	33.854
Others	12.549	16.222
Total	97.554	112.590
Av € per ton	1628.6	1831.9

Overall average prices dropped from €1831.9 per ton to €1628.6 per ton this year, whilst copolymer prices dropped from €1845.9 to €1538.4 per ton. By category homo grade imports into Hungary comprised 58,503 tons in January to June 2023 against 62,514 tons whilst copolymers fell to 26,502 tons against 33,854 tons.

Central European Rubber Markets

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

Czech synthetic rubber trade Jan-Jul 2023

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

Czech Exports of EBSR		
	Jan-Jul 23	***Jan-Jul 22***
Kilo tons	19.432	45.367
€ million	33.212	87.679
Av € per ton	1709.1	1932.7

Exports of emulsion styrene butadiene rubber (ESBR) from the Czech Republic dropped in the first seven months to 19,432 tons against 45,367 tons in the same period last year. The Kralupy plant includes capacities of 110,000 tpa of ESBR and its permanent closure will reduce Synthos' total ESBR capacity to 320,000 tpa. Despite the closure of the Kralupy plant, Synthos remains the largest producer of ESBR in Europe, with 190,000 tpa of ESBR capacity at its site at Oswiecim and 130,000 tpa at Schkopau.

Czech Butadiene Rubber Exports (unit-kilo tons)		
	Jan-Jul 23	***Jan-Jul 22***
Total	61.756	65.422
Revenues € million	111.678	135.048
Av € per ton	1808.4	2064.2

Czech butadiene rubber trade

The Czech Republic exported a total of 61,756 tons of butadiene rubber in the first seven months in 2023 against 65,422 tons in the same period in 2022. Average prices fell from €2064.2 per ton to €1808.4 per ton. Czech exports of butadiene rubber to India amounted to 7,461 tons was shipped in January to July 2023 against 13,243 tons in the same period in 2022. Other important markets included Poland where exports amounted to 8,362 tons in the first seven months this year against 9,001 tons in the same period in 2022, and South Korea rising from 3,324 tons to 8,216 tons.

Hungarian synthetic rubber Imports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
Butadiene Rubber	26.957	22.698
HBR	4.056	8.547
SBR	25.056	16.213
Other	14.096	23.228
Total	70.165	70.686
Hungarian synthetic rubber Imports (€ million)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
Butadiene Rubber	49.951	44.673
HBR	9.939	23.132
SBR	59.857	34.506
Other	39.746	57.170
Total	159.494	159.482
Av € per ton	2273.1	2256.2

Hungarian synthetic rubber imports Jan-Jun 2023

Hungarian imports of synthetic rubber ended in the first six months this year very close to last year's data both in regard to volumes and values. Volume imports amounted to 70,165 tons in the first six months this year against 70,686 tons in 2022 whilst overall costs rose slightly from €159.482 million to €159.494 million. As a result, average prices rising amounted to €2273.1 per versus €2256.2 per ton.

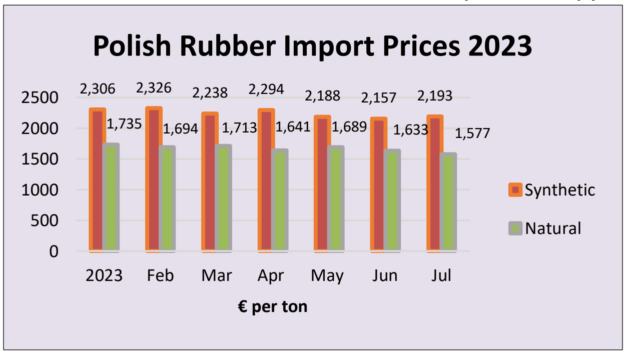
Butadiene rubber imports rose from 22,698 tons to 26,957 tons, with costs rising from €44.673 million to €49.951 million. Imports from Russia dropped from 9,225 tons to 2,318 tons in January to June 2023 whilst imports from Indonesia rose from only 98 tons in the first six months last year to 11,632 tons. Effectively Indonesia replaced Russian imports in the first half year although it is not clear if this trend will continue for the remainder of the year.

Imports of halogenated butyl rubber dropped from 8,547 tons in the first six months in 2022 to 4,056 tons and SBR imports rose from 16,213 tons to 25,056 tons.

Hungarian butadiene rubber Imports (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
Indonesia	11.632	0.098
Russia	2.318	9.225
Total	26.957	22.717

Polish rubber prices Jan-Jul 2023

Rubber import prices into Poland for both synthetic and natural have seen gradual declines from January to July this year as a confluence of economic factors have taken effect. Natural rubber prices dropped from €1735 per ton in January to €1577 per ton in July, whilst synthetic rubber prices dropped from €2306 per in January to €2193. Overall, synthetic rubber prices dropped from €2572 in the first seven months in 2022 to €2178 in 2023.



Polish rubber trade Jan-Jul 2023

Poland imported 152,234 tons of synthetic rubber in January to July this year against 174,043 tons in January to July in 2022.

Before the Russian invasion of Ukraine Poland was a leading importer of synthetic rubber from Russia. Although sanctions were introduced in 2022 amendments were made in early 2023 to allow tyre manufacturers to adapt gradually to new supply sources. Despite concessions imports of rubber from Russia have been in general decline. Nizhnekamskneftekhim, in particular, has shifted large volumes of sales from European markets to an easterly direction. Isoprene rubber has thus far been excluded from sanctions and this now comprises the main share of rubber export shipments from Russia to Poland.

In the first seven months in 2023 Poland imported 31,305 tons of synthetic rubber from Russia for a total value of €52.0 million. This compares against 92,653 tons in January to July 2022 and 133,341 tons in January to July 2021. Respectively this amounted to €182.7 million and €214.0 million.

Polish Synthetic Rubber Imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
ESBR	14.228	8.077
Block SBR	20.276	24.451
S-SBR	13.484	7.831
Butadiene Rubber	33.442	35.150
Butyl Rubber	2.946	2.190
HBR	6.387	10.642
NBR	3.681	9.381
Isoprene Rubber	6.646	21.803
EPDM	24.766	27.651
Others	26.378	26.867
Total	152.234	174.043
Av € per ton	2,178.0	2,572.2

Imports of halogenated butyl rubber from Russia amounted to 3,430 tons from the total of 6,387 tons in the period January to July 2023. Average prices from Russia amounted to €2444 per ton against the overall average of €2592. The US and UK have started supplying Poland this year to replace some of the Russian imports.

Polish Exports of Synthetic Rubber (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
SBR	102.379	121.492
Butadiene Rubber	28.013	27.104
HBR	2.194	3.537
Others	19.133	28.562
Total	151.719	180.695

Synthetic rubber exports from Poland amounted to 151,719 tons in the first seven months against 180,695 tons in January to July 2022. Exports of butadiene rubber from Poland amounted to 28,013 tons in January to July versus 27,104 tons last year.

Synthetic rubber production at Oswiecim for Synthos amounted to 108,800 tons in January to July 2023 from 163,800 tons in the same period in 2022. Production has been affected this year by demand side factors.

Central European aromatics and derivatives

Polish Benzene Exports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Czech Republic	12.006	32.321
Germany	66.160	62.212
Others	10.750	9.844
Total	88.917	104.377
Av € per ton	858.8	1178.2

Polish benzene exports Jan-Jul 2023
Polish exports of benzene totalled 88,917 tons in January to July against 104,377 tons in the same period last year. Average prices dropped to €1178.2 per ton against €858.8 per ton in January to July last year. Germany purchased 66,160 tons from Poland in the first seven months and the Czech Republic 12,006 tons.

Polish Aromatic Imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Adipic Acid	6.238	6.928
Bisphenol A	12.303	10.315
Caprolactam	6.545	2.079
Ethylbenzene	73.671	61.773
Paraxylene	0.000	34.150
Phenol	44.771	67.729
Phthalic Anhydride	18.523	20.303
PTA	3.658	1.179
Styrene	47.060	63.378
TDI	37.825	44.129
Toluene	13.130	13.873

Benzene exports from Poland were lower in the first quarter this year due to the problems for Petrochemia Blachownia in receiving coal based raw materials from Ukraine. Petrochemia Blachownia is part of the Czech Agrofert group

Polish-Czech aromatic imports Jan-Jul 2023
Phenol imports into Poland amounted to 44,771 tons in January to July 2023 for €57.741 million. In January to July this year Germany was the dominant supplier of phenol to Poland, shipping 32,231 tons for €30.553 million.

Phthalic anhydride imports into Poland dropped from 20,303 tons in January to July 2022 to 18,523 tons in the same period in 2023. Imports from South Korea amounted to 9,653 tons in the first seven months for €10.835 million, followed by the Czech Republic which supplied 2,281 tons from the Deza plant for €3.371 million.

In other product areas, styrene imports amounted to 47,060 tons in the period January to July 2023 versus 63,378 tons in the same period in 2022 whilst ethylbenzene imports rose from 61,773 tons to 73,671 tons. Nearly all of the ethylbenzene imports come from the Czech Republic. Czech benzene imports dropped in the first seven months to 16,212 tons against 38,025 tons in the same period in 2022, whilst toluene imports dropped to 3,082 tons and styrene rose to 17,491 tons.

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

Hungarian aromatic imports Jan-Jun 2023
In the first half of 2023 Hungarian benzene imports of benzene amounted to 6,809 tons for €6.529 million, against very little imports in the same period in 2022. The largest supplier of shipments into Hungary was the Czech Republic which provided 3,296 tons in the first six months, followed by 1,611 tons from Slovakia.

Toluene imports into Hungary amounted to 18,136 tons in the first six months for €20.184 million in value. This compares against 25,591 tons in the first six months in 2023 for a total value of €26.951 million. Toluene imports this year have been lower in correlation with lower TDI production. Germany was the largest supplier of toluene providing 7,172 tons to the Hungarian market versus 13,913 tons in the same period in 2022. Other suppliers to Hungary included the Netherlands, Poland, Belgium and Romania.

Spolana Caprolactam Exports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Belgium	0.915	4.535
Germany	0.309	5.575
Italy	8.331	9.764
Slovenia	1.941	3.043
Switzerland	1.423	1.645
Others	0.205	0.152
Total	13.124	24.714
Av € per ton	1765.2	2495.4

Central European caprolactam market

Poland produced 52,000 tons of caprolactam in the first seven months against 95,000 tons in January to July last year and 93,800 tons produced in January to July 2021. Since the second half of 2022 caprolactam production by Grupa Azoty in Poland has been affected higher energy costs combined with weak demand for polyamide. Over the past few years Poland has been transformed from a net exporter of caprolactam to a net importer, if only marginal. In the first seven months caprolactam imports amounted to 6,545 tons, nearly all of which was supplied from Germany.

