December 2025

Argus *C5 and Hydrocarbon Resins*

Chemicals

1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Executive Summary

Key developments

Piperylenes
- Demand for piperylene remains weaker overall in China with domestic prices lower from November. Supply from the balance of Asia-Pacific for both domestic use and for exports to the west increased with upstream cracker and IED outages completed but remains constrained by reduced upstream cracker operating rates. Pips imports to the US continue at reduced volumes and should drop further with reduced domestic C5 HCR capacity. Europe continues to import smaller volumes of pips for tackifier production.

DCPD
- Global demand into UPR remains weaker, with global demand into HHCR marginally better. DCPD prices in China remain very low and are contributing very little to C5 processor margins. UPR grade imports to the US continue to track well below levels seen several years ago with most of the supply to meet weak domestic demand coming from domestic production.

Isoprene
- Demand remains weaker globally into IR and SIS. Spot IPM pricing in China is slightly lower than in 2H November. In the balance of Asia-Pacific, a heaver IED turnaround schedule is complete, but production rates are capped by lower upstream cracker rates at key C5 processors. Formula pricing for spot or quarterly exports from Asia-Pacific to the west may moderate in early 2026 when balances should start to lengthen slightly.

Butadiene
- Asia-Pacific spot pricing is higher from the end of November despite weaker demand and was assessed on 19 December at $910/t cfr NEA. The prevailing USGC monthly contract price for December is lower from November at 29.25¢/lb ($645/t). The December European butadiene (BD) monthly contract price (MCP) is also lower from November at €720/t.

C5 tackifiers
- Demand remains weak globally and with margins in China squeezed by feedstock costs and very aggressive HHCR pricing. Chinese domestic demand for road marking grades is weak in December. Production in the US is reduced with the shutdown of ExxonMobil. While US pricing should be on the rise with US import tariffs, an extremely competitive market is keeping a lid on any price increases for both C5 HCR and HHCR., with exporting producers sharpening the pencil for sales, especially to larger customers.

C9 tackifiers
- Demand remains very weak in China along with construction activity, SBS modification and tire demand. Demand remains slightly better in the west. Margins for Asia-Pacific exports to the west remain continue to be under extreme pressure with pricing and somewhat elevated container freight costs. Operating rates in China remain very low for many thermal grade producers. Pricing in China is weaker in December again for both thermal grades and adhesive grades.

HHCR
- Capacity continues to grow rapidly in China with several more plant start-ups planned in 2026. Prices in China are close to flat in December vs. November amid some weakness in overall demand but with most plants in operation. Supplies remain more balanced from domestic producers in the US but production has decreased further approaching year end. Notwithstanding China, HHCR pricing remains slightly above that of adhesive grade C5 HCR in most markets. Prices in the west remain very competitive, especially for European imports, and thus far the US import tariffs are failing to drive pricing higher as we might normally expect.

NR
- TSR20 natural rubber (NR) futures on the SGX settled at $1,753/t on 18 December, a slight increase from prices earlier in the month which were as low as $1,719/t on 1 December. Prices have average $1,729 MTD, up from $1,712 in November.

SIS
- Demand continues to be weaker on a global basis. Producer operating rates are reduced overall in the US with production volumes remaining very minimal in Europe. Chinese SIS producers continue to run at much reduced rates with lackluster domestic and export demand. Jinhai, Ecisco and Sinopec/Baling have started up new capacity in China recently, keeping pressure on sales margins.

SBS
- Demand in footwear, modified asphalt and most other sectors remains weaker in China. Chinese SBS prices are slightly higher in December with regional BD pricing. Western demand will weaken entering the winter season, with European exports to the US lower as US producers produce more product and see ongoing imports from Asia-Pacific. New capacity is online in China from Petrochina Guangxi and Sinopec/Baling, adding to surplus capacity in the global market and keeping sales margins depressed for producers.

Isoprene Outlook

- Looking forward to early 2026, we should see continued overall weakness for demand into SIS, weaker demand for isoprene into IR versus the first half of 2025, and isoprene balances that should lengthen slightly as time progresses.
- Global IED capacity is expanding further in 2025-26 and beyond with new Chinese capacity. Some of this production will be from producers not fully integrated downstream to isoprene derivatives, creating more volume for merchant sale.
- The US will continue to see IPM imports primarily from Korea, Taiwan, and Brazil to meet demand requirements, most of which is destined for SIS production. US import tariffs on Chinese isoprene exports are likely to constrain this flow for the foreseeable future. The current tariffs on Brazilian exports to the US will make those imports more difficult but are unlikely to eliminate them.
- Japan will continue to import isoprene in support of SIS and IR production. Europe will continue to import smaller volumes of isoprene for butyl rubber and much reduced SIS production.

