Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

Chemical Industry News for Central Europe, South East Europe and Eurasia

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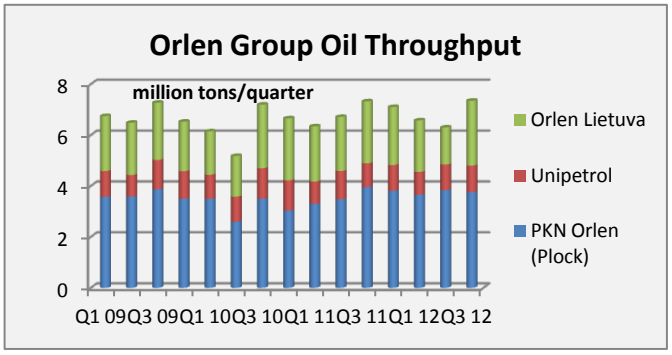
Issue 263, 29 October 2012

FEATURES FROM THIS ISSUES

CENTRAL & SOUTH EAST EUROPE

Petrochemicals

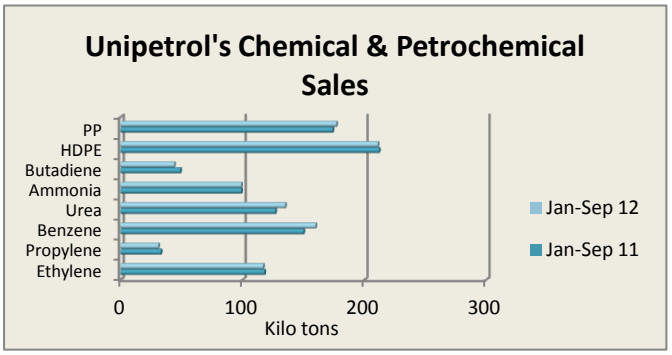


PKN Orlen, third quarter 2012

PKN Orlen achieved a net profit of zl.1.3 billion in the third quarter this year, compared to a loss of zl 258 million in the same quarter in 2011. The group's revenues amounted to zl31.6 billion, compared to zl 28.7 billion last year. The profit from Orlen's refining division amounted to zl 1,136 million in the third quarter and was higher than the same period in 2011 by zl 801 million. Refining volumes in all three countries, Lithuania, Poland and the Czech Republic achieved their highest levels this year. The cumulative impact of an increase in refining margins and stable sales increased the operational profit in the refining division by zl 848 million.

To offset the performance of the refining sector the Orlen Group showed a decline in profits for the petrochemical division by zl 154 million against the third quarter in 2011, and totalled zl 213 million. The valuation of stock was helped by the change in prices, and this was a key factor increasing the EBIT by zl 49 million. Cyclical maintenance shutdowns took place in the third quarter involving the Olefin 11 and PTA installations at Plock, correlated with shutdowns at Basell Orlen Polyolefins and Anwil. Basell Orlen Polyolefins announced a short force majeure at the end of August on production of four grades of HDPE. The plant in Płock has al production capacity of about 320,000 tpa of HDPE, whilst also operating a polypropylene plant with a capacity of 400,000 tpa.

In terms of capital expenditure in the petrochemical division the Orlen Group spent zl 229 million in the third quarter, the most significant investments of which comprised the modernization of pneumatics and automation in the phenol division and work associated with an increase of operational security at the Ethylene Oxide II plant. Other tasks included changes in technology for chlorine condensation at Wloclawek and reconstruction of an olefin furnace at Litvinov.

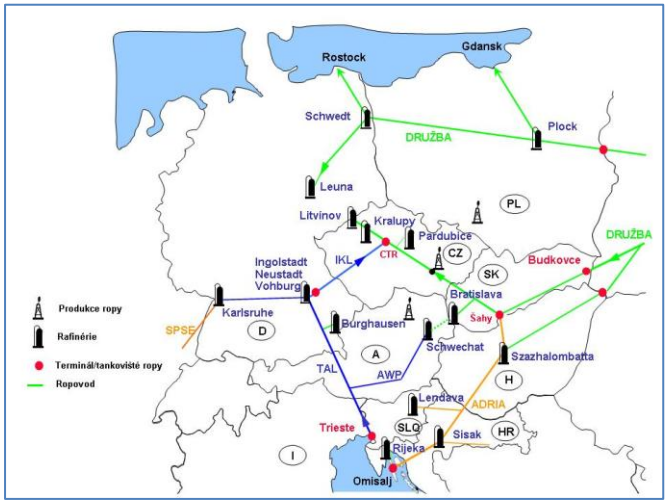


Unipetrol, third quarter 2012

Unipetrol Group results in the third quarter were influenced mainly by good performance in the refining division and higher sales volumes of refinery and petrochemical products. The group posted an operational result (EBIT) of Kc 942 million in the third quarter, with revenues up 5% to Kc 28.438 billion. Overall, the group recorded a loss of Kc 317.6 million in the first three quarters of this year, while in the same period in 2011 it posted a net profit of Kc 334.8 million.

The main factors that influenced third quarter performance in the refining division were better margins and higher crude oil throughput by 3%. Processed oil totalled 1.043 million tons, 11% up on the same period in 2012. Refinery utilisation of 93% was supplemented by a significant increase in margins.

The EBIT in the petrochemical division amounted to Kc 295 million in the third quarter, which was up significantly due to a stock revaluation. Sales of petrochemical products increased for Unipetrol by 13% against the second quarter to 466,000 tons, mainly due to reliable production and customers' restocking. The main factors that influenced the performance of the petrochemical division in the third quarter 2012 were lower model olefin margins as a result of lower spreads of ethylene and propylene to naphtha. However, lower olefin margins were partly compensated by higher model polyolefin margins. Higher sales volumes were recorded for polyolefins in the third quarter, but overall for the period January to September 2012 showed little change from 2011.



Unipetrol-Druzhba & IKL

Imports of crude to the Czech Republic through the Druzhba pipeline started to grow in the second half of this year compared with the first half of 2012. However, the use of Druzhba in future remains unclear as Unipetrol still negotiates oil supplies on a monthly basis, and is unable to guarantee supplies beyond the short term. Apart from the Druzhba pipeline, oil is delivered to the Czech Republic through the IKL pipeline from Ingolstadt.

Total oil imports to the Czech Republic decreased by about one-tenth to 7.06 million tons in 2011, the volume being the lowest since 2004. Imports via Druzhba have been falling year by year, dropping to 57% in 2011 against the previous average share of 70%. In the second quarter of this year, imports via Druzhba dropped to a minimum and Czech importers compensated the drop of supplies from Russia by a growth in supplies from IKL. The IKL is becoming more important and for 2012 could exceed volumes from the Druzhba for the first time. Whilst the capacity of the IKL has capacity to fully compensate supplies through the Druzhba, Unipetrol would prefer not to rely on one route and this is why is company hopes for a longer term supply arrangement with Transneft for Russian deliveries.

Dioki-Turkish rescue

The Dioki group and its petrochemical division Dina appear to have been rescued by a Turkish investor Caliskana, which has agreed to pay back wages and clear outstanding debts. Dina at Omisalj has been idle since last year due to unpaid debts. The losses at Dioki rose in the first half of 2012, rising from €14.9 million in January to June 2011 to €17.8 million this year.

The supervisory board for Dina at Omisalj has appointed a new management board consisting of representatives from Horizon Trading Company from Turkey, which is part of the Caliskana Group. A decision is expected as soon as possible to start production at Dina's petrochemical plant, which may happen before restructuring is started. The future for Dioki's petrochemical facilities at Žitnjak, Zagreb is less promising than Omisalj and only the polystyrene plant seems to possess a future.

Oltchim-privatisation to restart in 2013

At the start of October Romania's government officially acknowledged that the sale of its majority stake in Oltchim had failed and at the same time pledged to complete the process in 2013. In the immediate term the Romanian Environment Ministry has requested permission from the European Commission to grant a loan to restart some of the units at Oltchim, which had become idle prior to the privatisation process. .

On 25 October Oltchim started activity to restart its membrane electrolysis facility at Ramnicu Valcea. Also, the company is preparing to restart its propylene oxide plant, which provides raw materials for the polyols facility. The Ministry of Economy expects that Oltchim should be able to restart the production of oxo-alcohols and plasticizers from the second half of November.

Chemicals

Lotos-PGNiG and chemical synergies in Poland

PGNiG launched a natural gas link in September to the Lotos refinery at Gdansk, with the initial volume set at around 340 million cubic metres and the target volume at over 500 million cubic metres, making Lotos one of PGNiG's top five customers by volume. Due to this agreement Lotos will become one of the five largest gas recipients. The agreement will also result in Lotos' having at its disposal much larger amounts of LPG for sale, and the group is trying to form agreements with the chemical producers for long term supplies.

The prospect of a consolidation of the Tarnow and Pulawy groups has thrown up other possible scenarios for co-operation in the Polish chemical industry, and has provided impetus to a sector that has been characterised by a lack of direction in the past 10-15 years. Now with consolidation starting to move forward other opportunities are being thrown up that could lead to new arrangements for raw materials and the production of new products. The Treasury has now advocated that the Grupa Lotos should seek some form of cooperation with the Tarnow-Pulawy group in relation to gas transmission and possible cooperation in oil shale extraction.

The refining group Lotos at Gdansk has had no role in the petrochemical industry until this year when a 120,000 tpa plant for the extraction of xylenes. This is the first step by the group into chemical sector and whereas a single product does not challenge Orlen's domination in Poland, the strategic position of Lotos does give the group an advantage and the chance for further expansion.

Although PKN Orlen is the largest chemical producer in Poland it has been relatively slow to appreciate its role as a central player. For example, when investing in the cracker expansion in 2004-2005, Orlen did not consider

building enough propylene capacity to meet the demands of domestic consumers such as ZAK, PCC Rokita and Zachem. Equally, when the PX-PTA facilities were opened last year no additional thought had been given to orthoxylene which is purchased by ZAK for phthalic anhydride production. The Orlen Group did organise a jv with Synthos a few years for ethylbenzene, but that was disbanded after disagreement over price.

Until recently the concept of cooperation in the Polish chemical industry was broadly confined to small producers. However, the acquisitions made by ZA Tarnow and ZA Pulawy and now the potential consolidation of these two groups appear to have opened a new phase.

Merger of Tarnow-Pulawy groups could be finalised in 2013

The Polish Treasury expects that the combination of the companies ZAT and ZA Pulawy and group subsidiaries could be completed in the first quarter of 2013. The merger will ultimately depend on the authorisation by the OCCP (Polish Office of Competition and Consumer Protection) and the European Commission. In September, ZA Tarnow and ZA Pulawy concluded an agreement defining the terms of cooperation and negotiations aimed at signing the agreement for consolidation. The parties agreed to undertake due diligence for the consolidation deal which is to be managed in two stages. The first stage is to be completed by 30 October 2012, i.e. before the share capital increase in ZAT, which will concentrate investment projects and energy. The second stage is to be completed 30 days after the share capital increase in ZAT, which will concentrate mainly in the field of strategy and synergy.