Polish PTA Exports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Germany	106.550	212.872
Lithuania	1.618	27.322
Switzerland	4.444	4.508
Turkey	4.478	5.060
Others	13.416	2.804
Total	132.248	256.976
Av Price €	854.8	971.8

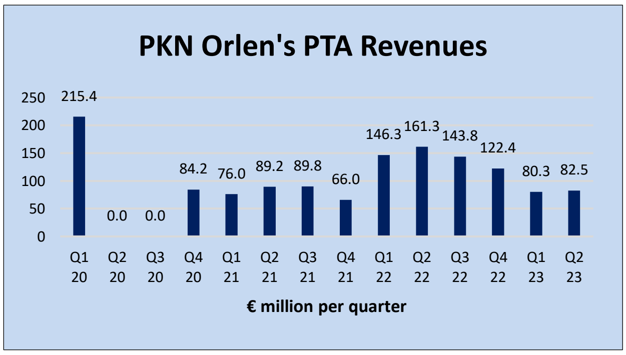
The Czech Republic exported 13,124 tons of caprolactam in January to July down from 24,714 tons in the same period last year. Average prices dropped from €2495.4 per ton to €1765.2 in 2023. All of the exports were shipped to European countries. Italy was the largest destination for Spolana's exports, reducing shipments from 9,764 tons in January to July 2022 to 13,124 tons this year.

Polish PTA exports Jan-Jul 2023

PTA exports from Poland amounted to 132,248 tons in January to July this year against 256,976 tons in January to July 2022, with average prices falling from €971.8 per ton to €854.8 per ton. The key factor this year behind the lower purchases was that Germany reduced purchases from 212,872 tons to 106,550 tons. Turkey was the second largest destination for PTA export shipments, taking 4,478 tons versus 5,460 tons in the first seven months in 2022.

Polish PTA Production and Trade		
	H1 23	H1 22
Production (kilo tons)	200.0	333.0
Total Sales (kilo tons)	200.0	330.0
Total Revenues (€ million)	162.7	309.8
Exports (Kilo tons)	96.0	183.3
Export Revenues (€ million)	113.3	216.9

In the first half of 2023 the Orlen Group undertook extended downtime at the PTA unit at Wloclawek, which was partly due to weak demand. Orlen is now accepting offers for maintenance contracts for April 2024 when a shutdown lasting two weeks is planned. Revenues from PTA sales whether export or domestic amounted to €82.5 million in the second quarter this year compared against €161.3 million in the same period last year. By volume sales dropped from 330,000 tons in January to June 2022 to 200,000 tons in January to June 2023



Revenues from PTA sales in the first half of 2023 amounted to €162.7 million against €309.8 million in the same period in 2022, with export revenues dropping from €216.9 million to €113.3 million.

Production at Wloclawek totalled 200,000 tons in the first half of 2023 against 333,000 tons in the same period last year whilst sales dropped to 200,000 tons from 330,000 tons. This included a drop in exports from 183,300 tons to 96,000 tons.

Central European isocyanates & polyols

Hungarian TDI Exports (unit-kilo tons)		
Country	***Jan-Jun 23***	***Jan-Jun 22***
Austria	1.520	1.306
Belgium	18.911	18.609
Germany	5.195	7.551
Italy	14.942	20.318
Poland	14.003	17.413
Portugal	6.272	7.942
Romania	6.782	7.173
Spain	5.903	6.086
Turkey	16.974	21.602
Others	32.370	40.187
Total	122.873	148.187
Av € per ton	2853.7	2730.8

Hungarian MDI Exports (unit-kilo tons)		
Country	***Jan-Jun 23***	***Jan-Jun 22***
Czech Republic	3.880	3.817
Germany	10.543	12.850
Italy	5.707	3.577
France	5.838	5.867
UK	2.558	4.733
Poland	17.889	20.992
Romania	9.736	11.672
Turkey	7.608	7.565
US	0.000	22.104
Others	27.967	23.571
Total	91.725	116.749
Av € per ton	2153.5	2603.9

Hungarian TDI-MDI exports Jan-Jun 2023

Hungarian TDI exports dropped in the first six months this year to 122,873 tons against 148,187 tons in the same six months in 2022. Average prices rose from €2730.8 per ton to €2853.7 in 2023. Although prices overall were higher in the first half this year the trend has been falling dropping from a peak of €3255.4 per ton in January to €2812.7 per ton in June which measured against €2769.8 per ton in June 2022. Thus, the gap between 2023 and 2022 prices is gradually narrowing.

Lower volume sales were recorded this year due largely to weaker economic performance throughout Europe. Exports of TDI to Belgium rose from 18,609 tons in the first six months last year to 18,911 tons in January to June 2023 whilst volumes to Italy fell from 20,318 tons to 14,942 tons.

Elsewhere in West Europe exports to Portugal dropped from 7,942 tons to 6,272 tons, and to Spain from 6,086 tons to 3,612 tons. In Central Europe shipments to Poland fell from 17,413 tons to 14,003 tons and Romania from 7,173 tons to 6,782 tons.

MDI exports from Hungary dropped in the first six months to 116,749 tons from 91,725 tons in the same period last year. The most significant drop in sales was the US where no shipments were made in the first six months against 22,104 tons in January to June 2022. In contrast to higher TDI prices, MDI export prices dropped from €2603.9 per ton in January to June 2022 to €2153.5 per ton this year.

Poland was the largest destination for Hungarian MDI exports, shipping 17,889 tons in the first six months in 2023 versus 20,892 tons in the first same period in 2022. Romania is the second largest market in Central and South East Europe, taking 9,736 tons in the first six months this year which was down from 11,672 tons.

Polish MDI Imports (€ million)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Germany	20.728	25.257
Netherlands	13.521	12.095
Hungary	21.495	23.426
Belgium	14.462	20.380
South Korea	4.968	0.984
Others	8.697	6.411
Total	83.872	88.553
Av € per ton	2193.7	2619.0

BorsodChem-annual TDI shutdown and MDI expansion

BorsodChem's TDI plant (250,000 tpa) started annual maintenance on 15 July which lasted until 18 August. This shutdown was a routine maintenance process based on the annual schedule and will not affect the company's production and operation.

The MDI plant (350,000 tpa) started maintenance on 18 July and this shutdown is expected to last for around 80 days. This shutdown involves modernisation and the expansion of capacity to 400,000 tpa. At the end of June this year BorsodChem opened new units for nitrobenzene and aniline for the MDI production chain. In addition to the aniline and nitrobenzene projects, the second new cogeneration power plant was put into use, doubling the company's generation capacity to meet the company's growing demand for heat and electricity while assisting the transition to green energy.

Central European isocyanate trade Jan-Jul 2023

MDI imports into the Czech Republic totalled 22,349 tons in January to July 2023 against 21,205 tons in the same period in 2022. Average prices dropped from €2667.2 per ton to €2368.1. The leading supplier was Hungary which shipped 6,661 tons in the first seven months against 2,891 tons in the same period last year. TDI imports into the Czech Republic Czech Republic amounted to 4,206 tons in January to July this year versus 4,567 tons in January to July 2022.

Polish TDI Imports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Belgium	1.405	0.932
Germany	9.299	13.255
Hungary	16.076	21.956
Netherlands	1.405	2.918
Saudi Arabia	1.254	1.404
South Korea	4.277	0.000
Others	2.700	4.154
Total	37.561	44.620
Av € per ton	2913.2	2793.7

MDI imports into Poland totalled 83,872 tons in January to July 2023 against 88,553 tons in January to July last year. Due to lower volumes overall costs for MDI imports into Poland dropped from €231.920 million to €183.988 million, with average prices dropping from €2619.0 per ton to €2193.7 in January to July 2023. Germany reduced shipments to 20,728 tons against 25,257 tons in January to July 2022, whilst imports from Hungary amounted to 21,495 tons against 23,426 tons.

TDI imports into Poland amounted to 37,561 tons in January to July against 44,620 tons in the same period in January to July 2022. Prices this year averaged €2913.2 per ton in the first seven months against €2793.7 per ton in 2022. The cost of toluene was one of the factors behind the rise in TDI prices, but also supply/demand factors. The supply of TDI is considered in short supply in Europe resulting in imports from countries such as South Korea and the US.

European Flexible Polyol Prices (€ per ton)		
Month	**2023**	**2022**
Ian	1825	2430
Feb	1775	2415
Mar	1675	2415
Apr	1675	2630
Mai	1625	2545
Jun	1525	2455

European Rigid Polyol Prices (€ per ton)		
Month	***2023***	***2022***
Ian	2550	2905
Feb	2450	2905
Mar	2350	2905
Apr	2300	3005
Mai	2250	2900
Jun	2150	2800

European polyol market prices 2023 vs 2022

European prices for polyols have seen large falls in 2023, particularly for flexible grades and to a lesser extent rigid grades. Flexible polyol prices dropped from €2455 per ton in June 2022 to €1525 per ton in June this year, whilst rigid grade polyols fell from €2800 per ton to €2150 per ton.

The weak demand combined with extra supply has led to keen price competition in recent months resulting in lower profitability for European polyol producers. Polyester polyols intended to a large extent for the production of rigid foams recorded declines.

MOL currently hopes to complete the 200,000 tpa polyol project in the second half of 2023. The completion will take place simultaneously as the propylene glycol and propylene oxide plants are finished. The project schedule overall is around 97% completed. The polyol project at Tiszaujvaros was originally scheduled to start in mid-2021 but the pandemic slowed the progress down sharply which has been followed by the impact of the war in Ukraine.

Czech Polyol Imports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Belgium	8.148	6.147
Germany	4.594	5.159
France	4.013	3.313
Netherlands	2.884	2.438
Slovakia	2.818	2.650
Others	4.084	4.690
Total	26.551	24.396
Av € per ton	2590.8	2895.4

Czech polyol imports Jan-Jul 2023

Czech polyol imports increased in the first seven months to 26,551 tons against 24,396 tons in the same period in 2022, with average prices dropping from €2895.4 per ton last year to €2590.8 in the first seven months in 2023. The leading supplier to the Czech market was Belgium which shipped 8,148 tons in the period January to July 2023 against 6,147 tons last year, followed by Germany which exported 4,594 tons down from 5,159 tons.

Polish polyol trade Jan-Jul 2023

Polish polyol imports amounted to 82,574 tons in the first seven months in 2023 against 89,021 tons in the same period in 2022. The major sources of imports came from Belgium, Germany and the Netherlands. Polyol import prices dropped from €2644.3 per ton to €2129.3 per ton. The largest source of imports came from Germany in the first seven months, amounting to 19,414 tons against 16,546 tons in the same period in 2022.

Polish Polyol Imports (unit-kilo tons)		
Country	*Jan-Jul 23*	*Jan-Jul 22*
Belgium	10.217	16.516
China	4.723	1.026
France	3.048	0.000
Germany	19.414	16.546
Netherlands	17.356	8.576
Romania	9.085	20.462
Saudi Arabia	1.663	13.901
South Korea	9.986	0.000
Others	7.083	11.993
Total	82.574	89.021
Price	2129.3	2644.3

Hungary imported 21,690 tons of polyols in the first six months this year against 16,343 tons in the same period in 2022. The largest source of imports came from Belgium in the first six months, amounting to 11,127 tons against 984 tons in the same period in 2022.

Exports of polyols from Poland in the first seven months amounted to 32,316 tons against 33,637 tons in the same period in 2022. Destinations for deliveries were focused mostly on Europe in 2023, led by Germany taking 4,584 tons in the first seven months followed by Italy taking 3,873 tons. Due to lower prices this year export revenues dropped from €93.609 million to €75.749 million.