DCPD Outlook

- Supply growth for DCPD will come primarily from China. HHCR demand for DCPD continues to grow at a faster overall rate than UPR demand, but with demand for both sectors on the weaker side and depressing DCPD pricing in China at the present. Demand for higher purity DCPD is likely to grow well above GDP rates with COC and poly DCPD applications.
- New and future IED start-ups that will produce additional DCPD in China include Ecisco at Jieyang City (operating) and an expansion at the Henghe Nanjing IED in 2026.
- The US will continue to rely on some DCPD imports from Asia-Pacific and the Netherlands to meet some demand requirements, most of which is for UPR or ENB production. Imports from Brazil may be more problematic if the current 50pc duty rate remains in place.
- Europe will continue to import some volumes of DCPD primarily from China for UPR and high purity applications, and export small volumes of resin grade/lower grade material to the US.

Price corrections

- The price for DCPD bulk ex-works average (PA0021592) loading in June 2025 was published incorrectly on 27 October. The correct price was $932/t. The price for isoprene bulk ex-works average (PA0021593) loading June 2025 was published incorrectly on 27 October. The correct price was $1,583/t.
- The price for DCPD bulk ex-works average (PA0021592) loading in July 2025 was published incorrectly on 24 November. The correct price was $795/t. The price for isoprene bulk ex-works average (PA0021593) loading July 2025 was published incorrectly on 24 November. The correct price was $1,858/t.
- For more details, please contact Steve Williams at steven.williams@argusmedia.com.

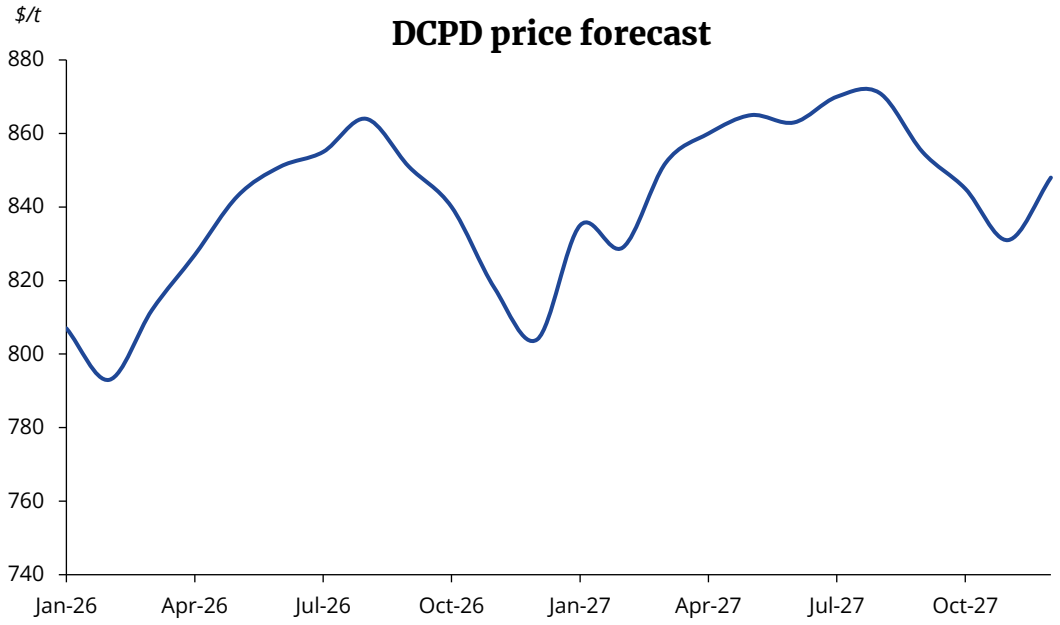
Executive Summary

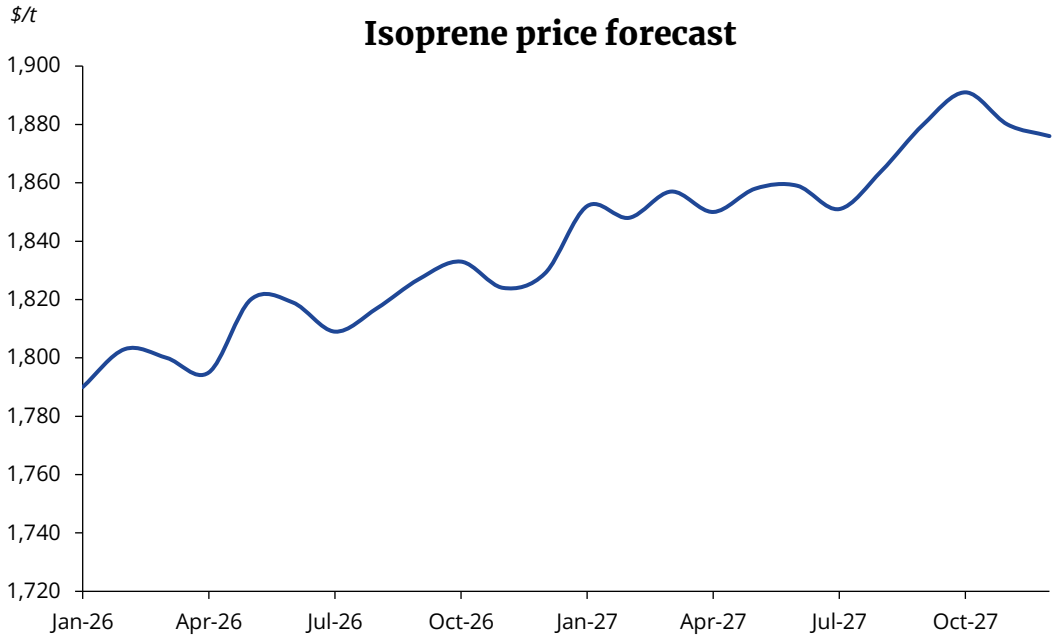
Click here to download the price dataset in Excel