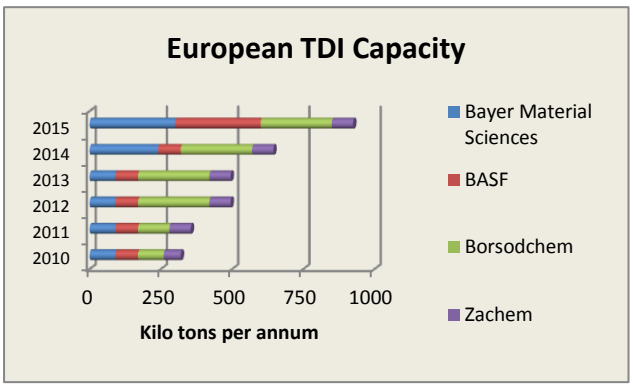
Polish Chemical Production (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
Caustic Soda Liquid	215.4	210.5
Caustic Soda Solid	46.2	39.5
Soda Ash	834.9	777.1
Ethylene	330.0	412.1
Propylene	236.7	276.4
Butadiene	40.1	49.6
Toluene	16.6	51.0
Phenol	27.7	32.0
Caprolactam	121.5	120.8
Acetic Acid	6.2	6.2
Polyethylene	230.8	272.8
Polystyrene	103.8	98.5
PVC	190.1	216.9
Polypropylene	174.8	185.3
Synthetic Rubber	143.3	138.6
Ammonia (Gaseous)	939.9	891.3
Ammonia (Liquid)	977.8	820.3
Pesticides	18.8	15.2
Nitric Acid	1730.0	1606.0

Political opposition to the merger is evident, particularly at local level where the loss of taxes is feared. For example, ZA Pulawy is a major tax payer in the local region, but these revenues would be transferred to Tarnow in the case of being incorporated into the Tarnow Group. Whilst these factors are unlikely to prevent the consolidation process being completed, they do raise hurdles. Questions remain on how equal the consolidation might prove for the ZA Pulawy group. Moreover, the management of ZA Pulawy continues to have reservations about the Tarnow offer in view of how it might affect the strategy of the company that has been pursued in recent years. Both groups have been working together since last year on a possible joint caprolactam plant in Asia, which aside Germany represents the key market for Polish exports.

ZCh Police-pipeline

A pipeline connection between ZCh Police and Germany is being reviewed, which itself could be relatively cheap to construct whilst at the same time denting the interests of PGNiG. This pipeline would be a step back for PGNiG, as it would be faced by new competition which might mean gas at lower prices. ZCh Police's annual consumption 540 million m3 of gas and thus the opportunity to buy cheaper raw flounder on the border would be very attractive. Even if only half of the gas came from the German side the savings would amount to tens of millions of dollars per year. In 2012 ZCh Police suffered gas supply problems from PGNiG due to adverse weather thus limiting ammonia production in the first quarter.

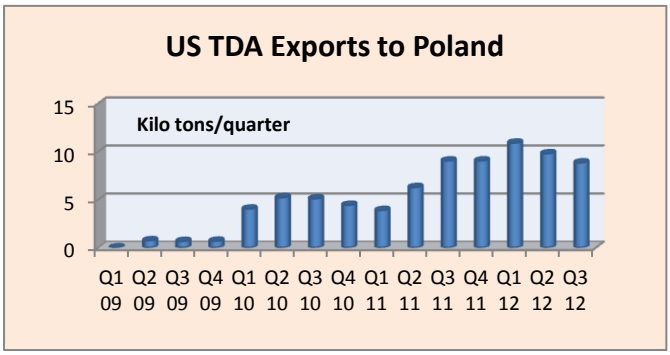


BASF buys Zachem's TDI business from Ciech

On 12 October BASF and Ciech announced the acquisition of Ciech's TDI business at Zachem, subject to approvals from relevant antitrust authorities. The closure of the transaction is expected in the first quarter of 2013. The agreement applies to the TDI business, but not the other parts of Zachem. Ciech and BASF will cooperate closely in order to facilitate the efficient transfer of contracts. BASF is a leading supplier of polyurethane basic products and manages TDI Geismar, Yeosu (Korea), Caojing (China), and Schwarzheide. The latter plant of 80,000 tpa will shut down in 2014-2015 when the new single train plant of

300,000 tpa starts up at Ludwigshafen.

The local administration at Bydgoszcz has been concerned over Ciech's management of Zachem and whether it has invested sufficiently in the company. Before buying Zachem Ciech was asked to invest more than zl 400 million, broken down into zl 130 million to modernise the chlorine plant, develop the production of TDA (zl 143 million) and zl 130 million for a new technology for EPI (epichlorohydrin). The investments have not materialised as expected, whilst Ciech has analysed that Zachem's TDI plant is not competitive against other producers. BASF provides a completely different proposition for the TDI plant at Bydgoszcz, but there are fears for the rest of the Zachem production facilities and whether a future exists.



Zachem-TDA

Ciech is seeking to terminate the supply agreement for TDA signed with Air Products in 2010 for delivery to Zachem. The reason for termination seems likely to be related to the sale of the TDI assets, although the plant at Bydgoszcz will continue to require TDA supply. The agreement with Air Products covers the period 2012-2018 to supply Zachem at Bydgoszcz with a constant supply of TDA for the production of TDI.

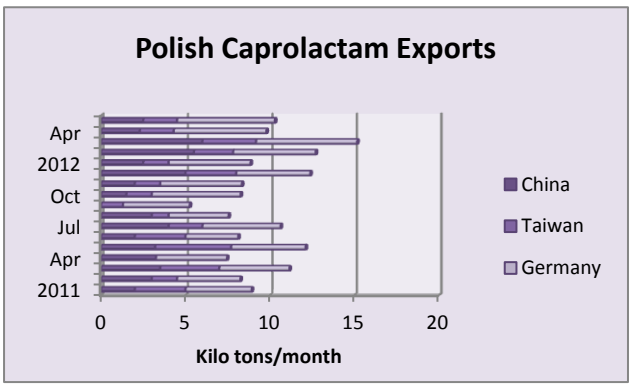
Zachem has long-standing experience in the production of flexible polyurethane foams and TDI. It is perceived as a forerunner of polyurethane production in Central Europe and the leader in polyurethane production in Poland. In 2007-2008, Ciech considered construction of its own TDA plant at Bydgoszcz, but these plans did not progress. In the second half of 2009, the Ciech Group increased the production capacity of the TDI facility at Bydgoszcz by 25%, to 75,000 tpa.

Donau Chemie-ferric chloride

Donau Chemie AG and its Hungarian subsidiary, Donau Chem Ltd have is close to completion of a new plant for ferric chloride and polyaluminum chloride production plant at Kazincbarcika on the BorsodChem site. This is the first plant for these products in Hungary. The initial investment of €6.4 million plant is scheduled to be implemented in April 2013 to start production. The new plant being developed by Donau Chem has been designed to utilise hydrochloric acid produced as a by-product from the TDI-2 plant at Kazincbarcika. The capacity for ferric chloride is 75,000 tpa and polyaluminum chloride 30,000 tpa.

Polish caprolactam producers

The anti-dumping duty imposed by China on caprolactam imports from the EU and US, effective from 22 October 2011, will remain in force for the next five years. ZA Pulawy was included in the group of producers forced to pay the duty, with the rate applicable at 4.4%, whilst ZA Tarnow pays 4.9%. On 1 January 2012, the Chinese government increased the rate of duty on caprolactam imports from 7% to 9%, justifying its decision by the need to protect local industry.



Last year, ZA Tarnow and ZA Pulawy signed an agreement on the possibility of building a caprolactam plant in Southeast Asia with a minimum capacity of 120,000 tpa. The aim was to build a plant close to the main market for caprolactam consumption, but at the same time it would involve the need to develop an infrastructure for the plant from scratch. With an existing infrastructure in place at Tarnow, ZA Tarnow is considering the option of expanding capacity. The two disadvantages of building a new plant in Poland is that the EU has very strict climate policy, making it difficult to acquire approval for construction, whilst also the main region for caprolactam consumption is Asia.

ZA Pulawy recently took part in the improvement of a caprolactam plant in India, using the Cyclopol process. One solution included the improvement of the quality of cyclohexanone. A contract was signed between GSFC Vadodara India and ZA Pulawy in 2009, in collaboration with the Institute of Industrial Chemistry in Warsaw and ENCO Engineering from Switzerland to undertake the project.

RUSSIA

Russian Industrial Production (unit-million tons)		
Product	***Jan-Sep 12***	***% vsJan-Sep11***
Coal	258	107.4
Oil extracted, inc gas condensate	386	101.0
Metallurgical coke	20.5	100.5
Oil refining	201	104.2
Naphtha	9.5	97.6
Propane and butane,	8.6	107.6
Sulphuric acid	8.2	103.1
Caustic Soda	0.701	105.5
Soda ash	2.1	102.2
Ammonia	10.2	96.9
Mineral or chemical fertilisers	13.6	96.4
Plastics in primary forms	3.9	97.5
Synthetic rubber	1052	98.5
Paints and varnishes	0.690	103.0
Materials for paints, etc	0.223	113.3
Chemical fibres and yarns	0.104	96.1

Russian chemical production Jan-Sep 2012

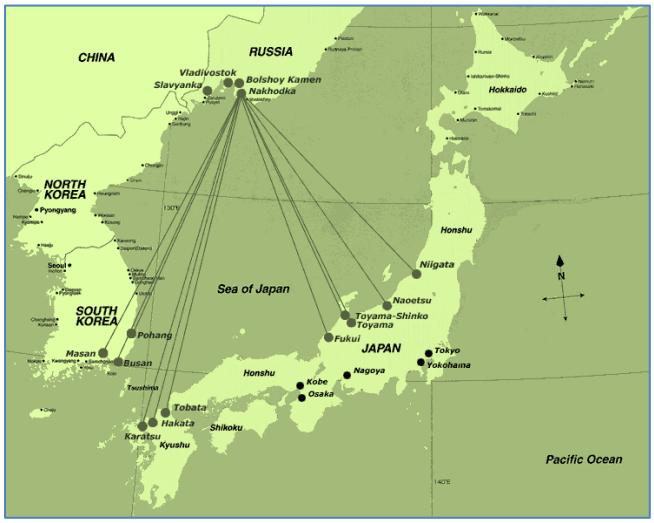
The index of industrial production in January-September 2012 for the Russian Federation was 2.9% up against 2011. For the chemical and petrochemical industry growth has been marginal this year, with some sectors not experiencing improvements. Russian production of mineral and chemical fertilisers dropped in the period January to September this year by 3.6% to 13.6 million tons. Ammonia production dropped 3.1% to 10.2 million tons, whilst caustic soda rose 535% to 807,000 tons and soda ash 2.2%, to 2.1 million tons.

With the accession of Russia to the WTO, the Russian government may now have to give up such forms of support for chemical industry, such as tariffs for railway transportation, gas and electricity, as well as preferential rates for exporters of chemical products.