Central European organic chemical trade

Hungarian maleic anhydride exports (unit-kilo tons)		
Country	*Jan-Jun 23*	*Jan-Jun 22*
Austria	1.606	1.345
Germany	0.790	0.652
Italy	1.524	1.548
Poland	1.575	2.879
Slovenia	1.030	1.035
Others	2.944	2.258
Total	9.468	9.717
Av € per ton	1267.0	2258.0

Hungarian maleic anhydride exports Jan-Jun 2023
Hungary exported 9,468 tons of maleic anhydride in the first six months this year against 9,717 tons in the same period in 2022, with average prices dropping from €2258.0 per ton to €1267.0. Export shipments to Italy and Austria amounted to 1,524 tons and 1,606 tons in the first six months this year, down from 1,548 tons and up from 1,345 tons respectively last year. Exports to Poland from Hungary dropped from 2,879 tons to 1,575 tons.

Hungarian imports of acrylonitrile (unit-kilo tons)		
Country	*Jan-Jun 23*	*Jan-Jun 22*
Germany	2.308	1.381
France	0.891	3.869
Netherlands	5.917	12.701
Russia	0.000	1.488
Others	3.252	0.587
Total	12.368	20.026
Av € per ton	2203.5	2404.3

Hungarian acrylonitrile imports Jan-Jun 2023
Hungary imported 12,368 tons of acrylonitrile in the first six months in 2023 against 20,026 tons last year. The Netherlands was the main source of imports in both years, shipping 5,917 tons in January to June 2023 versus 12,701 tons in 2022. Acrylonitrile prices dropped on average from €2404.3 per ton in the first six months last year to €2203.5 per ton in 2023.

Hungarian aniline imports (unit-kilo tons)		
Country	*Jan-Jun 23*	*Jan-Jun 22*
Belgium	18.603	0.799
China	11.067	0.019
Czech Republic	39.114	46.056
Others	0.000	1.269
Total	68.784	48.143
Av € per ton	1481.0	1860.1

Hungarian aniline imports Jan-Jun 2023
Aniline imports into Hungary increased from 48,143 tons in the first six months in 2022 to 68,784 tons in the same period in 2023. Inward shipments from BorsodChem-MCHZ in the Czech Republic amounted to 39,114 tons against 46,056 tons in the same period last year. Belgium supplied 18,603 tons in the first half this year against only 799 tons in the same period in 2022. Cost prices of aniline imports dropped from €1860.1 per ton to €1481.0 in 2023.

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

Polish Organic Chemical Trade		
Exports	*Jan-Jul 23*	*Jan-Jul 22*
Vol (kilo tons)	885.3	1,441.6
Value (€ million)	710.3	1,037.4
Imports	*Jan-Jul 23*	*Jan-Jul 22*
Vol (kilo tons)	2,331	3,100.4
Value (€ million)	1,514	1,848.0

Polish organic chemical trade Jan-Jul 2023
Exports of organic chemicals fell from 1.442 million tons in January to July last year to 885,300 tons this year, whilst imports into Poland dropped from 3.100 million tons to 2.331 million tons. High energy prices played a key role in driving up values last year which are still impacting on production and trade.

Polish EO/PO Imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
DEG	17.479	15.869
Ethylene Glycol	59.097	31.535
Ethylene Oxide	9.341	7.787
Propylene Glycol	10.407	12.218

Ethylene oxide imports into Poland totalled 9,341 tons in January to July versus 7,787 tons in January to July 2022. Poland stopped importing ethylene oxide from Russia in May last year.

Ethylene glycol imports increased in the first seven months to 59,097 tons versus 31,535 tons in the same period last year. Belgium supplied the largest volume of glycols to the Polish market, shipping 49,516 tons in the first seven months.

Polish Organic Chemical Imports (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Acetic Acid	20.465	29.372
Acetone	4.206	4.619
Butadiene	43.538	60,998
DINP/DOP	12.890	13.721
Ethyl Acetate	10.733	9.147
Isopropanol	5.979	5.754
Lysine	26.732	38.394
Maleic Anhydride	7.219	8.255
Melamine	19.355	12.259
Methanol	382.308	556.017
Propylene	74.464	86.810
VAM	9.219	11.213

Methanol imports into Poland totalled 382,908 tons in January to July this year against 556,017 tons in the same period in 2022.

For other organic chemical imports Poland imported 20,465 tons of acetic acid in January to July against 29,372 tons in January to July 2022. The US was the leading supplier, shipping 9,704 tons followed by the UK with 4,780 tons. Average prices dropped from €1181.0 per ton to €750.3 per ton. Ethyl acetate imports into Poland amounted to 10,733 tons in January to July this year against 9,147 tons in January to July 2022. Belgium provided the largest share of imports.

Polish Methanol Imports (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Azerbaijan	4.981	1.138
Belgium	41.745	0.044
Finland	0.000	42.007
Lithuania	0.000	0.610
Germany	36.082	70.648
Netherlands	3.536	0.650
Norway	57.466	16.787
Russia	187.561	421.894
US	20.999	0.000
Trinidad	7.989	0.000
Venezuela	20.765	0.000
Others	1.184	2.239
Total	382.308	556.017
€ price per ton	297.2	374.9

Regarding export activity in organic chemicals shipments of monochloroacetic acid (MCAA) rose sharply in the first seven months to 20,914 tons against only a few hundred tons in the same period in 2022. MCAA production is undertaken by the PCC Group at Brzeg Dolny. The destinations for Polish MCAA exports are spread throughout Europe including Germany, Italy, France and Spain.

Other organic chemical exports from Poland include acetone where shipments amounted to 8,054 tons in the first seven months this year versus 9,589 tons in January to July 2022. Normal butyl acetate exports dropped from 9,019 tons to 6,425 tons in January to July 2023.

Central European methanol markets

Central European methanol trade Jan-Jul 2023

Czech imports of methanol amounted to 33,511 tons in the first seven months this year against 26,804 tons in the same period in 2022. Russia accounted for 6,237 tons against 19,303 tons in January to July last year whilst imports from Poland increased from 20,694 tons to 29,886 tons. Prices per ton for methanol imports into the Czech Republic dropped from €463.7 in the first seven months last year to €385.9 in January to July 2023.

Imports of methanol into Poland totalled 382,308 tons in January to July this year versus 556,017 tons in January to July 2022 with Russia reducing shipments from 421,894 tons to 185,561 tons. Average prices amounted to €297.2 per ton against €374.9 per ton last year. Poland has been developing alternative sources to Russian methanol before the full embargo took full effect in June. Apart from Venezuela and Belgium, other new sources arrived this year from the US and Trinidad.

Poland Methanol Exports to Central Europe		
Country	**Jan-Jul 23**	**Jan-Jul 22**
Austria	29.694	45.084
Czech	35.049	45.881
Germany	48.393	67.110
Romania	18.927	21.606
Slovakia	26.629	29.352
Ukraine	13.234	7.409
Hungary	12.284	29.333
Others	0.190	3.063
Total	184.401	248.838
Av € per ton	377.1	436.5

Exports of methanol from Poland amounted to 184,401 tons in January to July against 248,838 tons in January to July 2022. Revenues from Polish exports of methanol rose from €106.0 million in the first seven months in 2022 to €70.2 million in January to July 2023, with export prices dropping from €436.5 per ton to €377.1 per ton. Ukraine imported 13,234 tons of methanol from Poland in the first seven months.

Methanol imports into Hungary in the first six months in 2023 increased to 49,640 tons against 39,235 tons in the same period in 2022. Imports from Russia dropped from 10,763 tons to zero and from Slovakia from 8,399 tons to 4,591 tons.

Czech Methanol Imports (unit-kilo tons)		
Country	**Jan-Jul 23**	**Jan-Jul 22**
Germany	3.820	3.646
Russia	6.237	19.303
Poland	29.886	20.694
Total	42.965	44.908
Av € per ton	385.9	463.7

The largest suppliers to the Hungarian market this year included Germany which provided 14,737 tons in January to June and the Netherlands which supplied 15,068 tons. Average prices amounted to €446.8 per ton this year against €471.6 in 2022.

Hungarian Methanol Imports (unit-kilo tons)		
Country	**Jan-Jun 23**	**Jan-Jul 22**
Germany	14.737	4.371
Netherlands	15.068	5.191
Poland	10.234	5.578
Russia	0.000	10.763
Total	49.640	39.235
Av € per ton	446.8	471.6

Company news

PCC Rokita Jan-Jun 2023

In the first half of 2023, the PCC Rokita's profit dropped by 35%, whilst sales revenues dropped by 5% to zl 1.34 billion. The EBITDA of zl 2023.305 million in the first half of 1, down nearly 18 percent year-on-year, and net profit of zl 161.3 million, down by almost 30 percent year-on-year. The first half of 2023 was a less favourable period for the PCC Rokita.

PCC Rokita Product Sales (unit-kilo tons)		
Product Group	**Jan-Jun 23**	**Jan-Jun 22**
Polyurethanes	48.0	43.0
Chloralkalis	171.0	186.6
Chemical	11.0	13.0
PCC Rokita's sales (€ million)		
Product Group	**Jan-Jun 23**	**Jan-Jun 22**
Polyurethanes	110.7	143.0
Chloralkalis	126.7	135.1
Chemical	19.7	26.4
PCC Rokita's Prices (€ per ton)		
Product Group	**Jan-Jun 23**	**Jan-Jun 22**
Polyurethanes	2321.7	3387.1
Chloralkalis	728.4	720.7
Chemical	1779.1	2044.4

Both the macroeconomic situation and the market of energy raw materials and electricity may worsen the competitiveness of European chemical companies against the intensifying activities of Asian producers. In the second quarter of this year, there was a maintenance shutdown of production installations, but this year a small part of the renovation works was moved to July.

In the first half of 2023 profitability of polyol production and sales fell to levels not seen for some time. The difficult situation on the polyurethane market continues, but also other chemical products were affected in the first half in 2023 with no sign of an upturn in the near future.

Regarding investments PCC Rokita is building a new plant at Brzeg Dolny, and the project is being run by PCC BD. From its production structure PCC Rokita's chlorine division was the most successful in the first half of 2023. By contrast to the chlorine division PCC Rokita's polyurethane segment recorded further declines.

PCC Exol Jan-Jun 2023

PCC Exol recorded lower sales in the first half in 2023 due to weak demand combined with oversupply of surfactants on the market. In the second quarter, the group recorded only 225.7 zl million in revenue, zl

15.3 million in EBITDA and zl 5.1 million in net profit. All these results fell sharply against the same period in 2023 respectively by 27.2%, 69.4% and 84.8%.

PCC Exol's sales (unit-kilo tons)		
Product Group	***Jan-Jun 23***	***Jan-Jun 22***
Surfactants for detergents and cosmetics	32.4	33
Surfactants for use in industry	17.2	18
PCC Exol's sales (€ million)		
Product Group	***Jan-Jun 23***	***Jan-Jun 22***
Surfactants for detergents and cosmetics	47.7	56.2
Surfactants for use in industry	41.3	50.7
PCC Exol's Prices (€ per ton)		
Product Group	***Jan-Jun 23***	***Jan-Jun 22***
Surfactants for detergents and cosmetics	1472.6	1701.6
Surfactants for use in industry	2400.3	2815.2

The surfactant market was difficult for PCC Exol in the first half of 2023, due to the decrease in demand and over-supply. There was a trend of abandoning more expensive branded products in favour of cheaper substitutes. This limited sales specialty products, which usually provide quite high margins.