Price assessments

Monomer	August	*September*	*October*	*November*	*December*
DCPD	841	*850*	*826*	*828*	*829*
Isoprene	1784	*1807*	*1779*	*1779*	*1783*

C5 Hydrocarbon Resin, delivered US $/t				
Year	1Q	2Q	3Q	4Q
2024	1,749 - 2,234	1,859 – 2,307	1,918 - 2,337	1,984 – 2,337
2025	1,984 - 2,337	1,984 - 2,337	1,955 – 2,337	





1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Monomers

Resin former supply

Supply

- Ethylene plants in all regions are operating at rates well below full capacity globally as we near the end of 2025, matching weak downstream derivative demand. US operating rates remain generally higher than those of most of Asia-Pacific or especially Europe. Asia-Pacific ethylene producers continue to see LPGs (or more so ethane if available) as the most economic feedstock for cracking as of late, with standalone naphtha cracking economics very negative. LPG cracking is ongoing in Europe along with some structural amounts of ethane cracking. US resin former production remains structurally more minimal.
- Cracker rates remain reduced in China but with naphtha still the most predominant feedstock for ethylene production. US exports of ethane to China continue and are growing with increased in US export terminal capacity. A growing number of other ethylene producing countries are looking at increasing the amount of ethane used to produced ethylene.
- All IED units in China except for Sunion Maoming (planned outage), Sinopec Shanghai (restarting after turnaround) and Sinopec Yanshan (long term outage and unlikely to restart) are online. Ecisco started the new IED train at Jieyang City in late third quarter. Average operating rates remain 75-80pc.
- Asia-Pacific crackers outside of China continue to run at reduced rates with negative standalone production economics for naphtha and LPG cracking. In Korea, YNCC continues to operate with just the No.1 and No. 2 crackers with the downstream IED running at rates to match reduced feedstock availability. YNCC further reduced overall cracker rates for December. Lotte will be operating at IED rates to match reduced rates on upstream cracker operations with lower cracker rates also expected this month. Further details emerged for the possible restructuring plans for more of the Korean petrochemical operations (see the *Industry News* section for further detail) which could impact YNCC and Lotte cracker operations at Yoesu, including permanent idling of the YNCC No. 3 cracker, and the shutdown of additional cracker capacity at either YNCC or Lotte, all of which could potentially impact C5 monomer production in the future.
- In Taiwan, the Formosa No. 1 cracker is shutdown for an indefinite outage, with the downstream IED running at rates to match feed availability.
- Overall cracker rates in Japan remain noticeably reduced, but with all IED capacity online. Like Korea, there have been several announcements relating to future cracker capacity rationalization in Japan as they suffer through eroding business economics and low operating rates.
- ExxonMobil has both crackers in Singapore online at present but may shut down the No. 1 cracker permanently in March. This would impact their internal production of DCPD and necessitate imports of DCPD to supplement their own local production if HHCR rates are to be maintained or increased. See the *Industry News* section for further detail.
- Ethylene continues to be tightly managed in Europe with no improvement to ethylene production volumes as producers manage inventories and co-products carefully at year end. US resin former production remains minimal with less than full operating rates on crackers and an ethane dominated feed slate. Domestic crude C5 feed to the largest consumer Gemspring (ex. Goodyear) will be reduced with overall cracker rates.
- C5 monomer output from Brazil has continued to find its way predominantly to the US and with Braskem progressing on an upgrade to their DCPD production capabilities which should come online in 2026. The current 50pc tariffs on Brazilian exports to the US has the potential to impact these trade flows going forward, but we believe these tariffs rates are likely to be significantly lower as part of any eventual bilateral trade agreement between Brazil and the US. DCPD depleted crude C5's continue to flow from Europe to the US from one producer with a November and December noted. These crude C5 shipments from Europe to the US will continue through mid-2026 and potentially beyond on a year-to-year basis. With a new owner taking over the Goodyear Chemical assets in the US (Gemspring Capital), it is possible we could see increased volumes of crude C5 imports from other sources to the US to supply the IED unit and increase operating rates.