The Ministry of Industry has developed an alternative scheme subsidising part of the cost of chemical plants for energy, natural gas and rail tariffs. The ministry proposed the use of interest rate subsidies for loans of high-tech exports of chemicals and fertilizer subsidy domestic agricultural producers. However, the Ministry of Economic Development notes that the proposed mechanism does not conform to the WTO rules. These prohibit subsidies that involve the use of domestic goods instead of imported goods. WTO rules though do not prohibit the direct subsidy of fertiliser producers, and this should result in continuing favourable prices for agricultural producers.

The Russian Union of Chemists (PCX) believes that the abolition of tariff exemptions for energy and rail transport, as part of WTO accession, could be a painful blow to the industry. Most of the domestic chemical and petrochemical plants are located far from the border, whilst at the same time being heavily oriented for export sales. This adaptation to a new cost regime could see some of these producers face new challenges, which may become more acute for the smaller to medium sized companies. .

Feedstocks & Projects



Eastern Petrochemical Terminal-Wrangel Bay

The Nakhodka petrochemical project being undertaken by Rosneft's subsidiary Eastern Petrochemical Company (VNHK) incorporates plans to build a specialised marine terminal for shipment of finished products for export. The target markets mainly cover the Far East and South-East Asia, especially China.

VNHK expects that the construction process for the Eastern Petrochemical Terminal (Port East, Primorsk Krai) will start in June 2013. The aim is to complete the design work and obtain the necessary certification from Glavgosekspertiza by May next year. Initially, two berths will be designed for receiving marine tankers of up to 4,000 tons. Simultaneously work will begin to expand river connections flowing into the bay to the harbour at Wrangel East. Local opposition to the terminal is quite vocal and how it might affect the ecology in region, but seems unlikely to avert this development taking place.

Russian Chemical Production (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
Acetic Acid	105.8	100.4
Ammonia	10,163.0	10,515.6
Benzene	792.6	815.8
Butanols	187.2	155.8
C Black	541.0	543.9
Caustic Soda	701.4	742.0
Ethylene	1,595.7	1,826.6
Methanol	2,464.8	2,196.8
PET	305.6	271.8
Phenol	204.1	190.1
Phthalic Anhydride	73.4	71.5
Polyethylene	973.7	1,159.2
Polypropylene	487.0	513.1
Polystyrene	250.2	234.1
Propylene	789.6	911.7
PVC	444.6	410.5
Soda Ash	2,136.0	2,090.0
Styrene	383.2	357.3
Urea	3,885.4	4,428.7

Eastern Petrochemical terminal is to be built for the needs of Rosneft, which in September began to build a petrochemical complex at Wrangel (Nakhodka). As part of the naval component of the project, eight marine terminals will be constructed including four on the left bank of the river Hmylovka which will be designed to receive oil product tankers of up to 1,000 tons. Another two berths for tankers with oil deadweight up to 4,000 tons will be built on a remote pier. The remaining berths will be used for the reception of ships for loading related products produced by refineries. The petrochemical complex is expected to start production in December 2016. The estimated cost of the project is more than $5 billion.

The regional Minister for Development of the Far East has reminded Rosneft of the need to build an infrastructure in the construction of a refinery at Nakhodka. This includes the development of Primorsk Krai in regard to gas, water and electricity. The plant is being designed to process naphtha and LPG from the refineries at Komsomolsk, Achinsk and Angarsk. VNHK will specialize in the production of polymers (polyethylene and polypropylene), and will also produce a number of other petrochemicals.

Nakhodka petrochemical complex marketing

Rosneft is undertaking a major market research project, using consultants, for the marketing of products from Eastern Petrochemical Company (VNHK) in the Asia-Pacific region, including China. The focus of the tender is to include a review of competition in the market, and a market forecast for the period 2015-2030. In particular, Rosneft wants to find out which other capacities are likely to be added providing competition for petrochemicals and refining. Other important tasks consist of studying marine transportation routes, and the requirements for the size of the vessels for shipping products.

Novy Urengoy Gas Chemical Complex

Gazprom has pledged to cover the sum of $830 million to the Royal Bank of Scotland and Russian bank Sberbank to support further investment in the Novy Urengoy gas chemical project in the Yamal peninsula. In April this year t6he Novy Urengoy Gas Chemical Complex raised a five year loan to Gazprombank for $270 million.

Projected start up dates for the ethylene and LDPE facilities at Novy Urengoy of 2013-2014 seem unlikely and production may not start until 2015. However, Gazprom is committed to the project and is unlikely to abandon the investment particularly as it has spent so much time and effort to reach this stage. The decision to create the Novy Gas Chemical Complex dates back to 1993. Necessary equipment was delivered quickly, but the project was suspended in 1996 due to a lack of funding and since then has continued to face problems. The capacity of the LDPE plant is 400,000 tpa, with provisional ideas for a second stage involving 1 million tpa of polyethylene.

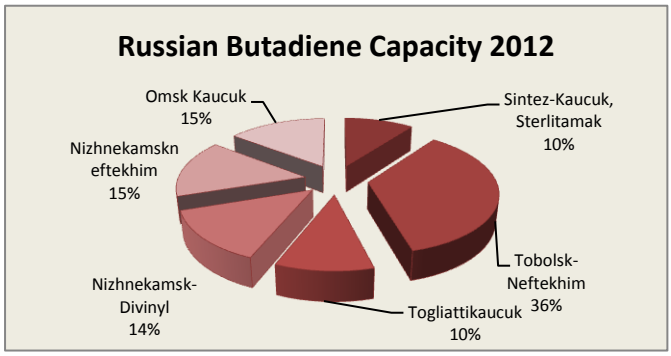
The local administration in the Novy Urengoy region has started to consider the establishment of an industrial park where small processing companies could take advantage of the polyethylene that is to be produced. The intention is to create a gas chemical cluster for the Yamal region. The administration wishes to create a chemical park by developing logistics, commercial and financial infrastructure for the efficient development of small and medium sized industrial enterprises. By establishing these facilities before polyethylene production starts, the hope is that some customers will already be in place ready to start purchases from the plant.

Tobolsk-Neftekhim-isobutane-butane columns

As part of the expansion of gas fractionating capacity, Tobolsk-Neftekhim has recently installed a column for the separation of isobutane and butane with a height of 90 metres and a weight of 590 tons. The construction of the new line at the gas fractionation plant (TSGFU-2) will add 2.8 million tpa of capacity at Tobolsk to the current capacity of 3.8 million tpa.

The start-up should be possible in 2014. The installation of the isobutane and butane column represents the completion of the second stage of construction and the six distillation columns. It means that Tobolsk-Neftekhim has now completed the installation of large-scale equipment.

The significance of the investment is that the additional gas fractionating capacity will partly provide the basis for the Zapsibneftekhim petrochemical complex being constructed at Tobolsk by SIBUR. The gas fractionating capacity should be added 2-3 years prior to the start-up of the Zapsibneftekhim complex and thus extra LPG output will be sold either to the domestic petrochemical industry or shipped for export.

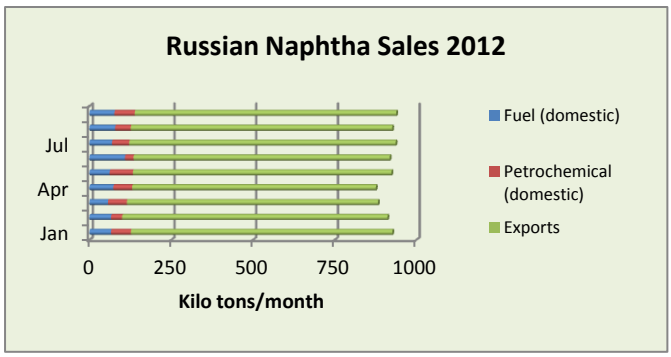


SIBUR expands butadiene plant at Tobolsk

SIBUR has completed a project to increase the production capacity of butadiene at Tobolsk from 197,000 tpa to 207,000 tpa. Much of the work on the project is to be undertaken during scheduled maintenance. Work has been carried out on the modernisation of the column and the installation of additional heat exchangers. Other tasks have involved replacement of instrumentation, and measures aimed at improving the efficiency of the catalyst. Construction of the new tower butadiene production is scheduled for completion in late 2012.

Russian naphtha sales & Novatek-Braskem agreement

Shipments of naphtha to the domestic market in Russia increased by 10% in September over August to 138,600 tons. The increase was due to more demand from the petrochemical industry. At the end of September Stavrolen resumed the production of olefins, and as a result naphtha supplies totalled 21,100 tons in September. At the same time SIBUR reduced volumes of naphtha by 25% to 39,400 tons. In total, Russian naphtha merchant sales in the period January to September 2012 totalled 8.2 million tons from total production of 9.5 million tons. Exports accounted for 86% of merchant sales with the other two sectors fuel and petrochemicals accounting for 8% and 6% respectively.

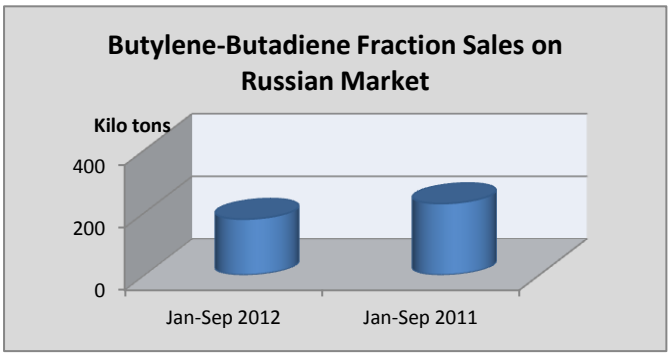


Novatek has signed the first export channel for the supply of raw materials from its new plant and terminal at Ust-Luga on the Russian Baltic coast. The company will supply naphtha through the port of Ust-Luga for delivery to Braskem. For the whole of 2013, supplies to Braskem could amount to around one million tons.

The first phase of the Ust Luga project for Novatek is close to completion, which will yield a capacity of 3 million tpa for gas fractionation. The second phase of the project will facilitate an increase in processing capacity to 6 million tpa of gas condensate and naphtha, in addition to producing diesel fuel, jet fuel and heating oil. This project opens up possibilities for Novatek to develop new markets, expanding the range of customers and adding value. The contract will allow Braskem to obtain high quality raw materials, as well as to build strong partnerships with Novatek Stable gas condensate is to be delivered by rail to Ust Luga from the Purovsky Plant in West Siberia, where Novatek is expanding capacity from 5 million tpa to 11 million tpa.