PCC Exol produces in two locations, Brzeg Dolny and Płock. The current production potential capacity is estimated at 139-144,000 tpa including approximately 104,000 tpa at Brzeg Dolny and approximately 35,000-40,000 tpa at Płock, depending on the product range.

Chimcomplex Jan-Jun 2023

Chimcomplex reported lower profits in the first half of 2023 largely due to lower production and a drop in sales by 34%. The Romanian economy has seen weak demand this year whilst export opportunities have been constrained by recessionary trends in Europe.

Chimcomplex Financial Performance (€ million)		
	Jan-Jun 23	***Jan-Jun 22***
Revenues	151.552	263.730
Costs	135.774	225.879
Operating Profit	15.778	37.851
Net Profit	9.930	30.726

At the same time raw material and energy costs have dropped this year allowing Chimcomplex managed to register a net profit of €9.930 million against €30.726 million in the same period in 2022. Revenues dropped from €263.7 million to €151.6 million whilst the EBITDA amounted to €25 million, with a margin of 15.6% of turnover. This performance was achieved under the conditions of operating the company at half capacity.

Chimcomplex Production (unit-kilo tons)		
Product	**Jan-Jun 23**	**Jan-Jun 22**
Chlorine	163.2	205.2
Propylene oxide	37.1	50.2
Polyol	43.4	58.8
Plasticizers	1.6	9.3
Inorganic chlorides	4.3	6.6
Methylamines	0.7	1.1
Total	250.3	331.2

Polyols accounted for 47.6% in total sales in the first half of 2023, whilst the chlorine sector accounted for 48.6%. The company made considerable efforts to reduce costs and streamline operations in the first half of 2023. Expenses decreased significantly, reducing them by 49% for utilities (electricity, natural gas, water) and by 45% for all other raw materials. This contributed to an operating profit margin of 10%, despite the reduction in turnover.

Chimcomplex, being a medium-sized company in the European Union, managed to recover faster than the big players showing a solid adaptive capacity. The company's strategy focuses on concrete goals, including decarbonization, harnessing hydrogen energy, developing renewable green energy and diversifying production. The investments made in the first half of 2023 included the works for the completion of the largest high-efficiency cogeneration plant built in Romania in the last 11 years. The installation of the third cogeneration group of 16.6 MW increased the energy capacity to a total of 49.6 MWh, energy that can be used by Chimcomplex's industrial platform at Ramnicu Valcea starting September 2023.

Chimcomplex Sales (€ million)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
Polyols	76.029	120.298
Chlor-alkali	77.534	92.563
Others	5.933	13.129
Total	159.516	235.512

In the medium and long term Chimcomplex intends to focus on increasing the production capacity of polyols, developing projects to obtain methanol, ethylene oxide, monoethylene glycol, glycols as well as modernising the existing PVC plant. The diversification of production by including new chemical products that Romania currently imports is another strategic objective.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Caustic Soda	710.1	747.0
Soda Ash	2,001.0	2,082.0
Ammonia	9,900.0	10,100.0
Nitrogen Fertilisers	7,299.0	6,884.0
Phosphate Fertilisers	2,585.0	2,498.0
Potash Fertilisers	4,915.0	4,649.0

Russian base chemical and fertiliser production Jan-Jul 2023

Russian ammonia production totalled 9.9 million tons in January to July 2023 against 10.1 million tons in the same period in 2022 whilst caustic soda dropped from 747,000 tons to 710,100 tons. Nitrogen fertiliser production totalled 7.299 million tons in the first seven months in 2023 against 5.034 million tons in the same period last year. Soda ash production fell slightly, due to raw material disruptions in Crimea. Crimean Soda is currently included in Russian statistics, even though legally Crimea is not recognised as Russian.

Russian Petrochemical Production (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Ethylene	2682.6	2573.9
Propylene	1663.5	1661.1
Benzene	772.0	688.0
Butanols	162.0	138.1
Methanol	2295.5	2,645.8
Acetone	93.4	79.8

Russian petrochemical production Jan-Jul 2023

Russian ethylene production amounted to 2.683 million tons in January to July 2023 from 2.574 million tons in the first seven months in 2022. Propylene production rose from 1.661 million tons to 1.664 million tons and benzene rose from 688,000 tons to 772,000 tons. In the organic chemical sector butanols rose from 138,100 tons to 162,000 tons, whilst methanol dropped from 2.646 million tons to 2.296 million tons. Methanol production has been affected by the loss of European export markets.

Russian rubber & polymer production Jan-Jul 2023

The production of plastics in Russia totalled 6.268 million tons in the first seven months this year against 6.117 million tons in the same period last year. The production of polyethylene rose from 2.031 million tons to 2.117 million tons in the first seven months in 2023. This market has been particularly helped by the increased consumption in pipe manufacture for water and gas pipelines. Polyethylene is produced at eight plants in Russia, the largest of which is ZapSibNeftekhim at Tobolsk. Domestic demand to some extent has replaced exports of polyethylene to European markets.

Russian Polymer Production (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
Plastics in Bulk	6,268.0	6,117.0
Polyethylene	2,117.0	2,031.0
Polystyrene	343.3	337.9
PVC	561.5	604.5
Polyamide	80.0	106.4
Synthetic Rubber	838.0	902.0
Synthetic Fibres	105.3	111.3

Polystyrene production amounted to 343,300 tons in January to July against 337,900 tons in the same period in 2022. PVC is the bulk polymer which has seen the largest fall in production, declining from 604,500 tons in the first seven months in 2022 to 561,500 tons.

The production of synthetic fibres decreased in January to July 2023 to 105,300 tons compared to 111,300 tons in the same period in January to July 2022. Russian production of synthetic rubbers in primary forms amounted to 838,000 tons in the period January to July 2023 compared to 902,000 tons in January to July 2022.

SIBUR suffers a decline in profits in 2023

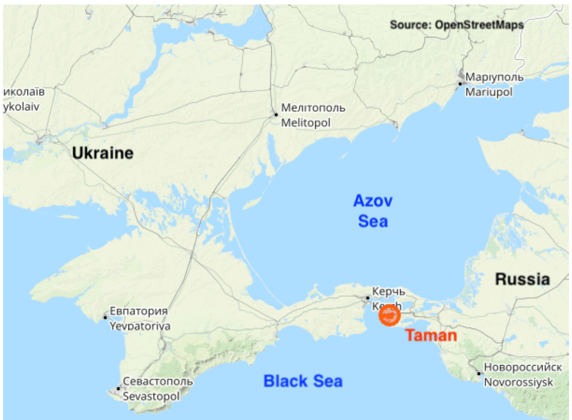
In the first half of 2023, SIBUR Holding's net profit decreased by 4.5 times compared to the same period last year to 47.4 billion roubles against 212.2 billion roubles. Revenues dropped 7% to 460 billion roubles, which is 7% down versus 2022 whilst the cost of sales increased by 8.5% to 317.3 billion roubles. The gross profit dropped from 201 billion to 142.8 billion roubles.

Costs increased 1.6 times from 18.7 billion to 30.3 billion roubles. Administrative expenses, which include employee labour costs, increased by 1.2 billion from 7.2 billion to 8.4 billion roubles. As a result, sales profit fell by 72 billion to 104 billion roubles.

Transportation rules loosened for ammonia and methanol export shipments

The Russian Ministry of Industry and Trade has prepared amendments to the legislation allowing the placement of chemical, hazardous, toxic and explosive substances in the water protection zones of seaports. This has been done to support projects for ammonia and methanol transshipment facilities in Russia. Until 2022 there was no urgent need for new ports as historically transshipment went through Ukraine and the Baltic states. The war has meant that alternative export capacities were required.

The changes, if implemented, will contribute to the development of port facilities and flexibility in transhipment of products with unconditional compliance with safety requirements. Russia is the world's largest exporter of ammonia (4.4 million tons in 2021) but does not possess its own transshipment facilities. The deficit became especially acute due to the closure of the Togliattiazot ammonia pipeline to Odessa on the very first day of Russia's invasion in Ukraine on 24 February 2022.



Togliattiazot is currently building a marine complex at Taman for the transhipment of ammonia, with facilities to ship up to 2 million tpa. The first part of this complex could be launched by the end of 2023. Other developments include terminal facilities for Evrokhim to transport 0.85 million tpa of ammonia at Ust-Luga, whilst large volumes of methanol could be transhipped at the Baltic Methanol terminal.

Metafrax renationalisation

Renationalisation of Metafrax was confirmed on 8 September after the failure of the appeal by the company's legal shareholders. Owners of many other companies are concerned over how far the actual revision of the results of privatization will go. Chemical production near Gubakha started working in 1955 initially on equipment exported after the Second World War from the factories of the German concern IG Farbenindustrie. In the mid-1980s, Europe's largest methanol plant with a capacity of 750,000 tpa was launched.

The argument put forward by the shareholders is that Metafrax is a far more technologically advanced company these after huge investments had been completed in the past fifteen years. In fact, there is no comparison to the facilities purchased in the first wave of privatisation in the 1990s.

Origins of Russian privatisation

In June 1992, the Supreme Soviet of the Russian Federation approved the State Privatisation Programme. Large enterprises had to be transformed into open joint-stock companies, and then go through the sale of shares.

At the same time, at least 29% of the authorised capital had to be sold through public auctions for privatization checks (vouchers). In a number of particularly important industries such as oil and gas, privatisation was prohibited. As a rule, enterprises were sold for a pittance.

Renationalisation of Volzhsky Orgsintez

As expected, the Arbitration Court of the Volgograd Region in August approved the so-called renationalisation of Volzhsky Orgsintez. Effectively the court process was simply a rubber-stamp procedure, activating the 100% takeover by the state from assets owned by shareholders with non-Russian residency and in particular Alexander Sobolevsky.

One of the main reasons for the seizure of assets was that Volzhsky Orgsintez had frozen the production of aniline, "which is necessary for the military-industrial complex of the Russian Federation".

The irony is that Volzhsky Orgsintez was forced to stop aniline production after the ban on monomethylaniline was imposed by the Russian Ministry of Energy. Consequently, the company was forced to close the aniline unit.

Lack of investment in higher added value chemicals

Very few investments are taking place at present in low tonnage chemicals in Russia mainly due to a lack of profitability. Even if projects are completed investors face the prospect of windfall taxes, even possibly losing the assets to the state should it so decide. For instance, Volzhskiy Orgsintez was constructing a new potassium butyl xanthate production facility with a capacity of 20,000 tpa, but this may now be scrapped.

The only way that such projects could be profitable is with the help of subsidies. Thus, there are calls for a mechanism to allow business investments in the chemical sector to be exempt from taxation, in addition to support by the state. Prospects for the latter seem very unlikely with a shrinking growing current account deficit and the priority of military expenditure.

The lack of progress in added value chemicals is not a new phenomenon but represents the trend over the past two decades where investors have leant heavily towards bulk volume commodity chemicals.