Demand

- Margins remain very weak for Chinese C5 processors with the bulk of any processing margin coming from isoprene. Demand for C9 feedstock and pips in China has been weaker with weak C9 HCR and C5 HCR demand domestically, but we may see better pips demand into the curing agent market further in the future from new offshore wind turbine construction in China.
- Resin formers continue to flow structurally to the US to meet consumer needs. 2024 and 2025 have seen saw tepid downstream demand with weaker overall imports of resin forming C5 monomers being the result. US demand for resin former imports remains reduced with the shutdown of domestic C5 HCR capacity and weaker domestic production rates for SIS and UPR relative to several years ago.
- Monomer flows to Europe remain weaker to meet corresponding demand, with minimal isoprene moving from Asia-Pacific to Europe for SIS and butyl rubber production, along with some smaller volumes of pips for HCR production and DCPD imports primarily from China.

Outlook

- 2024 through to late 2025 saw the start-up of three new IED units in China. An IED expansion is planned at Henghe Nanjing for 2026, further adding to resin former supply capacity in China. A permanent shutdown of the small IED train, an expansion of the larger IED train and a potential new IED unit appear likely as part of the announced ethylene transformation plan for Sinopec Shanghai occurring over the next three to five years. Sunion (Maoming) is looking at a possible expansion in 2027.
- Global resin former capacity will remain well above global demand for tackifiers and SIS/IR for much of the decade, but with production and consumption geographically dispersed in some cases. Further clarity on the finalization the US tariff and trade policies is likely to occur shortly and allow for improved planning beyond the short term .
- The US will continue to see imports of isoprene and DCPD in reduced quantities until we see improvement in derivative demand. Europe will continue to have C5 processing which is limited to DCPD production which will necessitate ongoing imports of pips, some grades of DCPD and smaller quantities of isoprene.

Unit Watch

- Chinese IED's including **Derong** (one train), **Jinhai** (two trains), **Sinopec SK Wuhan, Ecisco (Huizhou), Ecisco (Jieyang City), Henghe (Nanjing) , Fushun Yikesi, Fushun Yikesi (Panjin), Sunion (Zhanjiang), Tianli (Xinjiang), Luhua (Zibo), Luhua (Panjin), Luhua (Zhangzhou)** and **Sheng Hong** are all online with overall average rates remaining in the 75-80pc range.
- **Sunion (Maoming)** IED is down for planned turnaround through mid-January.
- **Sinopec Shanghai** IED is in the process of restart after turnaround.
- **Sinopec Yanshan** IED remains down due to weak economics as it has been for an extended period, with a restart now very unlikely.
- **YNCC** and **Lotte** are running at IED rates to match cracker feed supply at less than full capacity. **Formosa** has been running reduced rates on the IED with the No. 1 cracker offline. **Zeon** has normalized IED operations in Japan after an extended IED outage earlier in the summer.
- Operations are normalized at **Braskem** after an October IED outage.
- The **Goodyear** sale of the chemical business (including the IED at Beaumont, TX) to **Gemspring Capital** closed in early November.

Monomers

Piperylenes

Supply

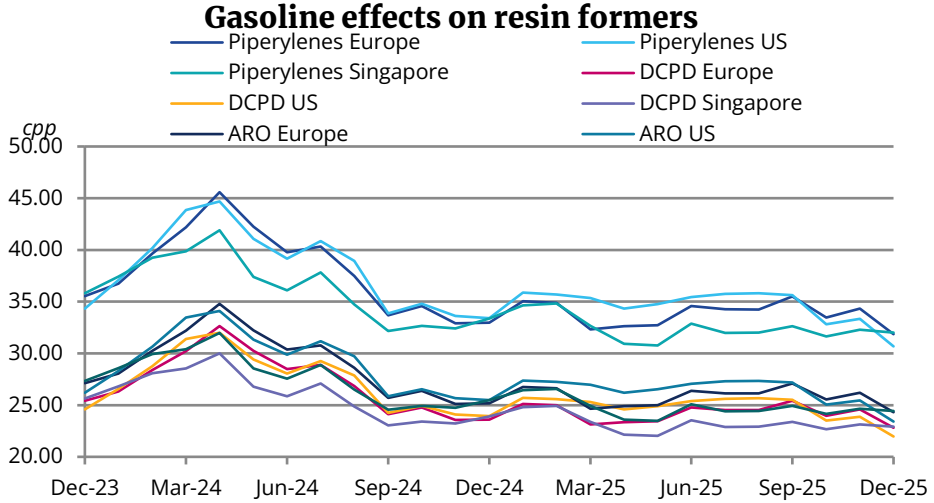
- Pips remain very well supplied in China with most IED units operational at an overall rate of 75-80pc. The recent start-up of the Ecisco Jieyang City IED in September is pushing pips balances further to the longer side. December has seen some loss of pips production at Sinopec Shanghai and Sunion Maoming with planned outages. Supplies in the northeast of China remain particularly long with prices dropping as a result.
- Pips production in Taiwan remains below capacity with one of the three Formosa crackers rotating offline and corresponding to reduced rates at the downstream IED. Exports of pips should remain slightly weaker as a result.
- Korean production volumes of pips remain reduced with IED's matched to reduced upstream cracker rates but with exports continuing given domestic pips balances. The end of the year should slightly weaker production in Korea with planned turnaround work complete at C5 processors and their upstream crackers but with cracker rates further reduced.
- Pips production within Japan remains reduced with lower cracker rates but appears sufficient for domestic consumption and for exports to Thailand to support improved C5 HCR production rates. Zeon's IED continues to supply their downstream derivatives in Japan and Thailand.
- Crude C5 and in turn pips production in the US remains structurally weaker with US crackers running at slightly lower rates in the fourth quarter on predominately ethane feed. Nonetheless, pips supplies are adequate for the domestic market.
- Crude C5 parcels containing piperylene continue to flow from Europe to the US from one producer and continue to provide additional pips (and isoprene) for the US market. There is no pips production within Europe and no plans on the horizon for that to change.