Russian butylene-butadiene fractions, Jan-Sep 2012

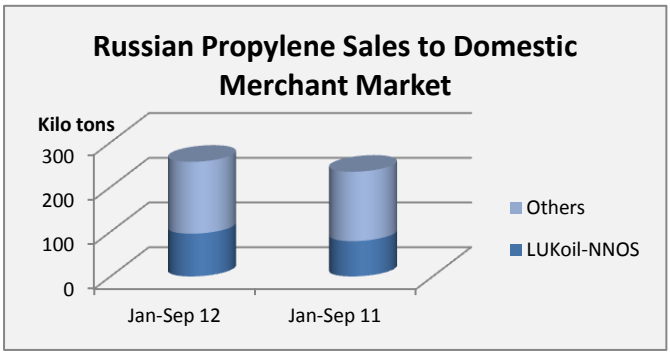
Sales of butylene-butadiene fractions declined by 1.7 times in September against August to 12,500 tons. The drop in sales was primarily due to maintenance. Angarsk Polymer Plant did not supply in September after supplying 4,200 tons in August, whilst SIBUR-Neftekhim reduced shipments by 39% to 3,800 tons. Sales of butylene-butadiene fractions to Kazanorgsintez dropped 29% in September to 1,900 tons and to Tomskneftekhim by 27% to 4,000 tons.



In the period January to September 2012 shipments of butylene-butadiene fractions to the domestic market totalled 178,000 tons, which was 28% lower than in 2011. The main reason for reduction of shipments this has been the extended downtime at Stavrolen, which has now finally ended. Other factors have included a reduction of sales by SIBUR-Neftekhim of 15% and Angarsk Polymer Plant by 9%. In early October, Stavrolen resumed supplies butylene-butadiene fraction to the domestic market. In the period from October 6 to October 10 from Budyennovsk shipped 1,280 tons of butylene-butadiene fractions, all of which was bought by Nizhnekamskneftekhim.

Russian propylene, Jan-Sep 2012

Russian domestic sales of propylene amounted to 256,500 tons in the period January to September 2012, 9% up on last year. The key factor for the rise has been that LUKoil-NNOS increased sales by 20% to 97,800 tons, and this has kept the merchant marketing operating largely in equilibrium. Sales volumes were affected in September due to maintenance by both producers and consumers.



Sales of domestic propylene decreased in September by 2.1 times to 16.500 tons. A significant reduction in the supply of monomer due to maintenance work at Angarsk, whilst Omsk Kaucuk reduced sales volumes of propylene in the domestic market by 6.3 times to 610 tons. SIBUR Kstovo stopped production between 10-22 September, reducing shipments by 2.6 times against August to 4,300 tons. Whilst domestic sales in Russia dropped in September exports rose to 7,000 tons, the highest figure since April 2011. LUKoil-NNOS exported 2,900 tons in September, the first time it has shipped abroad this year. This was due to a drop in domestic sales by 29% against August to 8,700 tons. LUKoil's main consumer Saratovorgsintez did not produce acrylonitrile due to a maintenance shutdown.

Total sales of propane-propylene fractions amounted to 140,800 tons in the period January to September 2012, 4% up on the same period last year. In September sales were down 3% over August to 20,500 tons, and this was due to lower availability from the Ufimsky and Ryazan refineries. Despite the decline in Russia's total sales Gazprom Neft boosted its supply from Omsk by 37%, up to 7,000 tons.

Russian styrene, Jan-Sep 2012

Styrene sales in the domestic market totalled 63,000 tons in the first three quarters in 2012, 7% down on the same period last year. The largest domestic consumers of styrene have consisted this year of Pizhi Prof (41% of gross purchases) and Voronezhsintezkaucuk (34%). Production has increased to 344,100 tons in January to August, against 318,100 tons against 2011. The increase was due to the expansion of capacity by SIBUR-Khimprom and Plastik at Uzlovaya.

Gazprom Neftekhim Salavat returned to the domestic market in September after an outage with deliveries of 767 tons, whilst SIBUR-Khimprom increased domestic shipments 4.9 times to 1,800 tons. Due to maintenance work Angarsk Polymer Plant did not sell monomer in the domestic market. Overall, deliveries to the domestic market totalled 6,300 tons in September which was 5% up on August.

Styrene exports totalled 15,310 tons in September 27% up on August. Gazprom Neftekhim Salavat exported 14,180 (+32% compared to August), whilst Plastik at Uzlovaya increased shipments by 1.5 times to 1,130 tons. SIBUR-Khimprom did not export in September due to the launch of the second EPS line at Perm. For the period January to September Russian styrene exports totalled 98,250 tons which was 14% up on 2011. Finland accounted for 58% of purchases and Turkey 25%.

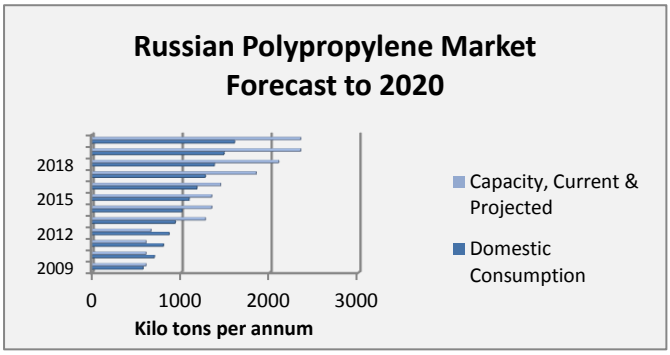
Bulk Polymers

Russian polypropylene market

Imports of polypropylene totalled 189,000 tons in the period January to September, 37% up on the same period in 2011. The trend in recent months has been downwards, as Stavrolen has gradually increased production levels at Budyennovsk. Import volumes peaked in June at 34,300 tons for the month, but by September, imports had dropped to 19,700 tons. Other factors have contributed to the falling imports, including lower exports from Russia and more focus on the domestic market and high inventories. It is the latter issue which has affected recent volume sales and imports. Stavrolen produced 6,170 tons of polypropylene in September, or 39% lower than in

August. This was due to the maintenance outage that took place prior to the restart of the cracker which had been idle since last December. The polypropylene plant at Budyennovsk has since been running on merchant propylene monomer but will now source feedstock from the complex. Combined with other outages at Moscow, Tomsk and Budyennovsk Russian polypropylene production dropped 18% in September over August, down to 61,000 tons. In addition to the plants listed above, Nizhnekamskneftekhim also reduced operating rates due to shutdown which started in late September.

Total production of polypropylene in the period January to September amounted to 487,000 tons, which was 5% down on the same period last year. The fourth quarter is expected to see volumes rise due to less plant downtime, and also the addition of some material from the new plant at Omsk. The Tobolsk-Polymer plant is expected to start in the second quarter in 2013.



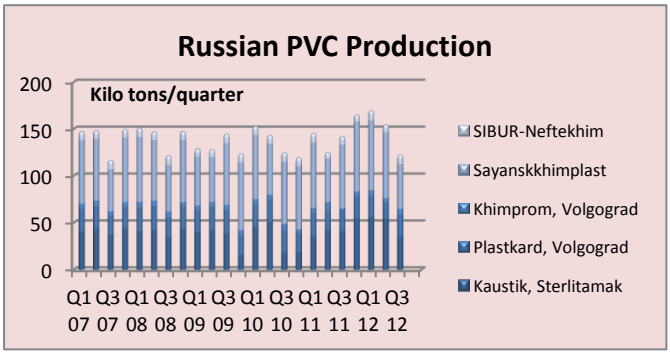
Polyom-polypropylene start-up

Titan reported that it had started polypropylene production in the middle of October, with intentions to market product in November. The configuration of the plant is such that it can run on imported propylene or on imported propane-propylene fractions. Polyom has already established a contract for fractions from the Omsk refinery, but may need to import tom supplement these deliveries. A surplus of propane-propylene fractions exists at the Pavlodar refinery in Kazakhstan, which is relatively close to Omsk. After full start-up, Polyom will be capable of producing more than 100 grades of polypropylene, including homopolymer, as well as block and random copolymers. In the case of co-polymers.

Russian PVC market, Jan-Sep 2012

Russian production of PVC dropped 19% in September against August due to maintenance outages. Sayanskkhimplast undertook a planned outage from late August to mid-September, whilst Kaustik at Sterlitamak incurred ethylene supply problems from Salavat which limited production. Overall, in the first nine months of this year, total output of PVC in Russia amounted to 444,583 tons, an increase of 8% compared to the same period last year.

PVC imports into Russia in the first nine months of 2012 amounted to 294,000 tons, which is 25% less than last year. In September, imports of PVC market amounted to 37,800 tons, of which around 60% came from the US. Also worth noting is the increase in imports of PVC from China, although in smaller volumes than from the US. The total volume of import PVC from the US to Russia in September amounted to 22,100 tons, which is comparable to the August figure.



In the final part of the year imports from the US are expected to fall due to higher prices and seasonal declines in demand. Although Chinese imports rose to 6,000 tons in September, falls are also expected. Imports from Ukraine dropped to 3,100 tons in September due to an outage at Karpatneftekhim, with the plant idle for all of October. Imports of PVC from Ukraine totalled 65,600 tons in the period January to September 2012.

Consumption in Russia has not expanded as quickly as expected this year, although still rising by 5% over 2011. Last year traders were buying product from abroad without hesitation, thus leading to high inventories, but in 2012 more caution has been applied to import decisions and volumes. Due to higher production this year, imports have accounted for less market share dropping from 50% of demand in the period January to September in 2011 to 41%.

Sayanskkhimplast-PVC forecast for 2012

Sayanskkhimplast expects to reach a total production of 270,000 tons of PVC in 2012, assuming no unplanned shutdowns in the next two months. In 2011 the company produced 259,000 tons. Gradual production rises in the

past two years have been helped by investments in the existing facilities. In 2010, the company put into operation a new VCM pyrolysis furnace with capacity of 200,000 tpa

The major plan now under review is to build another VCM furnace with a capacity of up to 400,000 tpa, whilst at the same time decommissioning old equipment. By 2014-2015, Sayanskkhimplast aims to increase PVC capacity up to 350-370,000 tpa and by 2020 up to 600,000 tpa. This latter expansion is inextricably dependent on the construction of new ethylene capacity in the region, whether it is a completely new facility at Sayansk or the replacement of the traditional EP-300 cracker at Angarsk.

South Korean Polymer Exports to Russia (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
PET	51.1	83.0
PVC	10.4	22.6
Exp PS	18.7	30.4
Polystyrene	17.6	16.0
HDPE	67.1	44.9
LDPE	27.0	21.3
Polypropylene	13.8	14.5
Polycarbonate	5.2	2.2
ABS	19.6	20.1

Rusvinyl project-electrolysis equipemt and energy contracts

Equipment for electrolysis was delivered to RusVinyl in October. The bipolar membrane electrolysis technology was supplied by Uhde, yielding a chlorine capacity of 205,000 tpa. The chlorine will be consumed in the production of VCM, with caustic soda produced as a by-product. The RusVinyl project was around 70% complete up to the end of September, and the aim for the new facilities to start production in 2013.

At the end of 2012 RusVinyl aims to conclude a ten year agreement with the power station TGC-6 to supply thermal energy to the PVC complex. The agreement of intent that was established on 26 September seeks to conclude a long-term contract for heat at unregulated prices (or prices agreed by the parties). TGC-6 could start supplying hear to RusVinyl in the second half of 2013. TGC-6 is the main producer of heat and electricity in the Nizhny Novgorod region.