Russian petrochemical markets

Russian Ethylene Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Angarsk Polymer Plant	106.019	111.756
Kazanorgsintez	381.276	388.172
Stavrolen	190.773	188.799
Nizhnekamskneftekhim	381.562	379.416
Novokuibyshevsk Petrochemical	19.928	27.867
Gazprom N Salavat	193.222	195.626
SIBUR-Kstovo	256.385	237.194
SIBUR-Khimprom	32.180	31.302
Tomskneftekhim	161.760	175.646
Ufaorgsintez	62.178	59.701
ZapSibNeftekhim	897.322	778.462
Total	2682.604	2573.941

Russian ethylene production Jan-Jul 2023
Russian ethylene production increased from 2.574 million tons in the first seven months in 2022 to 2.683 million tons in the same period in 2023. ZapSibNeftekhim increased production from 778,462 tons in January to July 2022 to 897,322 tons. In Tatarstan Nizhnekamskneftekhim produced 381,562 tons of ethylene against 379,416 tons in 2022, whilst Kazanorgsintez reduced from 388,172 tons to 381,276 tons. The advantages of joining the SIBUR group in 2021 have included the widening of raw material sources for both Nizhnekamskneftekhim and Kazanorgsintez.

Nizhnekamskneftekhim started a routine maintenance shutdown in September which was expected to last three weeks. During the shutdown, a major overhaul of the plant's flare system will be carried out to ensure subsequent smokeless burning of light blowouts. In addition, in order to improve the environmental friendliness of production, measures will be taken to improve the efficiency of the plant's local wastewater treatment plant, including cleaning, repair and technical re-equipment of individual units.

The production capacities of Nizhnekamskneftekhim include 617,000 tpa of ethylene, 250,000 tpa of butadiene, 300,000 tpa and 199,000 tpa of benzene. Polyolefin capacities include 230,000 tpa of HDPE/LLDPE and 180,000 tpa of polypropylene.

Other important ethylene producers included SIBUR-Kstovo which produced 147,500 tons versus 137,100 tons in January to July 2022. In Bashkortostan Gazprom neftekhim Salavat reduced production slightly from 195,626 tons to 193,222 tons, whilst Ufaorgsintez raised production from 59,701 tons to 62,178 tons. Stavrolen at Budyennovsk reduced ethylene production to 190,773 tons against 188,799 tons in the first seven months in 2022.

Russian Propylene Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Angarsk Polymer Plant	56.000	62.375
Kazanorgsintez	29.905	31.865
Lukoil-NNOS	141.727	186.449
Stavrolen	76.334	95.204
Nizhnekamskneftekhim	190.610	188.675
Novokuibyshevsk	14.716	15.749
Omsk Kaucuk	35.243	31.691
Polyom	94.067	113.009
Gazprom n Salavat	85.327	85.825
SIBUR Kstovo	100.949	104.494
SIBUR-Khimprom	44.540	46.104
Tomskneftekhim	88.073	91.383
Ufaorgsintez	97.151	98.748
ZapSibNeftekhim	608.875	509.524
Total	1663.516	1661.093

In Siberia the Angarsk Polymer Plant produced 106,019 tons of ethylene in the first seven months in 2023 versus 111,756 tons in the same period in 2022, whilst Tomskneftekhim reduced production to 161,760 tons from 175,646 tons. Tomskneftekhim resumed the production of monomers in early September after routine maintenance which started in August.

Russian propylene production Jan-Jul 2023
Russian propylene production changed slightly in the first seven months, amounting to 1.664 million tons against 1.661 million tons in 2022. ZapSibNeftekhim at Tobolsk increased production from 509,524 tons in January to July 2022 to 608,875 tons in the same period in 2023.

The next largest producer was Nizhnekamksneftekhim which increased production from 188,675 tons to 190,610 tons. Lukoil reduced propylene production at its Kstovo refinery from 186,449 tons in the first seven months in 2022 to 141,727 tons in the same period this year. Polyom at Omsk reduced propylene production from 113,009 tons in the first seven months in 2022 to 94,067 tons this year, whilst Tomskneftekhim reduced production from 91,383 tons to 88,073 tons.

Russian Propylene Exports (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Lukoil-NNOS	15.236	53.417
SIBUR-Kstovo	0.483	10.552
Omsk Kaucuk	0.000	5.100
Angarsk Polymer Plant	21.110	14.816
Total	36.829	83.885

Russian propylene exports & sales Jan-Jul 2023

Propylene exports from Russia amounted to 83,885 tons in the first seven months in 2022 against 36,829 tons in January to July 2023. Due to the loss of European business Lukoil-NNOS reduced export shipments from 53,417 tons to 15,236 tons in January to July this year whilst SIBUR-Kstovo reduced shipments from 10,552 tons in 2022 to 483 tons. While European markets have been gradually closed for Russian exporters and China has become the main market for Russian exports.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Angarsk Polymer Plant	13.941	16.109
SIBUR-Kstovo	93.212	91.905
Akrilat	6.644	13.216
Lukoil-NNOS	134.422	105.405
Tomskneftekhim	1.947	0.886
Stavrolen	3.302	17.183
Others	3.241	2.595
Total	258.073	247.299

Russian sales of propylene on the domestic merchant market amounted to 258,073 tons in the first seven months against 247,299 tons in the same period last year. The largest propylene supplier to the domestic market was Lukoil-NNOS, shipping 134,422 tons against 105,405 tons in January to July 2022 followed by SIBUR-Kstovo which increased sales from 91,905 tons to 93,212 tons.

Overall supply of propylene exceeds demand in the domestic market, despite the outage over the summer at Angarsk Polymer.

Russian Propylene Domestic Purchases (unit-kilo tons)		
Consumer	***Jan-Jul 23***	***Jan-Jul 22***
Saratovorgsintez	115.912	94.614
Volzhskiy Orgsintez	4.766	5.997
Akrilat	15.512	17.115
SIBUR-Khimprom	23.986	14.867
Omsk-Kaucuk	20.005	4.307
Tomskneftekhim	2.927	1.706
ZapSibNeftekhim	45.916	74.020
Moscow Refinery	5.523	1.218
Ufaorgsintez	8.692	7.453
Khimprom Kemerovo	2.355	4.185
Plant of Synthetic Alcohol	0.252	3.436
Others	2.572	2.193
Total	258.073	247.299

Regarding merchant consumers, ZapSibNeftekhim purchased 45,916 tons of merchant propylene in January to July this year versus 74,020 tons in the same period in 2022, sourced mostly from other SIBUR plants.

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

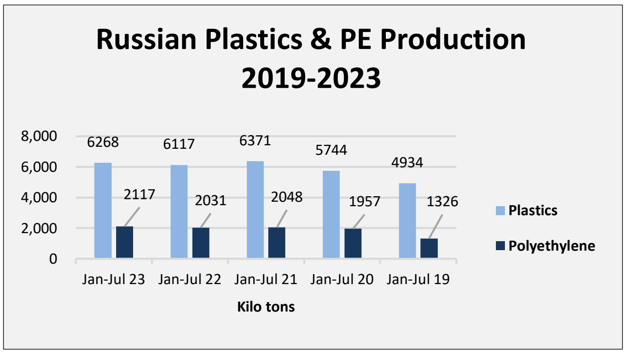
Other consumers of merchant propylene in Russia include Akrilat which reduced purchases from 17,115 tons in the first seven months last year to 15,512 tons this year. Akrilat uses propylene in the production of acrylic acid and acrylates. SIBUR-Khimprom increased purchases in January to July 2023 to 23,986 tons from 14,867 tons last year. Propylene is used by SIBUR-Khimprom in the production of oxo alcohols.

Russian Butadiene Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
ZapSibNeftekhim	129.866	158.318
Nizhnekamskneftekhim	103.337	131.260
Togliattikaucuk	26.995	28.880
Sterlitamak Petrochemical Plant	13.940	16.813
Omsk Kaucuk	25.020	22.240
Total	299.158	357.511

Russian butadiene production Jan-Jul 2023

Russian butadiene production totalled 219,115 tons in the first seven months against 269,559 tons in the same period in 2022. Only Omsk Kaucuk showed an increase over 2022, rising from 22,240 tons to 25,020 tons whilst the largest producer ZapSibNeftekhim reduced production from 158,318 tons to 129,866 tons. Nizhnekamskneftekhim reduced production from 131,260 tons to 103,337 tons.

Russian bulk polymers



Russian plastics production Jan-Jul 2023

Russian bulk plastics production amounted to 6.268 million tons in January to July this year against 6.117 million tons in the same period in 2022 and 6.371 million tons in 2021.

Although the production of plastics increased to record levels in 2023, not all products have seen strong demand. Polyethylene has been the leading product, whilst polyamide production has been affected by lower tyre consumption and also exports. PVC production has been in particular affected lower construction in the domestic market.

Polyethylene production amounted to 2.117 million tons in the first seven months, up from 2.031 million tons in the same period in 2022. Despite mitigating the effects of sanctions across many segments. SIBUR is attempting to fill parts of the market which previously depended on Western imports. However, whilst sanctions have created opportunities for Russian companies to develop its own production to replace imported products, overall, the lack of trade with Europe provides major hurdles to long term growth.

Polyplastik aims to build a plant in Primorye

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

The pipe sector remains the stimulus for polyethylene production and demand. Last year pipe manufacture in Russia rose by 19.5% whilst this year growth of 15% is expected. Gazprom's regional gasification programme was launched in 2021 and should be completed in 2025. This is part of the housing and utilities modernisation programme, which has been given more impetus following the loss of Gazprom's gas market share in Europe. In addition to the public procurement of gas pipes, contracts for water pipes in 2022 are likely to affect their annual production in 2023 and 2024, and pipes for heat supply in 2024.

Since water supply refers to pressure systems where PE100 pipe grade polyethylene should be used (at least for the inner layer of multilayer pipes), further growth should be expected in this segment of polymer production. Overall PE100 grades in Russia account for more than half of the total volume of raw materials. The second most popular polymer is polypropylene although the domestic pipe industry consumes more than three times less than PE100.

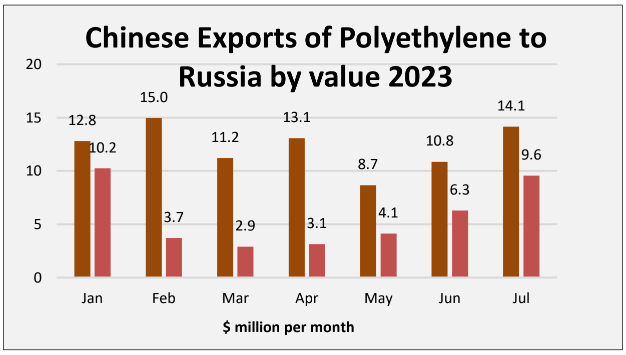
In 2022, the pipe industry consumed 548,000 tons of PE100 which is 29.8% higher than a year earlier. Consumption of various grades of polypropylene increased by only 6%, to 170,000 tons.

PE100 Consumption in Russia (unit-kilo tons)	
Year	***Volume***
2023	650
2022	548
2021	422

After February 2022, European producers began to curtail the supply of polyethylene grades to Russia. Russian pipe manufacturers experienced an acute shortage of them until SIBUR ramped up production. Currently, the production of 36 grades of polyethylene has been mastered by SIBUR, of which six are intended for the production of pipes, including three related to black, one to white and two new to colour. In general, the new pipe grades are part of SIBUR's attempts to fill parts of the market which previously depended on Western imports. PE80 production previously took place at Stavrolen but stopped due to a fire some years ago. Some businesses still try to use PE80 where possible as it cheaper than PE100, but generally it is quite difficult to source.