Demand

- Overall demand for pips into C5 tackifiers was weaker globally this year with weaker demand from the tapes and labels markets and with stiff competition for C5 tackifiers in some markets from aggressively priced HHCR. This is not expected to change in early 2026.
- The north of China has entered the winter season, with C5 HCR demand into road markings and in turn pips demand weaker. Demand for pips streams in China into the curing agent market for epoxies also remains weak this month.
- Posted pricing for pips in China is lower again this month with the weaker demand and was recently seen at 5,200 – 6,200 RmB/t ($739/t - $881/t) ex-plant depending on the region, with weak margins for C5 processors along with C5 HCR producers.
- Demand for pips in the balance of Asia-Pacific remains slightly improved from last year including volumes flowing to Thailand for tackifier production, with Japan and potentially Korea supplying much of this volume. We expect pips demand for Thailand, Korea and/or Japan to be structurally stronger with additional C5 tackifier exports to the US and Europe with the recent shutdowns of C5 HCR production in those regions, particularly if the more elevated tariffs for Chinese exports of HCR to the US relative to other exporters remain in place, which seems very likely at this point.
- Import flows of pips to the US have been reduced but not eliminated since early 2024, given lower overall C5 HCR demand from the shutdown of production at the Resin Solutions tackifier plant in Texas last year followed by ExxonMobil at Baton Rouge this year. Brazil and to a lesser extent Korea remain the primary suppliers of any US pips imports. Some US domestic production of pips may find its way to the gasoline pool depending on short term regional balances given the structural decrease in domestic demand.
- Pips consumption in Europe will remain more minimal given the significantly reduced volume of C5 HCR production in the region but import volumes primarily from Asia-Pacific are likely to continue, with Brazilian volumes being another potential supply source.

Outlook

- The addition of three new IED facilities in 2024 and 2025 has increased the available supply of pips within China. 2026 should see further capacity additions for pips as part of an Henghe Nanjing IED expansion. Beyond that, expansion plans at Sinopec Shanghai and Sunion Maoming will add further production capacity for pips.
- Globally, pips supply is expected to be more than adequate given current weaker demand for C5 tackifiers until such time as the tapes and labels markets see much stronger demand. Demand for pips into epoxies within China should grow further in the future with growth in offshore wind farms but currently ranks a distant second to tackifiers in terms of piperylene consumption in the country.
- Piperylene imports to the US will be reduced with reduced C5 HCR production, and piperylene imports to Europe will remain more minimal to match much reduced HCR production.