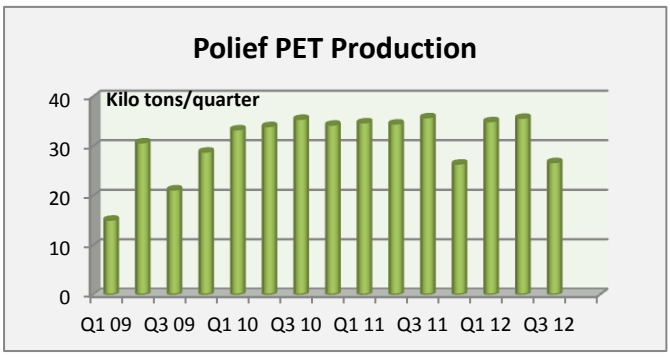
Russian PET Production (unit-kilo tons)

Producer	*Jan-Sep 12*	*Jan-Sep 11*
Evroplast (Senezh)	69.5	66.3
SIBUR-PETF	62.2	49.3
Alko-Naphtha	109.3	24.9
Polief	91.9	93.5
Total	332.9	234.0

Russian PET market

Imports of PET in January-September 2012 totalled 140,600 tons against 224,997 tons in the same period last year. Asian PET producers have lost market share this year and in 2011 due to the presence of material from Alko-Naphtha. Russian converters of PET show a trend of preferring domestic product over imports. PET bottle production in Russia increased in January-September by 13% to 332,900 tons.

The proposed ban on using PET bottles for beer packaging is yet to be decided, as the Ministries and agencies involved in the final decision could not agree on a common position on the use of PET bottles for bottling of alcoholic beverages. The agencies were not able to reconcile their positions on this issue. As a result, the fate of the PET bottle is decided by the government.



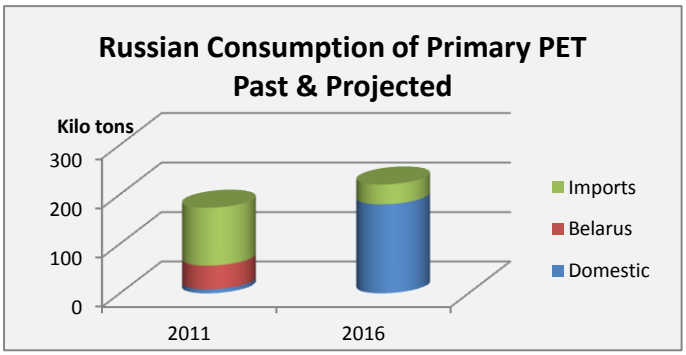
SIBUR-Polief expansion

SIBUR has started work on the expansion of Polief's PET capacity at Blagoveschensk from 140,000 tpa to 210,000 tpa. The increase in capacity will allow SIBUR to become the largest producer of PET in Russia. The first phase of the project includes preparation for the construction of a new cooling tower to cool the circulating water. Construction of the new facility is scheduled to begin in late 2012. PET consumption is estimated at 4.1 kg per capita in Russia, which is considered less than half of the level in the US and considerably lower than Japan and West Europe.

The first phase of the project entailed the delivery of the SSP (solid state polycondensation) reactor from Turkey, arriving 5 October. The contract for the supply of equipment, basic engineering and technical services is being undertaken by the Italian company Chemtex. The reactor was made by one of the Turkish factories, and was delivered to Russia by sea to Rostov-on-Don. From this location special rail transport for abnormal loads was arranged for delivery to Blagoveshchensk.

Ivanovo-PET project

The German company EPC Engineering Consulting GmbH and Russia's Cluster Textile Corporation signed a memorandum of cooperation in October, based on the production of polyester textile fibres and processing at Ivanovo. The project is expected to create modern facilities for PET and processing in the Ivanovo region.



Creating a complex for production of synthetic fibres is being implemented as a pilot project in the Ivanovo region. The project being developed by EPC Engineering, involves construction of 180,000 tpa plant of PET. This includes the planned production of PET melt followed by direct production of textile filament and staple fibres.

The development of modern production facilities in the Ivanovo region will contribute to the strategy of light industry in Russia up to 2020. The first step in the project is to undertake a contract for the provision of basic engineering services, equipment supply and installation. The proposed plant at Ivanovo is intended to act as a basis for a cluster of textile processing companies. The main idea of the project is to create conditions for mass replacement of imported raw materials for the domestic textile industry. If the project progresses to completion by 2016 the Ivanovo plant could replace large volumes from imported textile PET.

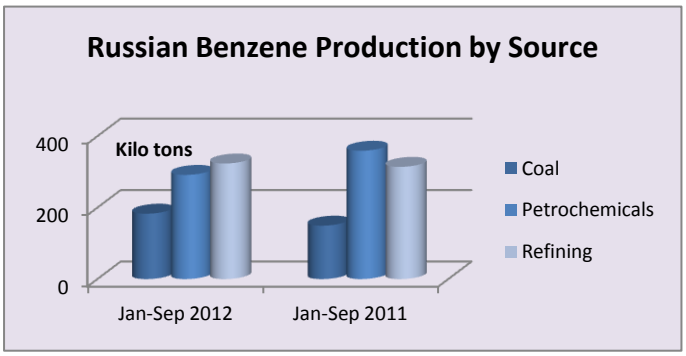
Nizhnekamskneftekhim-Ineos

In late October Nizhnekamskneftekhim and Ineos Technologies signed a license agreement for supplying the technology to produce 600,000 tpa of polyethylene. The agreement involves the construction of a joint stock company of two plants for the production of polyethylene, both of 300,000 tpa. Currently Nizhnekamskneftekhim operates a 230,000 tpa HDPE plant based on Basell technology. Together with two Ineos lines the company will become capable of producing different grades of polyethylene at the same time and become competitive outside of the CIS.

SIBUR-Khimprom-second EPS line opens

SIBUR-Khimprom officially launched its second EPS line at Perm on 12 October, doubling total capacity to 100,000 tpa. The additional capacity should reduce the available volumes of styrene monomer sold on the open market from Perm. In 2010 SIBUR-Khimprom raised capacity for ethylbenzene to 220,000 tpa and styrene to 135,000 tpa before opening the first EPS line of 50,000 tpa. The cost of construction of the second line was around 1.7 billion roubles. The introduction of the first line for EPS last year has already succeeded in displacing some imported sources in 2012.

Aromatics & derivatives



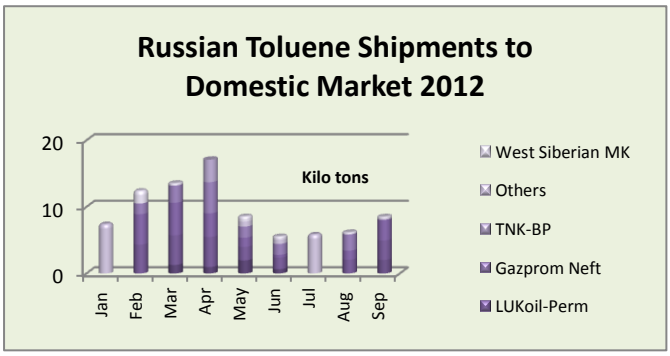
Russian benzene market, Jan-Sep 2012

Sales of benzene in the Russian domestic market in September amounted to 55.500 tons, 4% more than in August. After the completion of repair work Kirishinefteorgsintez increased shipments to the domestic market in September 4.2 times to 4,500 tons. The volumes of benzene from West Siberian Metallurgical Combine and Gazprom-Neft at the Omsk refinery rose by 27% and 14% respectively, up to 4,300 tons and 8,500 tons. Due to maintenance work Angarsk Polymer Plant reduced the supply 2.8 times to 510 tons, whilst TNK-BP's Ryazan refinery reduced volumes1.9 times to 1,600 tons, and SIBUR-Neftekhim reduced by 18% to 4,200 tons. Domestic market sales of benzene totalled 540,400 tons in the period January-September 2012, 2% down on the same period in 2011.

In mid-October the Ryazan refinery resumed production of benzene after maintenance was completed. In the period January to September the Ryazan refinery sold 25,900 tons on the domestic market, thus representing a useful contributor to the supply/demand balance. With Rosneft purchasing the assets of TNK-BP, the Ryazan

refinery has now been outlined for major investments which may lead to an increase in benzene production. Angarsk Polymer Plant, which is also owned by Rosneft, resumed shipments of benzene in October, whilst Stavrolen (owned by LUKoil) could soon be reappearing on the market.

Regarding consumers Shchekinoazot has resumed purchases of benzene in the domestic market to support caprolactam production. The cyclohexanone plant has been under reconstruction forcing the company to import feedstocks for the caprolactam plant at Shchekino. Russia imported 1,630 tons of benzene in September, 1.6 times more than in August. Total imports of benzene amounted to 29,310 tons in the period January to September, 7% less than in 2011. The decline is due to reduced imports from Kazakhstan by 3.3 times to 1,190 tons.



Russian toluene, Jan-Sep 2012

Toluene shipments to the domestic market totalled 86,100 tons in the period January-September 2012, 10% up last year. Sales totalled 8,560 tons in September, 23% more than in August, and 4% higher than in September 2011. Biysk oleum plant purchased 14% of shipments in September, amounting to 1,200 tons. The second largest consumer of toluene was the Zagorsk paint plant with 920 tons, whilst another 660 tons was purchased by the explosive producer JM Sverdlov. Traders purchased 1,730 tons of toluene in September, whilst manufacturers of fuels and lubricants bought 1,140 tons.

Russian orthoxylene sales, Jan-Sep 2012

Total sales of orthoxylene on the Russian domestic market amounted to 97,550 tons in the period January-September this year, which was 2% up on the same period in 2011. September sales were up 9% over August to 9,810 tons, and 1% up on September 2011. The Russian market has observed rapid growth in the consumption of orthoxylene by consumers using it as a high-octane additive for motor fuels, rising almost 10 times to 1,490 tons in September (15% of total Russian consumption of orthoxylene). Around 80% of this quantity (1,190 tons) was bought by Naftogaz of Obninsk, near Moscow. Exports of orthoxylene from Russia totalled 36,300 tons in the first three quarters in 2012, 14% up on the same period last year.

Russian phthalic anhydride market

Phthalic anhydride sales could increase in 2013 if the Roshalsky Plasticizer Plant embarks on a major expansion of DINP capacity, as planned. This expansion would provide the first stimulus to the phthalic anhydride market for many years, with consumption levels having been relatively static. In the first eight months in 2012 consumption totalled 37,200 tons which is almost the same as in 2011. For the whole of 2011 consumption rose 2% over 2010. The lack of growth in this sector has resulted from the main product application areas receiving little investment.

Russian Phthalic Anhydride Market (unit-kilo tons)

	Jan-Aug 12	*Jan-Aug 11*	*Jan-Dec 11*	*Jan-Dec 10*
Production	65.1	70.0	94.6	96.8
Exports	37.0	38.1	50.7	52.6
Imports	9.0	8.4	7.53	6.13
Market Balance	37.1	40.3	51.4	50.3

Over the past few years phthalic anhydride lacquers used in the manufacture of alkyd materials have tended to be replaced by more advanced water-dispersion paints. This trend has been a disadvantage to the phthalic chain, and overall there seems limited potential for growth in phthalic consumption in the coatings sector.