Russian polyethylene trade Jan-Jul 2023

Russian polyethylene trade from China has varied sharply in the past eighteen months with both imports and exports changing in response to international sanctions. Initially in 2022 Russian producers increased export activity in polyethylene shipments to China, rising to 83,000 tons in August last year but then gradually dropping for the rest of the year. Volumes in 2023 have been more consistent and lower than in 2022. Exports dropped from 213,153 tons in January to July last year to 125,496 tons, with values dropping from $176.160 million to $147.628 million. Export grades from Russia to China comprise mostly HDPE and LDPE.

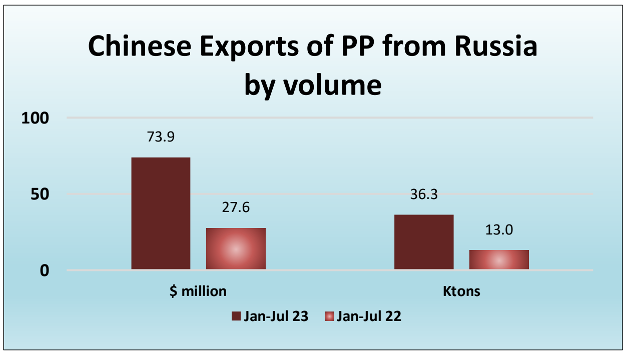


From more than 50,000 tons of polyethylene and its copolymers imported from China to Russia in the first half of 2023, almost 12,000 tons, or 24%, were produced by non-Chinese producers.

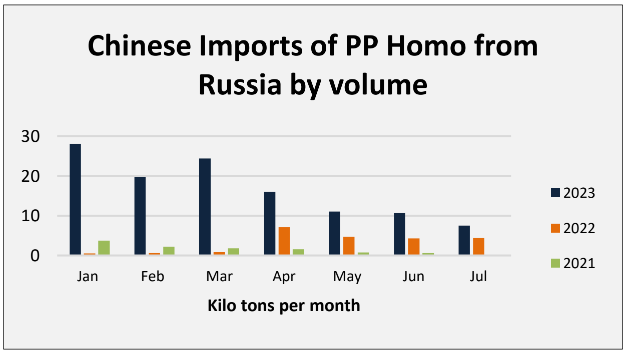
By contrast inward shipments of polyethylene from China into Russia increased by value in the first seven months to $89.9 million tons versus $39.3 million in 2022 and €19.5 million in 2021. By volume imports totalled 63,214 tons in the first seven-month period in 2023 against 26,433 tons in the same period in 2022 and 14,279 tons in 2021. The most expensive grades of polyethylene included ethylene-vinyl acetate and ethylene-hexene copolymers.

Russian-Chinese polypropylene trade Jan-Jul 2023

Sinopec became the leading exporter of polyolefins to Russia in 2023, exporting 11,600 tons of PP in the first seven months in 2023. In total China increased export sales of polypropylene to Russia to 36,315 tons in the first seven months against 12,974 tons in the same period in 2022. Import costs increased from $27.564 million to $73.937 million.



Exports of polypropylene from Russia to China amounted to 99,319 tons in the first seven months in 2023 against 18,114 tons in the same period in 2022.

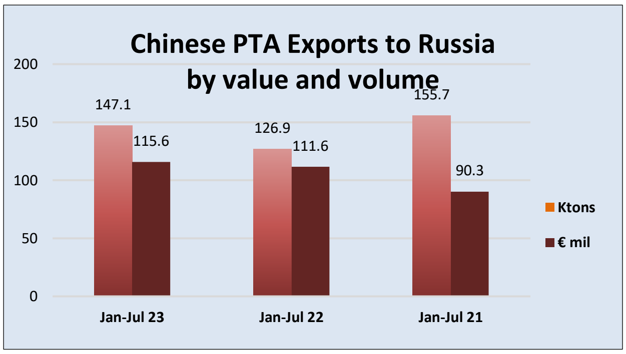


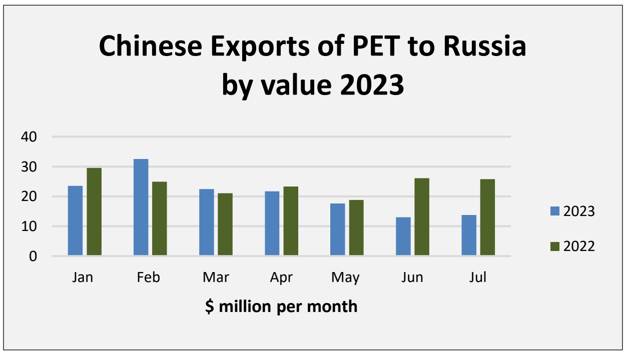
In 2022, polypropylene exports decreased by 12.4% under the influence of the ban on the import of Russian polypropylene to the EU countries. Deliveries to Poland and Ukraine, as well as to Vietnam, decreased the most in 2022. An increase in supplies to Turkey, China and Uzbekistan helped to avoid a more significant drop in exports.

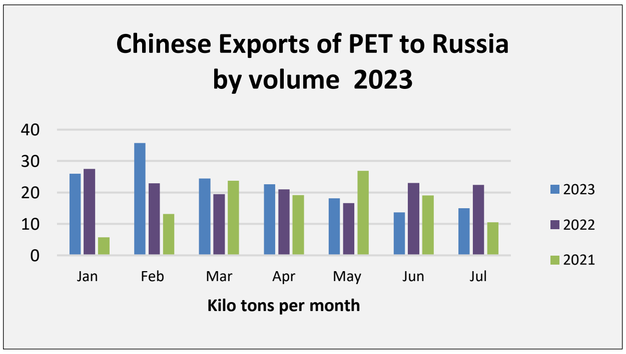
SIBUR-construction of new PP plant at Tobolsk starts

In late August construction started for a new polypropylene plant at Tobolsk under the SIBUR subsidiary ZapSibNeftekhim for the production of polypropylene, which will become part of the already existing ZapSibNeftekhim complex. The expansion project for SIBUR's Tobolsk production cluster involves the construction of a propane dehydrogenation unit with a capacity of 550,570 tpa and a polypropylene production unit of 500,000 tpa. The project will increase the capacity of SIBUR's Tobolsk industrial site to produce polypropylene by one and a half times, up to 1.5 million tpa.

Paraxylene-PTA-PET







Russian PTA imports Jan-Jul 23

Russian PTA imports from China increased in the first seven months to 147,068 tons versus 126,912 tons in the same period last year but was lower than the 155,615 tons imported in January to July 2021. This year values of imports amounted to $115.630 million in the first seven months against respectively $111.6 million in 2022 and $90.255 million in 2021.

Nearly all of the PTA imports from China were shipped to Ekopet at Kaliningrad by rail. PTA import prices averaged $786.2 in the first seven months this year, down from $879.3 in 2022 and up from $579.8 in 2021.

Russian PET trade Jan-Jul 23

In the first seven months Russian import values of PET from China amounted to $144.592 million against $143.836 million in January to July 2022 and $81.987 million in 2021. By volume imports rose from 130,464 tons to 155,742 tons in January to July 2023. Average prices dropped this year in line with lower feedstocks costs, amounting to $932.6 per ton against $1110.9 per ton in the first seven months last year. However they were higher than the comparative period in 2021 when numbers amounted to $863.6 per ton.

Russian PET imports from China in the whole of 2022 amounted to a total of 238,000 tons, which is 34.7% more than in 2021. As a result, the share of Chinese PET in total Russian imports increased from 84% to 95%. Russia imported 194,260 tons of PET from China in 2021 for $194.690 million, whilst Import values rose to $296.478 million.

Polief-raw materials supply

Polief increased MEG purchases of MEG in the first seven months in 2023 to 38,100 tons versus 26,400 tons in the same period in 2022. Nizhnekamskneftekhim is the main supplier to Polief, shipping 32,300 tons in the period January to July.

Polief's MEG Domestic Purchases (unit-kilo tons)

Company	*Jan-Jul 23*	*Jan-Jul 22*
Nizhnekamskneftekhim	32.3	26.2
SIBUR-Kstovo	5.7	0.3
Total	38.1	26.4

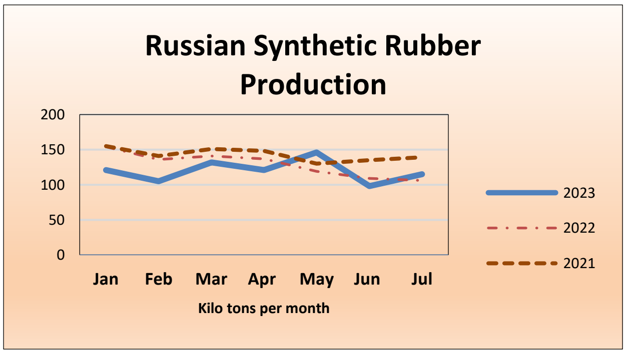
Polief's revenue amounted to 7.8 billion roubles in 2022 which is around $100 million at the current exchange rate, up from 6.5 billion roubles ($84 million) in 2021. Due to higher costs the company's net profit more than halved from 501.4 million roubles (46.468 million) in 2021 to 230.1 million roubles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

The capacity of the plant at Blagoveshchensk is currently estimated at 374,000 tpa of PTA and 264,000 tpa of PET. Following the introduction of recycling facilities Polief has become an example of a closed economy where the re-involvement of used plastic bottles in production and further circulation. Polief produces a small surplus of PTA which is sent normally to SIBUR-PETF at Tver.

Synthetic rubber

Russian synthetic rubber production Jan-Jul 2023

Synthetic rubber production in Russia amounted to 838,000 tons in January to July 2023 against 902,000 tons in the same period in 2022. May production volumes rebounded this year strongly to 146,000 tons, which amounts to an increase of 22.7% over the same period in 2022 and 12.9% higher than in May 2021. However, production fell in June and July to 96,000 tons and 116,000 tons respectively. Tyre manufacturing remains suppressed by weak demand and concerns over how many drivers will be able to purchase new winter tyres.



Russian Chinese rubber trade Jan-Jul 2023

Overall Russian exports of synthetic rubber to China totalled $444.7 million in the period January to July 2023 against $287.7 million in 2022. By volume Russian shipments amounted to 307,489 tons in the first seven months versus 163,886 tons last year.

Chinese Synthetic Rubber Imports from Russia (unit-kilo tons)		
Product	***Jan-Jul 23***	***Jan-Jul 22***
SBRs	56.435	19.520
Butadiene Rubber	66.136	16.906
Butyl Rubber	62.234	48.736
HBR	35.158	33.252
NBR	19.583	6.187
Isoprene Rubber	31.819	29.108
Others	36.123	10.176
Total	307.489	163.886

By volume butyl rubber exports from Russia to China increased from 48,736 tons in January to July 2022 to 62,234 tons in the same period this year. For rubber producers, as for all Russian companies, the reorientation to Asian markets is associated with logistical problems. The capacity of Russian railways and Russian Far Eastern ports does not allow to quickly reorient all supplies to Asia. In February this year Russian quotas were established for imports of synthetic rubber into the EU area consisting of a total of 562,973 tons to be completed by 30 June 2024 in addition to 752,475 tons of carbon black.