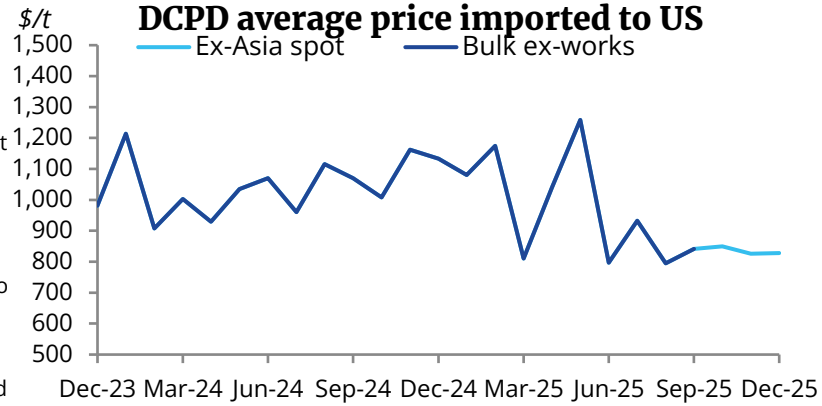


Monomers

DCPD

Supply

- DCPD balances are long during December in China with surplus volumes in the north spilling over to east China. Prices are lower relative to the end of November and were seen recently at 4,650 – 4,800RmB/t ($660/t - $682/t) ex-plant for 80-85pc grade material with prices weakest in the northeast. New DCPD capacity at the Ecisco Jieyang City IED commenced operation in September. December has turnarounds at Sinopec Shanghai (in restart) and Sunion Maoming.
- Korean DCPD production remains reduced in 2025 with cracker rate reductions and IED turnarounds earlier in the year. Imports of DCPD to Korea continue to supplement domestic DCPD production for use in HHCR production, much of it from China. Japan continues to produce less DCPD with crackers reduced on rates generally but with the Zeon IED operations normalized post turnaround. DCPD production volumes in Singapore should be normalized, but with future volumes likely to drop with the expected shutdown of the ExxonMobil SOP1 plant in March (see the *Industry News* section for further detail). This will necessitate DCPD imports to Singapore if ExxonMobil is to maintain or increase HHCR production rates including HHCR volumes destined for the US.
- Production rates for DCPD in Taiwan remain reduced with Formosa rotating upstream cracker outages and with reduced downstream IED rates as a result. DCPD exports from Taiwan YTD through October are tracking 43pc above 2024 levels at 10,841t. Stronger operating rates at the Idemitsu/Formosa HHCR plant utilizing higher purity DCPD as feed along with reduced IED rates means less DCPD is available for export than several years ago. Taiwan exported just 10,138t of DCPD in 2024 according to GTT data. We expect the trend of lower DCPD exports from Taiwan predominantly finding their way to the US (54pc YTD) to continue. October saw a large amount (2,900t) of material exported to China for the first time since 2019.
- DCPD availability remains adequate at present to meet UPR demand for the construction, automotive and RV markets in the US, with US producers that are normally capable of producing high or ultra high purity DCPD continuing to be the primary suppliers to the UPR market to move volumes. This will likely continue until another significant cost competitive source of UPR grade material to supply the US is available or demand for high and ultra-high purity DCPD improves domestically. Imports from Europe of resin grade material are likely to continue going forward. We may also see some resin grade DCPD upgraded to UPR grade at custom processing facilities within the US if balances dictate it.
- Brazil (Braskem) will become a UPR grade exporter in 2026 with product suitable for direct sale to UPR customers in the US (tariffs notwithstanding), Mexico, Europe and elsewhere. This additional supply of UPR grade material would help fill the gap left by the shutdown of a key UPR grade producer in the US during 2024..
- European DCPD production was reduced later in the early fourth quarter with operating issues at Unipetrol Litvinov, but production has since been normalized with the upstream cracker back in operation. Lower upstream cracker rates at DCPD producers will mean slightly lower European production than what may have been seen even several years ago. DCPD exports from Taiwan to Europe were very minimal in 2024 and again YTD for 2025, with any DCPD imports to supplement domestic production coming almost exclusively as of late from China. With any Chinese exports of DCPD facing what could be elevated import tariffs to the US, Europe and the balance of Asia-Pacific will tend to be the preferred home for any these Chinese DCPD exports outside of Asia-Pacific.



Demand

- Overall DCPD demand in China remains very weak during December with UPR overall operating rates now around 35pc and expected to drop prior to the lunar new year holiday and with tepid HHCR demand for DCPD. Recent historical lows for domestic DCPD pricing has helped encourage buying interest despite the weaker downstream demand. Some Chinese DCPD producers are hopeful that reduced DCPD production in Korea next year with lower cracker operating rates will mean more imports from China and improved price support in 2026.
- Dropping HHCR production in Europe and the US means more Chinese export HHCR volumes will find their way to those regions, supporting long-term DCPD (and C9 ARO) demand in the China domestic market. Korean and Taiwanese HHCR producers will also try to move additional volumes to help backfill the European HHCR domestic production imbalance, providing additional demand for DCPD into HHCR in the balance of Asia-Pacific. DCPD demand in Europe will be tepid overall between weaker UPR demand, lacklustre demand into ENB, growing demand into COC and more minimal demand into HHCR.
- US UPR market demand for DCPD remains weaker approaching year end. DCPD demand for HHCR is becoming much reduced in the US with the ExxonMobil HHCR shutdown. Demand for ultra-high purity DCPD for poly DCPD applications is expected to increase significantly in the US after UHP DCPD capacity was expanded over the last two years with most of this volume anticipated to serve as feedstock for ExxonMobil's emerging Proxxima™ business.
- Based on September GTT data (which is the latest available after the recent US Federal Government shutdown), US imports of DCPD increased to 1,804t from 1,020t in August, with arrival volumes from Japan, Belgium, Taiwan and Brazil. Benchmark DCPD prices were tentatively assessed at $841/t for August bulk loadings to the US and with December prices for loadings forecasted to be $829/t ex-Asia. Benchmark prices will be reassessed as necessary once the relevant USITC website import data becomes available. For 2025 YTD through September, US DCPD imports were 15,667t and are tracking 20pc lower than for the same period of 2024. For 2024, US imports of DCPD totaled 23,207t. Weaker demand in the UPR markets coupled with stronger domestic production of UPR grades remains the key reason for the weaker imports.
- European domestic production of high purity DCPD continues to feed domestic consumers for ENB in Belgium and cyclic olefinic copolymer (COC) production in Germany. The start-up of the second COC plant by TOPAS Advanced Polymers GmbH in Germany is anticipated for April 2026.Demand for UPR grade in Europe will be weaker like the US. As a result, DCPD exports from Taiwan to Europe for 2025 remain minimal, with just 1,429t exported to the region through October. Smaller Russian(Tartarstan) origin DCPD volumes if produced will likely flow to India, Turkey or other Asia-Pacific consumers having been displaced from the Eurozone by sanctions. Chinese exports will make up most of the balance of demand in the EU.