The plasticizer market therefore offers the best scope for expansion inside Russia. The sector is in mild transition from the most common product DOP to more advanced plasticizers. Imported advanced plasticizers are preferred in terms of quality, but largely not price and this has allowed DOP production to survive even though the future looks less promising. The Roshalsky Plasticizer Plant hopes to increase capacity for DINP in 2013 from

150 tons per month to 1500 tons per month. Such an expansion would push Kamteks-Khimprom to increase production levels. Production at Perm has been in decline this year due to technical maintenance and a lack of market opportunity both for domestic and export sales.

Imports of phthalic from Belarus have increased in 2012, being 28% up on the period January to August. In total imports rose 67% in the period January to August 2012 to 9,000 tons. Kamteks-Khimprom is actively trying to gauge whether the DINP expansion will take place next year.

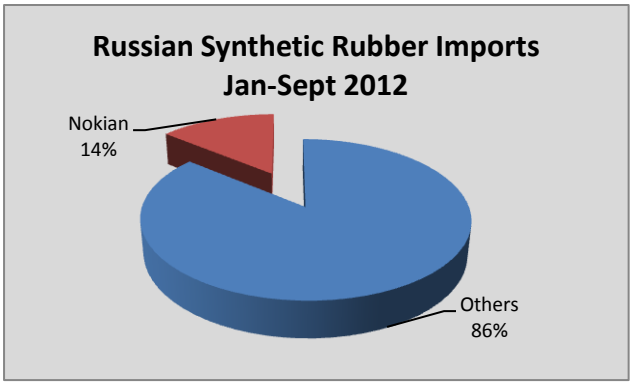
Russian Phenol Production (unit-kilo tons)

Producer	*Jan-Sep 12*	*Jan-Sep 11*
Ufaorgsintez	54.4	44.5
Kazanorgsintez	47.3	44.7
Samaraorgsintez	55.6	59.3
Omsk Kaucuk	46.8	47.3
Total	204.1	195.9

Russian phenol market

Phenol consumption in Russia amounted to 204,100 tons in the period January to September 2012, which was 2% up on 2011. Availability has improved this year reducing the need for imports. Samaraorgsintez underwent maintenance in October 2011, but after the upgrade of the plant there has been no requirement to halt production this year. The company is still reviewing a possible expansion in capacity by 30,000 tpa up to 120,000 tpa. The largest increase in production this year has been achieved by Ufaorgsintez.

Synthetic Rubber



Russian synthetic rubber trade

Russian imports of synthetic rubber totalled 61,200 tons in the period January to September 2012, 22% up on 2011. Exports totalled 635,400 tons which was 2% on 2011. Nokian Tyres is now a major importer of synthetic rubber into Russia, accounting for 16% of purchases in September. In terms of demand, tyre producers are extremely busy and raw material tightness has culminated in higher prices in the first part of the fourth quarter. Raw material costs are not being passed on to the end-user due to competition in the domestic market.

Russian Carbon Black Production (unit-kilo tons)

Producer	*Jan-Sep 12*	*Jan-Sep 11*
Yaroslavl Carbon Black	174.3	154.5
Nizhnekamsk Carbon Black Plant	86.0	75.6
Omsk Carbon Black Plant	164.1	153.3
Volgograd Carbon Black Plant	61.8	48.9
Sosnogorsk Gas Processing Plant	23.6	21.1
Ivanovski TU Plant	10.4	13.6
Tumazi Carbon Black Plant	20.7	18.0
Total	541.0	485.0

Russian carbon black market

Carbon black consumption is rising gradually in Russia due to rising volumes of tyre production. In the export market Russian exports totalled 298,500 tons in the first eight months of 2012, 3% down on last year. In the period January to August 2012 Russian imports of carbon black totalled 4,500 tons, which reflected a 90% increase over 2011. Yokohama for its Lipetsk tyre plant imported 214 tons of carbon black in August, 2.3 times more than in July and 70 times more than in August 2011.

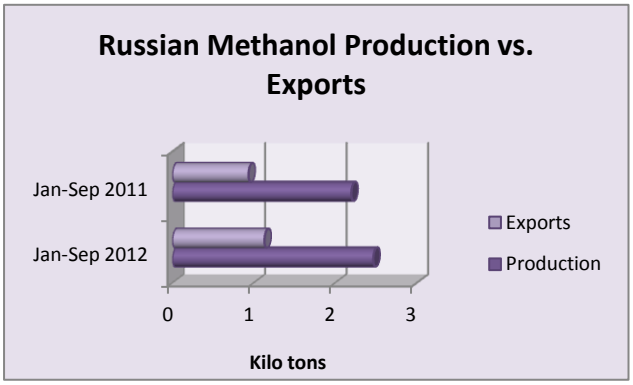
The sharp increase in supply by Yokohama is due to the management's intention to avoid shortages of raw materials for tyre production capacity in September. In August, the entire volume of imported carbon black was purchased from the Czech company CS Cabot. In addition, this year Yokohama has purchased from Orion Engineered Carbons (Poland). The total purchases from January to August amounted to 415 tons which was almost 15 times more than in the comparable period of 2011.

SIBUR-Reliance jv

SIBUR and Reliance Industries have finalised arrangements for a jv named Reliance SIBUR Elastomers in order to build a 100,000 tpa plant for butyl rubber at Jamnagar in India. The jv will be the first manufacturer of butyl rubber in the country and the fourth largest in the world. At present India's demand for butyl rubber is created mainly by the tyre industry and the 75,000 tpa consumption fully supplied by imports from North America, Central Asia and Europe, including Russia. SIBUR's technology used for butyl rubber production at Togliattikaucuk will be

applied to the jv. Reliance Industries will own 74.9% of the JV with SIBUR 25.1%. The jv plans to invest around $450 million to construct the production facility, which is expected to be commissioned by mid-2015.

Methanol & related chemicals



Russian methanol market, Jan-Sep 2012

Methanol shipments to the domestic market totalled 96,000 tons in September, 3% down on August. Sales were affected due to a short outage at Togliattiazot, but to some extent the deficit was met by extra sales from Metafrax and Sibmetakhim. Smaller Russian producers also kept up with the market leaders; Shchekinoazot and Azot at Novomoskovsk increased the sale of the product on the domestic market in September in comparison with August by 106% and 43%, respectively. Sibmetakhim took a planned shutdown in September, helping to keep the market balanced. The cost of methanol in the domestic market increased in early October compared to September.

Russian Chemical Exports (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
Acetic acid	47.5	37.1
Acetone	26.1	24.4
Ammonia	2169.5	2893.0
Caprolactam	156.2	132.2
Carbon Black	335.5	346.6
Caustic Soda Liquid	202.9	192.9
Caustic Soda Solid	59.2	54.7
Chlorine	12.3	11.5
Isobutanol	61.8	61.2
MTBE	111.5	119.3
N Butanol	63.7	82.2
Orthoxylene	33.8	39.3
Paraxylene	67.0	91.6
PET	51.5	59.6
Phthalic anhydride	30.8	40.4
Polyamide	48.9	68.5
Polypropylene	36.7	53.2
Polystyrene	40.7	34.7
Propylene	16.1	24.7
PVC	2.5	3.0
Soda Ash	492.2	480.7
Styrene	98.2	99.9
Urea	3446.0	3594.4
Methanol	1130.0	898.1
LDPE	127.9	113.3
HDPE	52.5	68.5

From January to September 2012, exports of methanol from Russia amounted to 1.13 million tons, an increase of 21% over 2011. The higher export volumes have been accountable to higher production this year, with domestic consumption showing a slight increase. Export volumes from Russia are expected to remain high in the fourth quarter assuming no unplanned outages.

Sibmetakhim to expand methanol plant

Sibmetakhim has completed a planned maintenance upgrade of equipment for methanol production worth around 270 million roubles, according to its parent company Vostokgazprom. During the repairs the process control system was modernised, whilst also introducing an automated system for technical metering, and replacement rotors of two compressors.

Vostokgazprom intends to continue investments in the methanol facilities in the next few years, although it is not clear about how much additional capacity will be provided. Sibmetakhim was established in November 2006 as a jv between Vostokgazprom and SIBUR Holding. Vostokgazprom now controls 100% control over the assets.

Russian MTBE market

In the first nine months of 2012 sales of MTBE in the Russian market amounted to about 525,000 tons, which is almost 17% more than in the same period last year. Seasonally high demand for MTBE in Russia saw sales reach 69,000 tons in September which was 13% up on August. The main suppliers to the Russian market comprised Uralorgsintez, Kaucuk (Volzhskiy) and Omsk Kaucuk. These three producers accounted for 62% of shipments in September. In September, the Pavlodar Petrochemical Plant supplied 1,300 tons of MTBE to the Russian market, which is almost three times higher than August. In the first nine months of 2012 Russia imported about 4,300 tons of MTBE from Pavlodar which was 45% lower than in the same period last year.

SANORS commissions TAME plant

SANORS commissioned its new plant for TAME production at Novokuibyshevsk on 22 October, with a capacity of 300,000 tpa. The project cost more than 725 million roubles. The plant has been constructed using the former isoprene site at Novokuibyshevsk, which was mothballed in September 2008. One of the raw materials

isoamylene was part of the production process for isoprene, and now has been diverted to the new plant for TAME.

Metafrax-MetaDynea & Karbodin

Metafrax has finalised a deal to buy stakes in two synthetic resin producers; 50% of MetaDynea (Perm) and 45.14% of Karbodin (Moscow Region), which were both companies were established jointly with Dynea Chemicals Oy, Following the transaction, the share of Metafrax in MetaDynea has risen to 100% and for Karbodin to 90.28%. The other 9.72% in Karbodin is owned by MetaDynea. After the transaction, Metafrax will combine both assets and invest around a billion roubles in their development in the 2013-2014 period.

Total revenues for MetaDynea and Karbodin are expected to reach 5 billion roubles in 2012. Metafrax and Dynea Chemicals Oy jointly established MetaDynea in 2004, and Karbodin in 2005. The combined design capacity of both jvs is 450,000 tpa of resins. MetaDynea and Karbodin are currently running at around 60% of capacity, and Metafrax hopes to raise operating rates at both plants to 100%.

Organic chemicals

Russian Butanols Production (unit-kilo tons)

Producer	*Jan-Sep 12*	*Jan-Sep 11*
Angarsk Petrochemical	26.8	32.4
Azot Nevinomyssk	12.4	14.8
Gazprom Neftekhim Salavat	92.8	97.3
SIBUR-Khimprom	55.1	43.9
Total	187.2	188.3

Russian butanols, Jan-Sep 2012

Domestic sales of butanols amounted to 6,250 tons in September, which was 5% lower than in August and 10% lower than in September 2011. The proportion of normal butanol in total sales volume in September was 88%. From January to September 2012 sales of butanols on the domestic market totalled 58,980 tons which was 21% up on 2011. The largest consumer was Dmitrievsky Chemical Plant, which uses butanols to produce butyl acetate, as well as supplying butanols for export on behalf of Gazprom Neftekhim Salavat. The second largest consumer is Akrilat at Dzerzhinsk which is used for the production of butyl acrylate.