European Synthetic Rubber Capacities	
Product	***Capacity***
SIBUR & TAIF	1191
Arlanxeo	454
Versalis	443
Synthos	415
Trinseo	330
Global Synthetic Rubber Capacities	
Product	***Capacity***
Arlanxeo	1969
Sinopec	1895
PetroChina	1505
SIBUR & TAIF	1191

Nizhnekamskneftekhims rubber caapcities

Until Russia invaded Ukraine Nizhnekamskneftekhim sold nearly of its synthetic rubber exports in the European market, shared with other players. Since the second half of 2022 the company has been redirecting exports largely to China.

Nizhnekamskneftekhim accounted for 41.6% of global isoprene rubber production in 2021, whilst accounting for 15.4% of butyl rubber in global terms and 5.8% of butadiene rubber. Together with the acquisition of Nizhnekamskneftekhim in 2021, SIBUR is the largest producer of synthetic rubber in Europe but is largely excluded from European markets. Before sanctions Nizhnekamskneftekhim sold rubber under long-term contracts to tyre manufacturers such as Goodyear, Michelin, Pirelli, Continental, Bridgestone, etc. Most of these contracts came with zero margins or at a loss in order to fulfil the terms of supply, even if sales themselves brought decent revenue. As a result, the total revenues for the company rose sharply even if total profitability only hovered around 10%.

Nizhnekamskneftekhim had set a target of raising synthetic rubber capacity by 2025 to 1 million tpa, but due to external events such as the pandemic and now sanctions capacity remains around the current 800,000 tpa. Rubbers have traditionally provided 35-40% of all proceeds for Nizhnekamskneftekhim and 80% of the company's foreign exchange earnings.

Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Shchekinoazot	756.824	890.982
Gazprom Methanol	439.200	421.940
Metafrax Chemicals	686.763	641.325
Akron	47.160	55.945
Azot Novomoskovsk	9.320	130.855
Angarsk Petrochemical	15.881	20.485
Azot Nevinnomyssk	60.493	64.230
Tomet	236.030	362.786
Ammoni	43.869	57.271
Totals	2295.540	2645.819

Russian methanol production Jan-Jul 2023

Russia produced 2.296 million tons of methanol in the first seven months in 2023 against 2.646 million tons in the same period in 2022. Gazprom Methanol and Metafrax were the only producers to increase output this year, rising from 421,940 tons in the period January to July 2022 to 439,200 tons and from 641,325 tons to 686,763 tons respectively. Azot at Novomoskovsk showed the largest proportional fall from 130,855 tons to 9,320 tons, having not produced since January. Other small producers all reported lower production numbers.

Russia's largest producer Shchekinoazot reduced production from 890,982 tons to 756,824 tons. At Togliatti Tomet produced 236,030 tons of methanol in January to July 2023 versus 362,786 tons last year. Ammoni in Tatarstan did not produce in July and for the first seven months reduced methanol production from 57,271 tons to 43,869 tons.

Russian Methanol Exports by Destination (unit-kilo tons)		
Country	***Jan-Jul 23***	***Jan-Jul 22***
Belarus	96.410	137.751
China	456.722	8.220
Finland	106.441	437.391
Germany	5.265	1.110
Kazakhstan	26.116	22.597
Latvia	1.230	45.353
Lithuania	9.019	40.804
Netherlands	20.814	137.072
Poland	126.002	253.359
Romania	0.000	26.488
Slovakia	0.000	49.035
Turkey	147.420	55.700
UK	0.000	8.398
Ukraine	0.000	11.916
Others	2.529	0.547
Total	997.968	1235.743

Gazprom Methanol shutdown

Gazprom Methanol stopped for planned maintenance on 11 September. Officially this was scheduled, but unofficially market concerns and lower prices helped the decision to undertake maintenance. No precise restart date has yet been confirmed. Irrespective of the reasons, the company will take the opportunity to conduct key maintenance and repair of equipment, replacing process pipelines, and repairing thermal insulation and cover layer on pipelines and equipment.

One of the planned tasks include the modernisation of the synthesis gas compressor turbine will be undertaken. Other tasks include the modernisation of the water circulation cycle and replacement of switchboard equipment. During the repair, the catalysts for desulphurisation and methanol reforming, as well as methanol synthesis, will be replaced. It is not clear how long the outage will last.

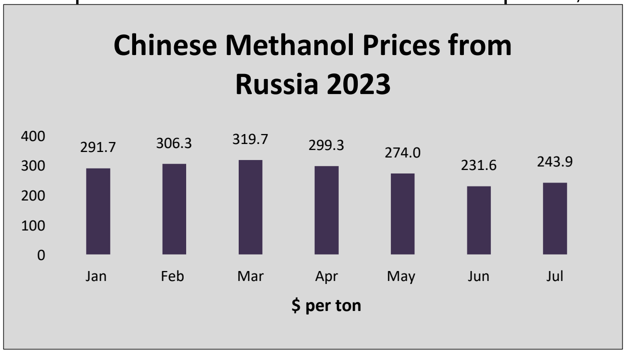
Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Azot Nevinnomyssk	5.2	1.0
Azot Novomoskovsk	44.6	43.5
Akron	0.0	4.9
Metafrax Chemicals	254.8	246.8
Gazprom Methanol	232.3	154.5
Tomet	52.7	119.9
Shchekinoazot	408.0	662.6
Ammoni	0.0	1.5
Total	997.5	1234.6

Russian methanol exports Jan-Jul 2023

Russian methanol exports amounted to 997,968 tons in the first seven months in 2023 versus 1.236 million tons in the same period in 2022.

Russian methanol exports to Belarus decreased to 96,410 tons in January to July 2023 against 137,751 tons in January to July 2022. Exports to Kazakhstan in the first seven months in 2023 increased to 26,116 tons from 22,597 tons last year whilst more significantly shipments to Poland dropped from 253,359 tons to 126,002 tons.

China's imports from Russia were valued at $113.881 million for shipments in the first seven months. In terms of product pricing Russian shipments to China have seen lower prices since the start of the second quarter, dropping to $231.6 per ton in June before recovering slightly to $243.9 in July. These prices test profit margins for Russian producers which are facing much higher logistics costs to China than to European markets. Much of advantage in lower gas prices is eroded in shipments to China through the costs of transport.



Shchekinoazot reduced exports from 662,600 tons to 408,000 tons whilst Metafrax Chemicals increased shipments from 246,800 tons to 254,800 tons this year. By overall volumes Tomet exported only 52,700 tons of methanol in the first seven months this year versus 119,900 tons in the same period last year. Gazprom Methanol increased exports slightly in the first seven months from 154,500 tons to 232,300 tons.

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

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Azot Nevinnomyssk	4.614	15.480
Azot Novomoskovsk	0.000	80.059
Metafrax Chemicals	264.346	219.068
Gazprom Methanol	179.509	226.902
Tomet	173.370	216.117
Shchekinoazot	224.078	167.576
Ammoni (Mendeleevsk)	17.567	31.035
Total	863.484	956.237

Russian methanol domestic sales, Jan-Jul 2023

Domestic merchant market sales tended to stabilise in the second quarter and then weaken slightly towards the end of the quarter. In March-April, the price per ton of methanol in Russia had increased but has now eased back, partly due to the cessation of exports to the EU which has freed up product. In the first seven months in 2023 Tomet supplied 125,225 tons to the domestic merchant market against 164,782 tons in the same period in 2022. The largest consumer for Tomet is Togliattiazot where methanol is used for the production of urea-formaldehyde concentrate.

Russian Formaldehyde Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Pigment	22.130	21.100
Shchekinoazot	18.076	19.046
Akron	74.273	87.462
Metafrax	167.896	214.129
Sverdlov Plant	3.584	9.178
Khimsintez	29.113	26.054
Uralkhimplast	27.826	25.754
Nizhnekamskneftekhim	101.778	48.445
Metadynea	17.248	22.083
Total	461.923	473.252

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

Metafrax Chemicals increased merchant shipments in the first seven months this year from 219,068 tons to 264,346 tons. Formaldehyde production at Gubakha amounted to 461,923 tons in January to July 2023 versus 473,252 tons in the same seven months in 2022. Metafrax reduced production from 214,129 tons to 167,896 tons whilst Akron reduced production from 87,462 tons to 74,273 tons.

Shchekinoazot increased domestic sales from 167,576 tons in the first seven months in 2022 to 224,078 tons in January to July 2023. This partly offset the loss of export volumes. Overall, the company faces the largest challenges amongst the Russian producers having expanded its capacity to 1.45 million tpa in September 2021. In order to develop internal processing Shchekinoazot is looking for a general contractor for the construction of the KMMF-110 unit, which comprises a concentrated low-methanol formalin with a capacity of 110,000 tpa. The timing of the Shchekinoazot project remains uncertain though.

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 23***
Angarsk Petrochemical company	17.057	17.961
Azot Nevinnomyssk	11.815	9.264
Gazprom neftekhim Salavat	44.026	36.419
SIBUR-Khimprom, Perm	19.299	17.609
Total	92.196	81.253
Russian Isobutanol Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 23***
Angarsk Petrochemical Company	13.029	12.773
Gazprom neftekhim Salavat	24.162	18.976
SIBUR-Khimprom, Perm	38.027	32.879
Total	75.217	64.628

Russian butanol production Jan-Jul 2023

Russian normal butanol production rose from 54,729 tons in January to July last year to 72,326 tons in January to July 2023. Gazprom neftekhim Salavat was the largest Russian producer, increasing production to 44,026 tons from 36,419 tons.

Isobutanol production in Russia increased from 64,628 tons to 75,219 tons in January to July 2023. Gazprom neftekhim Salavat increased production from 18,976 tons to 24,162 tons, whilst SIBUR-Khimprom increased production from 32,879 tons to 38,027 tons.

Normal butanol exports rose from 7,688 tons in the first seven months last year to 15,522 tons in the same period this year, including an increase in shipments by Gazprom neftekhim Salavat from 2,465 tons to 7,758 tons.

Russian Butanol Exports (unit-kilo tons)		
N-Butanol	***Jan-Jul 23***	***Jan-Jul 22***
Gazprom neftekhim Salavat	7.758	2.465
SIBUR-Khimprom	0.000	0.683
Angarsk Petrochemical	6.993	1.189
Azot Nevinnomyssk	0.771	1.745
Dmitrievsky Chemical Plant	0.000	1.606
Total	15.522	7.688
Isobutanols	***Jan-Jul 23***	***Jan-Jul 22***
Gazprom Neftekhim Salavat	4.522	18.930
SIBUR-Khimprom	8.609	9.597
Angarsk Petrochemical	0.118	0.000
Dmitrievsky Chemical Plant	1.508	0.498
Total	14.757	29.024

Isobutanol exports fell from 29,024 tons in January to July 2022 to 14,757 tons this year. Gazprom neftekhim Salavat reduced shipments from 18,930 tons to 4,522 tons whilst SIBUR-Khimprom reduced shipments from 9,597 tons to 8,609 tons.