Monomers

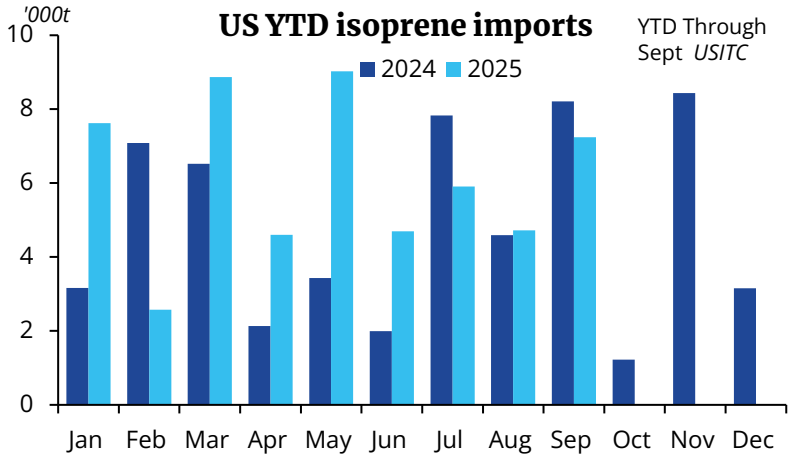
Isoprene

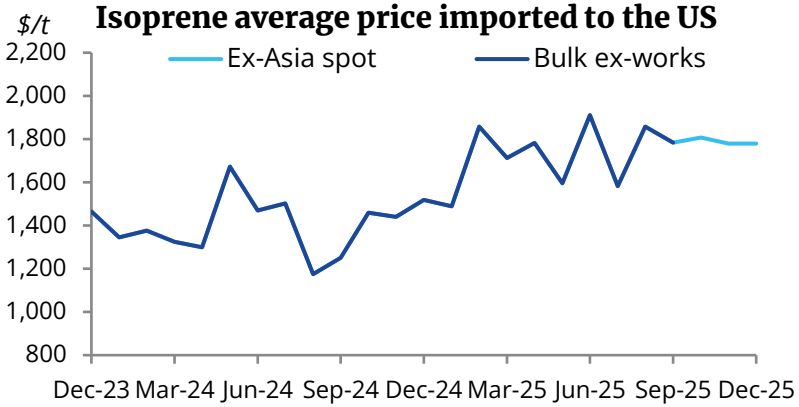
Supply

- Isoprene supply in China remains adequate with all isoprene units except for Sinopec Shanghai (restarting) and Sunion Zhanjiang (planned outages) and Sinopec Yanshan (long term outage and unlikely to restart) operating, with overall rates of 75-80pc. New capacity from Ecisco (Jieyang City) started up in September. Domestic spot IPM prices in China are lower from this time last month but weakening recently and were seen at 10,500 – 11,300 RmB/t ($1,491/t - $1,605/t) ex-plant with prices weakest in the northeast, where balances are long.
- China has exported 20,662t of isoprene YTD through November, up 125pc from 2024. Chinese exports of isoprene for all of 2024 totaled just 12,134t. Chinese exports of isoprene arriving in the US for 2024 were just 3,300t and volumes exported from China to the Eurozone during all of 2024 just 1,392t. China has exported 2,355t of isoprene to the US YTD. With the current tariff regime in the US for Chinese imports, we could still see some Chinese isoprene exports to the US arriving going forward. Chinese exports to Japan, Singapore, Italy, India and Brazil have all increased this year.
- Korean isoprene exports increased to 5,691t in November from 4,342t in October but are tracking 8.4pc below 2024 at 51,507 YTD according to GTT data. YTD export volumes are lower as a result of the reduced IED operating rates at YNCC for February through early April followed by Lotte during an upstream cracker turnaround through early June. The end of the year continues to see some reduced production with weaker upstream cracker and in turn IED rates expected through December and likely beyond. Korean production rates and isoprene exports were much improved in 2024 from 2023, with a total of 62,257t exported, 66pc higher than 2023. Most of this volume (68pc) was destined for the US. Korean exports to Singapore are increasing with the start-up of the new Cariflex IR latex facility last year and are 5,150t YTD through November, up 33pc from 2024. At the same time, Korean isoprene exports to Brazil have dropped by 75pc, presumably due to lower operating rates earlier in the year at the Cariflex plant in Brazil as the Singapore plant ramped up production. Overall isoprene imports to Brazil are down 10pc YTD and could remain lower if Brazilian isoprene production is preferentially sold domestically in the face of the current US tariffs for exports to the US. Korean production of isoprene could suffer in the future with the latest round of rationalization proposals including a permanent shutdown of YNCC cracker No. 3, and further rationalization of Lotte and YNCC cracker capacity at Yoesu. See the *Industry News* section.
- Taiwan remains the second largest isoprene exporter in the Asia-Pacific region exclusive of China with export volumes of 15,865t YTD through October, now 6.9pc above volumes for the same period of 2024 after stronger September export volumes. In 2025, 85pc of export volumes YTD are headed for the US. For 2024, total shipments of isoprene were 22,128t, with most (59pc) headed to the US.
- Japanese production of isoprene has normalized after the summer turnaround at one producer. Balances in the Asia-Pacific region outside of China have been snugger when taken in conjunction with weaker Chinese, Korean and Taiwanese production in the same time frame. Pricing as of late has been at or above annual contract pricing for IPM export parcels to the west or Japan which are negotiated quarterly or on a spot basis. This is likely to remain the case until global supply/demand balances likely lengthen in early 2026 with the cracker/IED turnaround season behind us and with additional new IED capacity online in China. It also means that formula contract pricing for 2026 purchase/sales will closely resemble that of 2025.