Exports of butanols totalled 12,220 tons in September, 1% down on August and 26% down on September last year. From January to September 2012, export shipments of butanols from Russia amounted to 125,500 tons, which is 12.5% less than in the same period in 2011. The drop in exports is attributable to increased domestic consumption, which is mostly based on normal butanol. The share of exports to China in total Russian exports for nine months of the year was 50%, Finland 37%, and Poland 3%.

Russian DOP Market (unit-kilo tons)

	Jan-Sep 12	*Jan-Sep 11*	*Jan-Dec 11*	*Jan-Dec 10*
Production	55.2	47.3	69.7	79.2
Exports	0.1	0.3	0.3	1.5
Imports	1.8	7.6	8.7	16.1
Market Balance	56.9	54.6	78.0	93.8

Russian DOP Market

DOP production totalled 55,820 tons in the period January to September 2012, 18% up on 2011. Production in September totalled 8,660 tons which was 5% up on August. The Roshalsky Plasticiser Plant increased production by 51% in September to 2,260 tons, whilst other producers Kamteks-Khimprom and the Ural Plant of Plasticizers reduced production by 10% to 2,130 tons and 1,200 tons respectively. Russian DOP imports totalled 1,850 tons in the period January to September 2012, 79% lower than the same period last year. The fall was the result of increased competition of Russian producers of plasticizers and suppliers of imported products.

Kazan Synthetic Rubber Plant-ethylene chlorohydrin

Kazan Synthetic Rubber Plant plans to invest 500 million roubles in the organisation of production of ethylene chlorohydrin on the Oka-Polymer industrial park at Dzerzhinsk. The design capacity of the new plant is being set to produce a total of 22,000 tpa, with full capacity expected to be achieved in 2015. Production could start as early as April 2013, but initially capacity will run at rates of around 12,000 tpa.

Ethylene chlorohydrin provides the raw material for polysulphide rubber (thiokol) which is used for the manufacture of sealants and mastics for the aviation industry, construction and nuclear power, etc. Kazan Synthetic Rubber Plant produces thiokol at its Kazan location, and is intending to develop a chain from raw materials to polymer processing.

The former company Kaprolaktam at Dzerzhinsk produced ethylene chlorohydrin and effectively Kazan Synthetic Rubber Plant is taking over the idle plant and renovating the equipment. In the past the Kazan plant was forced to rely on purchases of ethylene chlorohydrin from Dzerzhinsk, but production has been limited in recent years. Currently Kazan Synthetic Rubber Plant produces about 7,000 tpa of Thiokol, and with the launch of the new production will be able to double their production. About 30% of this production is exported, so with the increase in production company will be able to increase its share in foreign markets.

Nitol-hydrogen plant

A new hydrogen plant has been introduced by Nitol at Usolye-Sibirsk in the Irkutsk region to serve the requirements the polycrystalline silicon facilities, and for the production of hydrogen chloride. The hydrogen plant was constructed by the Norwegian company Hydrogen Technologies, with investments exceeding 500 million roubles. After passing stages of drying, cleaning and compression, hydrogen converts to hydrogen chloride. This is the main component for the production of trichlorosilane, which is the main raw material for producing polycrystalline silicon. Nitol now plans to complete construction of its trichlorosilane, which has a capacity of 24,000 tpa.

Starting the hydrogen station at the end of 2012 will allow Usolye-Sibirsk Silicon to produce more polycrystalline silicon in first half of next year. By mid-2013 the company hopes to achieve maximum capacity of its 5,000 tpa plant.

The main consumers of products from Usolye-Sibirsk Silicon include European and Asian companies for the production of modules and panels for solar energy. The introduction of Nitol's own hydrogen plant, produced through the membrane electrolysis of water, represents a key part of the supply chain.

Chemical park-Polief

The Chemterra chemical park has been started in Bashkortostan, which is located close to the Polief PTA and PET plants. The intention is to fill the park with converters, mainly using Polief for raw materials. The first phase of the park comprises 27,000 square metres It is expected that the park will run complex production of PET preforms, PET tape, PET sheet, built the reprocessing of used and coming from the municipal waste collection services for PET bottles.

Polief-infrastructure improvements

Improvements to Polief's railway terminal at Blagoveshchensk have been undertaken by SIBUR-Trans. The aim was to improve the track facilities and rolling stock, as well as increasing the number of orders by attracting new partners.

SIBUR-Trans has taken over the infrastructure for Polief, and handling of cars with the incoming raw materials. All shipments of finished products are carried out by motor transport. SIBUR-Trans hopes to develop new possibilities for selling product by rail shipment, to reduce the cost of PET packaging and TPA.

Jotun-Tosno plant

Jotun has started construction of a new paint plant in October, located in the Tosno district of the Leningrad region. The plant capacity being designed includes 12 million litres of liquid paints and 3,600 tpa of powder coatings. The company is targeting the production of coatings used in the Russian shipbuilding industry, protective coatings used for infrastructure and oil and gas installations, and powder coatings. The start-up of the plant is scheduled for 2014.

Joint ventures & cooperation

SIBUR & Gazprom Neft reached agreement for PBBs

SIBUR and Gazprom Neft signed a three-year partnership agreement for the production and sale of plastic road materials. This includes an agreement on the supply of SIBUR's SBS polymers used in the production of polymer-bitumen binders (PBBS). The value of these products is that they improve the quality characteristics of the road surface and extend the life of the road. By applying PBBs to asphalt the life of roads is significantly extended from 3-4 years to 7-10 years.

The parties are ready to carry out joint research to extend the use of road materials based on polymers, in particular to develop a new brand of SBS polymers. SIBUR and Gazprom Neft plan to conduct a unified technical policy in the field of quality SBS polymers in coordination with leading Russian scientific-research and design organisations.

SIBUR produces key raw materials for PBB production, including butadiene-styrene thermoplastic elastomers and geosynthetics. Butadiene-styrene thermoplastic elastomers (SBS polymers) are produced by Voronezhsintezkaucuk.

One of the priorities of Gazprom Neft is the development of the bitumen business. In 2008, the company created specialized unit bitumen. At the refinery, located in Moscow, Omsk, Yaroslavl, as well as in Serbia, Gazprom Neft produces a wide range of bitumen products, including PBBs and asphalt emulsion.

Thyssen-Krupp, Omsk

The Omsk regional adminstr4ation, Titan and ThyssenKrupp signed an agreement in September for on cooperation in the creation of high innovative industries in the Omsk park project. The parties agreed to work together to develop and implement investment projects in the Omsk region with complex high-tech innovative industries. ThyssenKrupp is ready to supply equipment and technology for the future production of the park, as well as take on the function of the partial implementation of the final product. ThyssenKrupp and Titan already have joint experience in Kazakhstan at Karaganda, developing a plant for the production of silicon metal.

SIBUR-Solvay jv

SIBUR and Solvay have agreed to establish a jv RusPAV at Dzerzhinsk for the production of surfactants and products for the oil industry. Start of production is expected in 2015. SIBUR is to provide the joint venture with raw materials, and the necessary industrial and logistics infrastructure. Novecare, a global leader in surfactants, is to provide practical experience in the processing and application of surfactant, research and innovation expertise, as well as its client network in the international oil and gas market sector, household and personal care products. This joint venture will support the goals of SIBUR to concentrate on key products in selected high-growth divisions. Demand for surfactants in the CIS is currently rising at rates of more than 6% per annum.

Industrial gases

Russian Chemical Imports (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
ABS	24.9	26.8
Acetic Acid	18.1	13.9
Benzene	29.3	28.8
BOPE	62.3	76.1
BOPP	30.0	27.6
Caustic Soda Liquid	27.9	22.6
Caustic Soda Solid	14.4	22.9
HDPE	290.5	228.8
LDPE	90.7	76.5
LLDPE	109.4	89.8
PET	140.6	224.0
Phthalic Anhydride	4.9	3.9
Plasticizers	12.7	11.3
Polypropylene	181.1	129.2
Polystyrene	138.5	129.4
PTA	160.7	133.5
PVC	372.3	442.5
PVC films	46.6	55.8
Soda Ash	300.0	275.3
Titanium Dioxide	52.0	78.4

Air Liquide-Tatarstan

Air Liquide is looking to expand its supply of industrial gases in Tatarstan, after already having established a production centre in the Alabuga Special Economic Zone (SEZ). The company plans to obtain a medical license for operating the plant in the SEZ Alabuga that will produce oxygen for medical purposes.

The company plans to supply industrial gases, not only for residents of the SEZ Alabuga, but also for the companies of the petrochemical complex of Tatarstan residents Technopolis Khimgrad medical facilities. Air Liquide has been a resident of SEZ Alabuga since 2008. The first phase of the plant was commissioned in 2010, producing 40 tons per day of gaseous oxygen, supplied by pipeline to Price-Daimler-Tatneft Alabuga Glass.

Voronezhsintezkaucuk-ASU

Voronezhsintezkaucuk has opened air separation plant (ASU) for the production of nitrogen which has been developed by Air Products. Following agreements with SIBUR, Air Products built the unit at Voronezh providing the supply of industrial gas whilst Voronezhsintezkaucuk built the necessary facilities and communications. , The ASU from Air Products will increase the security of supply for industrial gases at Voronezh. The total capacity of the unit is 166.4 million cubic metres per annum, which exceeds the current needs of the company. The management of the ASU is controlled from Czestochowa in Poland. Both SIBUR and Air Products gain advantages from the new unit.

Omsk Kaucuk-air separation plant

Omsk Kaucuk has added a new air separation plant with a capacity of 1500 cubic metres per hour of gaseous nitrogen. The new plant has been installed due to the expansion of production at Omsk Kaucuk and the holding company Titan. Nitrogen is required not only for MTBE produced by Ekooil, but also for the new Polyom polypropylene plant. Both Ekooil and Polyom form part of Titan. The new equipment will have a reserve of nitrogen and will help to further develop capacities of at Omsk Kaucuk. The total cost of installation was around 50 million roubles. The equipment was provided by the Russian company Cryogenmash (Balashikha).

Ryazan ASU

American company Red Mountain has finished installing air separation unit (ASU) for Cryogen, a leading manufacturer and supplier of technical and medical gases in the Ryazan area and adjacent regions. The unit includes a dual cooling tower, air compressor and centrifugal air separation plant for the production of 1,000 kg per hour of liquid oxygen and nitrogen. The installation provides an opportunity to increase productivity by liquid nitrogen. If an additional unit of nitrogen liquefaction, station productivity is increased by 2 times, with significantly reduced specific power consumption.

Linde-gas separation plants

Linde Gas plans to invest around €60 million to build two air separation plants at SIBUR-Neftekhim's Kstovo site, in addition to providing the necessary infrastructure for the production of industrial gases. The design capacity of the new plants has been agreed at about 1,160 tons per day, from which the installation will produce oxygen,

nitrogen and argon in gaseous and liquid form. Production from these units will be delivered the chemical industry in the Nizhniy Novgorod region. The project is expected to be completed by 2015; Linde Gas is undertaking a similar project at Kuibyshevazot.