Russian acetone production Jan-Jul 2023

Russian acetone production increased from 79,789 tons in the first seven months last year to 93,356 tons in the same period in 2023. Omsk Kaucuk produced 21,724 tons of acetone against 17,402 tons whilst Kazanorgsintez produced 32,801 tons versus 27,157 tons. Acetone has sanctioned by the EU, preventing Russian exports and new markets are being sought by producers. Exports fell in the first seven months from 56,620 tons in the first seven months in 2022 to 6,118 tons in the same period this year.

Russian Acetone Production (unit-kilo tons)		
Producer	***Jan-Jul 23***	***Jan-Jul 22***
Ufaorgsintez	21.021	18.137
Kazanorgsintez	32.801	27.157
Novokuibyshevsk Petrochemical	17.810	17.093
Omsk Kaucuk	21.724	17.402
Total	93.356	79.789

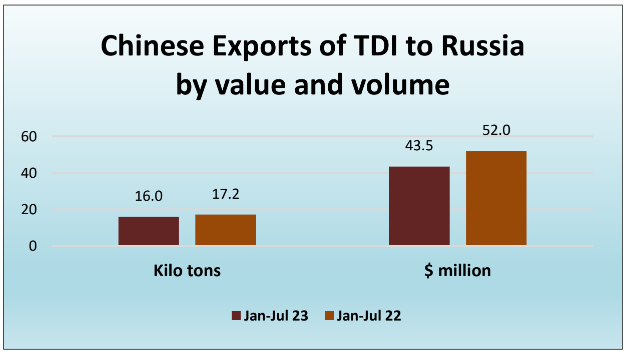
Russian plasticizer trade Jan-Jul 2023

Russian plasticizer exports dropped from 6,585 tons in the first seven months in 2022 to 4,891 tons in the same period in 2023. Exports this year have gone largely to Turkey and Uzbekistan.

Russian Plasticizer Trade 2023 (unit-kilo tons)		
Exports		
	Jan-Jul 23	***Jan-Jul 22***
DOTP	4.801	6.585
Imports		
DOP	2.383	1.320
DOTP	1.515	4.512
DINP	17.629	13.717
Total	21.527	19.549

Imports of plasticizers increased from 19,549 tons in January to July 2022 to 21,527 tons in the same period in 2023. The largest share of plasticizer imports comprises DINP which increased in the first seven months this year to 17,629 tons from 13,717 tons last year. Most of Russia's plasticizer imports this year came from South Korea, followed by China and India.

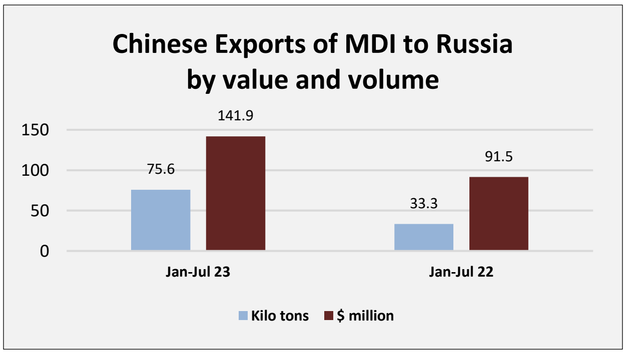
Russian chemical projects and new products



Elastokam goals in polyurethanes

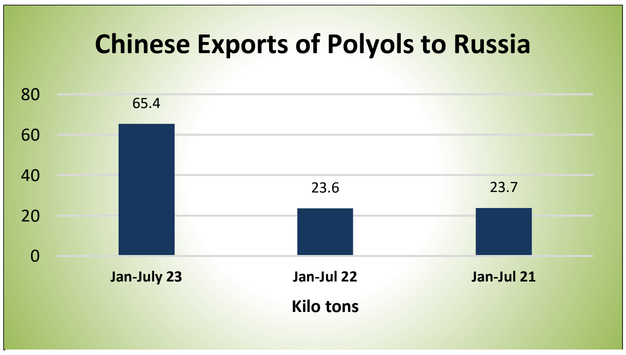
After encountering multiple challenges following the course of Western sanctions, the Nizhnekamsk polyurethane producer Elastokam plans to launch the production of all types of polyurethane materials by 2025-2026. At this stage it is not clear how these goals will be achieved. Elastokam was set up originally as a jv between Nizhnekamskneftekhim and BASF two decades ago, but BASF has since been replaced by SIBUR.

Elastokam has made a rebranding and began production of polyurethane systems under the brand Sibufoam. Over the past year and a half, the consumption of polyurethane systems in Russia has decreased by about 20%. A number of suppliers and consumers left, whilst the vacated niches have been filled by companies from China and Turkey. The main restrictions on undertaking investment plans are linked to the lack of domestic isocyanate production.



Isocyanate/polyol imports from China into Russia

Due to sanctions, Elastokam lost some of its foreign partners in 2022, whilst access to isocyanates and low-tonnage chemistry was lost. However, with the help of SIBUR, it was possible to find suppliers in China and elsewhere in Asia.



TDI imports from China into Russia increased from 15,999 tons in January to July 2022 to 17,227 tons in the same period in 2023 whilst MDI imports increased from 33,277 tons to 75,630 tons. Polyol imports increased from 23,568 tons in the first seven months in 2022 to 65,365 tons in the same period in 2023.

Outlook for Russian polyurethanes

The general perception of instability in the industry remains, but although market participants are gradually returning to discussing prospects and investment projects. The company looks at the third and fourth quarters of 2023 with cautious optimism, expecting growth of 4-5%.

Elastokam expects to increase its market share and enter new segments, including the segment of refrigeration equipment, where the company has already signed agreements on the supply of heat-insulating polymer materials for refrigerators with the Belarusian company Atlant and the Uzbek company Artel. Contracts are being discussed with several more manufacturers that occupy a significant share of the Russian market of household refrigeration equipment.

In the footwear industry Russian manufacturers use raw materials from Turkish and Chinese companies that have replaced European suppliers. Elastokam plans to launch its own production of the polyol component of the polyurethane shoe system and enter this market with a domestic alternative. Elastokam also intends to maintain the company's presence in the automotive industry. In the mass of a passenger car, 25-30% are elements made of polyurethanes, in particular, air ducts, seals, sound insulation, foam in the seats, etc.

Russian chemical plant news

Gazprom neftekhim Salavat-superabsorbents
Gazprom neftekhim Salavat expects to become the country's only producer of superabsorbent polymers (SAP). In 2017, Gazprom neftekhim Salavat commissioned a complex for the production of acrylic acid and butyl acrylate, which produces crude acrylic acid, butyl acrylate and glacial acrylic acid. In the manufacture of products, our own propylene and butanol are used.

Plans for the implementation of the SAP production project were announced back in 2021. Then it was planned that the production capacity would be 45,000 tpa. Investments were estimated at 11 billion roubles.

Gazprom Linde Engineering has developed project documentation, and a license agreement for the use of the technology has been concluded with Superabsorbent Technologies AG (Switzerland). The company has every chance to occupy a vacant niche and become the only manufacturer of SAP in the country. The consumption of these products is only growing every year. The implementation of the import-substituting project will allow the company to cover 60-70% of the needs for superabsorbents in Russia.

Akron Production (unit-kilo tons)		
Product	***Jan-Jun 23***	***Jan-Jun 22***
Ammonia	1106.0	1039.0
Urea	975.0	830.0
Methanol	40.0	50.0
Formaldehyde	64.0	75.0
Urea-formaldehyde resins	76.0	91.0
Calcium Carbonate	217.0	206.0

Akron Jan-Jun 2023
Akron’s net profit dropped by 74% over the first half of 2022 to 19.040 billion roubles ($199.4 million). Turnover fell by 40% to $1.140 billion, and the EBITDA fell 55% to $478 million.

By volume Akron's production of mineral fertilisers in the first half of the year increased by 7.1% compared to the same period last year to 3.67 million tons. Ammonia production increased by 7.8% to 1.51 million tons, nitrogen fertilisers by 12.4% to 2.88 million tons. Production of ammonium nitrate decreased by 13% to 1.11 million tons, and urea production increased by 17.5% to 975,000 tons. Production of complex fertilisers increased by 0.9% to 1.212 million tons. Overall, the production of basic commercial products increased by 6.1%, up to 4.3 million tons. At the same time, methanol production dropped by 19.6% to 40,000 tons, formalin by 15.6% to 64,000 tons, and urea-formaldehyde resins by 16.5% to 76,000 tons.

Sintez, 2-ethylhexyl nitrate
The Bashkir company M Sintez plans at the end of 2024 to complete the construction of a plant for the production of cetane-increasing additives (2-ethylhexyl nitrate) for diesel fuel. Until recently, a significant part of the market was occupied by foreign additives. The design capacity of the plant is 30,000 tpa based on raw materials provided by Gazprom neftekhim Salavat. Cetane-increasing additives can save fuel, reduce harmful emissions and increase engine efficiency.

Kuibyshevazot-modernsiation
Commissioning of the new granulated urea production facility continues. Its capacity will be 525,000 tpa. At the same time the first stage has been completed for the project for the production of nitric acid, ammonium nitrate solution and the ammonium nitrate granulation unit. In the first half of 2023, the technical re-equipment of the first polymerization unit for polyamide production was completed, which made it possible to increase the quality of the polyamide production.

Volzhskiy Orgsintez-project to build potassium butyl xanthate plant in doubt
Following the seizure of assets by the state there are doubts whether Volzhskiy Orgsintez will complete the construction of a new potassium butyl xanthate production facility. The company is already operating a plant with a capacity of 26,500 tpa and prior to the so-called renationalisation the aim was to increase capacity by another 20,000 tpa.

Potassium butyl xanthate is a flotation reagent used in the enrichment of heavy, non-ferrous, noble and rare metals, native copper as a collector reagent. Revenue for Volzhskiy Orgsintez increased by 23.5% in 2022 over 2021 to 15.48 billion roubles, whilst the net profit rose 1.6 times up to 2.92 billion roubles.

Kazakhstan

Kazakh gas treatment plant for polyethylene plant

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

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

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

KazMunaiGaz-fertiliser plant

KazMunaiGaz has launched a large-scale project to create a nitrogen fertiliser production facility in Kazakhstan. From 2023 to 2028, it is planned to build a urea plant with a capacity of 1.3 million tpa. The plant is planned to be located in the Aktobe region of Kazakhstan. A licensor is currently being selected. The new production will be mainly focused on foreign markets. In Kazakhstan, the level of consumption of nitrogen fertilisers amounted to 72,000 tons in 2022. The implementation of a large project for the production of nitrogen fertilisers with a capacity of 1.5 million tpa was launched by KazAzot.

Butadiene project Kazakhstan change of ownership

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

KazMunaiGaz and Tatneft established the Butadien jv at the end of 2021. Raw materials for the new plant, which was originally planned to be launched in 2026 in the Atyrau region, should be supplied from the Tengiz field by Tengizchevroil, and the finished products, in turn, will be sent to the KamaTyresKZ tire plant, launched at the end of 2022 near Karaganda. This is a joint venture between Tatneft and the Kazakh group Allur.

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

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

Daewoo-Turkmenistan ammonia and urea

Daewoo E&C is preparing to implement a major project in the gas chemical industry of Turkmenistan. The new plant will produce mineral fertilisers from natural gas. The plant's production capacity will be 660,100 tpa of ammonia and 155,000 tpa of urea.

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