Ukraine

Ukrainian Chemical Production (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
Acetic Acid	104.8	110.8
Ammonia	3730.6	3836.8
Benzene (+95%)	97.7	97.4
Caustic Soda	117.1	119.9
Ethylene	128.2	143.0
Methanol	129.8	114.7
Polyethylene	54.7	70.3
Polypropylene	25.5	69.8
Polystyrene	14.1	14.9
Polyvinyl Acetate	3.6	4.6
PVC	71.4	53.4
Propylene	55.2	65.1
Soda Ash	487.8	573.7
Titanium Dioxide	113.0	116.9
Toluene	4.6	4.4

Ukrainian benzene market, Jan-Sep 2012

Ukraine resumed imports of benzene in September, after dropping sharply in August. Azot at Cherkassy imported 2,500 tons of benzene in September from Poland, bringing the total for January to September to 19,400 tons. This was 1.9 times less than in the same period in 2011. Demand this year has been affected by low production of adipic acid at Rivne and Severodonetsk, whilst Azot at Cherkassy has purchased more domestic product this year. In the first nine months in 2012 Ukrainian domestic consumers purchased 22,950 tons from domestic production and imported sources, of which 67% was bought by Azot at Cherkassy.

Ukrainian methanol market, Jan-Sep 2012

A seasonal increase in demand for methanol in Ukraine in September 2012 led to an increase in domestic consumption. Azot sold 3,700 tons of methanol in September, having increased shipments by 17% against August. The largest share of sales sold on the domestic market (60-70%) went to gas companies, taking 2,300 tons in September. Stirol increased its purchases of commercial methanol compared to August by 40%, amounting to 1,200 tons.

Ukrainian Chemical Imports (unit-kilo tons)

Product	*Jan-Sep 12*	*Jan-Sep 11*
ABS	2.8	1.4
P Anhydride	0.3	2.7
Benzene	19.4	39.4
PET	125.1	122.6
Polyamide	1.9	0.9
PVC	89.5	124.3
Polypropylene	67.4	51.8
Polystyrene	39.4	37.7
LDPE	82.5	86.2
LLDPE	52.4	46.5
HDPE	83.8	100.4
Soda Ash	10.1	23.1
Caustic Soda L	122.6	123.9
Caustic Soda S	10.1	12.0
Styrene	13.1	14.7
MTBE	39.5	51.8

From January to September 2012, Azot sold 39,500 tons of methanol in the domestic market which is around 20% higher than in 2011. An important factor that has contributed to the growth of demand for commodity methanol this year has been the drop in imports from Russia.

Azot at Severodonetsk has increased its revenues and profits this year under the new ownership of the DF Group. In the period January to September 2012 Azot achieved revenues of 4.8 billion hryvnia, up 120 million hryvnia on the same period last year. The company has recorded a profit for the first time since Ukraine became an independent country. Results would have been more impressive had there not been maintenance shutdowns.

Ukrainian urea plants

Azot at Cherkassy will increase urea capacity from 1,110 tons to 1,600 tons per day after an extended maintenance shutdown in October and November. The company has invested considerable sums in modernisation in the past couple of years, including a reduction in consumption of energy per ton to 1105 cubic metres per ton against 1250 cubic metres previously. Stirol at Gorlovka is also undertaking a shutdown in late October, involving the units Urea-2 and an integrated plant to produce ammonia. The decision will be taken to stop the deterioration of market conditions.

Crimean Titan-sulphuric acid plant

Crimean Titan is commissioning a new sulphuric acid plant in order to support its production of titanium dioxide. Ukraine holds around 3% of the world market for titanium dioxide production, and hopes to increase this share to around 6-8% after interment. Te commissioning of the sulphuric acid plant will increase production of titanium dioxide at Crimean Titan from the current level of 108,000 tpa to 120,000 tpa, whilst also facilitating the start-up of a second line for titanium dioxide with a capacity of 120,000 tpa.

The company previously operated 540,000 tpa of sulphuric acid capacity in three trains to run its sulphate-process

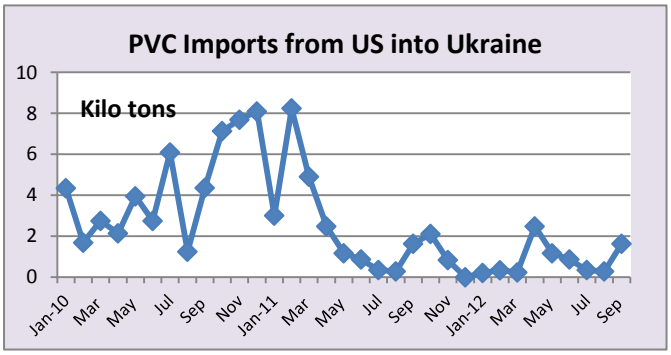
TiO2 capacity, but will now close down one of these 180,000 tpa units. The new 600,000 tpa plant will thus take acid capacity at the site to 960,000 t/a. The new plant will also reduce environmental emissions from the company's acid production. The construction of the sulphuric acid plant in Crimea has cost an estimated $917 million, with an estimated payback period of 4-5 years. Crimean Titan is majority owned by the DF Group.

Ukrainian Caustic Soda Production (unit-kilo tons)

Producer	*Jan-Sep 12*	*Jan-Sep 11*
Dniproazot	35.2	41.4
Karpatneftekhim	81.9	92.3
Total	117.1	133.7

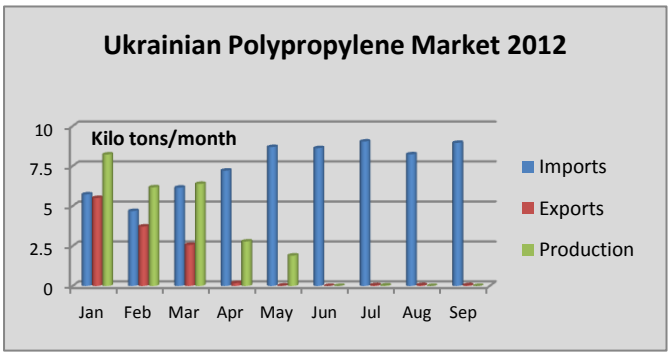
Ukrainian caustic soda production

The two caustic soda producers in Ukraine Dniproazot and Karpatneftekhim have undertaken maintenance outages in the past couple of months, increasing the demand for imports. Dniproazot stopped production on 5 October until 15 October whilst Karpatneftekhim has been shut since 1 September. Sales on the domestic market from the tow plants totalled 4,900 tons in September which is 26% less than in August. Ukrainian caustic soda production amounted to 5,300 tons in September against 12,800 tons in August. Karpatneftekhim produced 700 tons and Dniproazot 4,600 tons. From January to September 2012 Ukrainian production of caustic soda totalled 117,100 tons which is 5% down on the same period last year.



Ukrainian PVC market

Karpatneftekhim submitted a complaint to the Ukrainian ant-monopoly authorities to consider anti-dumping measures against PVC imports from the US. The complaint states that US imports were sold at low prices from the third quarter of 2011 to the second quarter in 2012, during which US imports rose significantly. In fact this argument is unfounded as US imports into Ukraine have dropped markedly in the past year, particularly since Karpatneftekhim started production at Kalush. Whilst Karpatneftekhim is looking to protect the domestic market for its own sales, it does have an unresolved dispute with the Ukrainian government over VAT which may affect its PVC plant at kalush. .



Ukrainian polypropylene

Imports of polypropylene totalled 67,400 tons in the period January to September 2012, against 51,800 tons in the same period last year. Major suppliers have included Rompetrol, Slovnaft, and TVK. Other importers have included Saudi Arabia and Iran. Imports have risen in 2012 due to the raw material problems faced by the sole domestic producer Linik at Lisichansk. Demand is expected to soften in the latter two months of the year.

Ukrainian EPS Market (unit-kilo tons)

	Jan-Aug 12	*Jan-Aug 11*
Production	11.7	12.8
Exports	4.9	4.6
Imports	30.2	30.6
Market Balance	37	38.8

Ukrainian polystyrene

The polystyrene market in Ukraine is awaiting new injections of building activity to generate more growth. Due to preparations for the football championships Euro 2012, polystyrene consumption rose 11% in 2011 against 2010. In 2012, however, the construction industry has stagnated in relation to the last two years, and with it reduced consumption of polystyrene.

The demand for expandable polystyrene was stimulated over the past couple of years through construction projects connected with the Euro 2012 championships, which is probably the largest international event to be staged in Ukraine. The championships finished in July and now the question arises how will demand be driven for this product and other polymers?

The sole domestic producer of EPS is Ukraine is Stirol at Gorlovka, but the capacity of the plant is too small to meet the full demand from the domestic market. Stirol's main problem is that it depends on Russian imports of styrene. SIBUR-Khimprom exported 6,900 tons of expandable polystyrene into Ukraine in the period January to August 2012, replacing market share previously taken by Asian suppliers.

Consumption totalled 63,000 tons in 2011 which was 11% higher than in 2010. Construction is the main consumer of polystyrene, accounting for 59% of purchases. According to the State Statistics Committee of Ukraine, the volume of construction in 2011 increased by 11% compared to 2010. However, from January to August 2012, the Ukrainian market for construction fell 5% against the same period last year.

For 2013, growth hopes for polystyrene consumption are based on heat-insulating materials, but the increase over 2012 is not expected to exceed 5%. In terms of styrene monomer tightening supply in Russia may force Stirol to buy from other sources outside the CIS. In 2011 SIBUR provided 77% of Stirol's styrene requirements, of which SIBUR-Khimprom provided 51%. SIBUR-Khimprom now consumes its own styrene in the production of EPS, and following the start-up of the second line of 50,000 tpa recently it is not likely to possess much surplus for sale. Stirol has started buying from countries such as Spain through Repsol Quimica. Probably longer term the most logical alternative to SIBUR-Khimprom as a source of feedstock for polystyrene production at Gorlovka is Gazprom Neftekhim Salavat.

In the first nine months of 2012 imports of styrene in Ukraine amounted to 13,700 tons, which is 1% down against 2011. The main suppliers of products to the Ukrainian market were Russian companies SIBUR and Gazprom Neftekhim Salavat, supplying 42% and 29% respectively. The largest consumer of styrene in Ukraine is Stirol, accounting for around 93% of imports to date in 2012.

Relevant Currencies

Czech crown. Kc. $1= 20.753. €1 = 25.833: Hungarian Forint. Ft. $1 = 229.448. €1 = 288.154: Polish zloty. zl. $1=3.414. €1 =4.280: Bulgarian leva: $1 = 1.5956. €1= 1.557: Romanian Lei. $1 = 3.555. €1= 4.463: Croatian Kuna HRK. $1 = 5.998. €1= 7.530: Ukrainian hryvnia. $1 = 8.07. €1 = 10.140: Rus rouble. $1 = 33.192. €1= 41.867

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