- US production of isoprene remains slightly below typical with crackers at reduced rates during the fourth quarter on predominantly ethane feed but with isoprene contained in crude C5 imports from Europe continuing to boost production numbers at the largest isoprene producer in the US. Without these imports of crude C5 to the US, consumers would need to source replacement isoprene volumes from other exporters.
- Isoprene supply to Europe is made up entirely of imports, most of which has historically flowed to Italy for SIS production and smaller volumes to other countries for butyl rubber production. Isoprene flows to Europe are not expected to increase with more minimal SIS production as noted.

Demand

- SIS demand for isoprene in the west remains tepid at best at year end, with demand into IR faring slightly better. Domestic demand in China into SIS remains weaker with ample inventory. Isoprene demand into IR within China is on the weaker side with weaker demand into the tire segment. New SIS/SEPS capacity online at Jinhai, Ecisco and now Sinopec Shanghai/Baling could increase domestic demand for isoprene in the short term, but the SIS production balances will need to be managed given limited market demand.
- US isoprene production continues to be used primarily for internal use and mostly for IR (Gemspring/Goodyear) production with some external IR sales. Much of the IR exported from the US represents intra-company transfers to tire producing locations around the globe, with Goodyear/Gemspring receiving a number of isoprene import parcels this year including from China in support of IR production.
- Export markets for US SIS producers remain challenging given the delivered cost of isoprene feedstock to their operations, with IPM formula pricing higher in 2025 and quarterly/spot pricing higher yet currently as noted above. Isoprene exports to the US from China were more minimal in 2024 but increased briefly early in 2025 only to taper off once again. Most isoprene arrivals to the US remain contract purchases from Korea, Taiwan or Brazil. Brazil purchases are likely to be minimized where possible for the foreseeable future if the US import tariff remains at 50pc.
- In September, total imports of isoprene to the US were 7,242t compared to August at 4,723t per GTT data. Benchmark isoprene prices were tentatively assessed at $1,784/t ex-Asia for August bulk loadings, with December loading prices forecast to be $1,783/t ex-Asia. Benchmark prices will be reassessed as once the relevant USITC website import data becomes available. US imports of isoprene through September are 55,247t, 23pc higher than the same period of 2024, with the increased imports largely attributable to increased demand for isoprene into domestic IR production and with volumes from Taiwan and China making up much of the increase.
- Demand for isoprene in Europe remains weaker with minimal SIS production and with smaller volumes destined for butyl rubber production. Korea exported just 3,740t to the Eurozone during 2024, China 1,392t, and Taiwan 2,151t, and overall totals this year may trend lower yet.
- Japan, the second largest importer of isoprene after the US, has imported 9,703t of isoprene YTD through October, down 20pc from the same period of 2024. October imports dropped to just 90t. Imports for all of 2024 were 15,516t.





Monomers

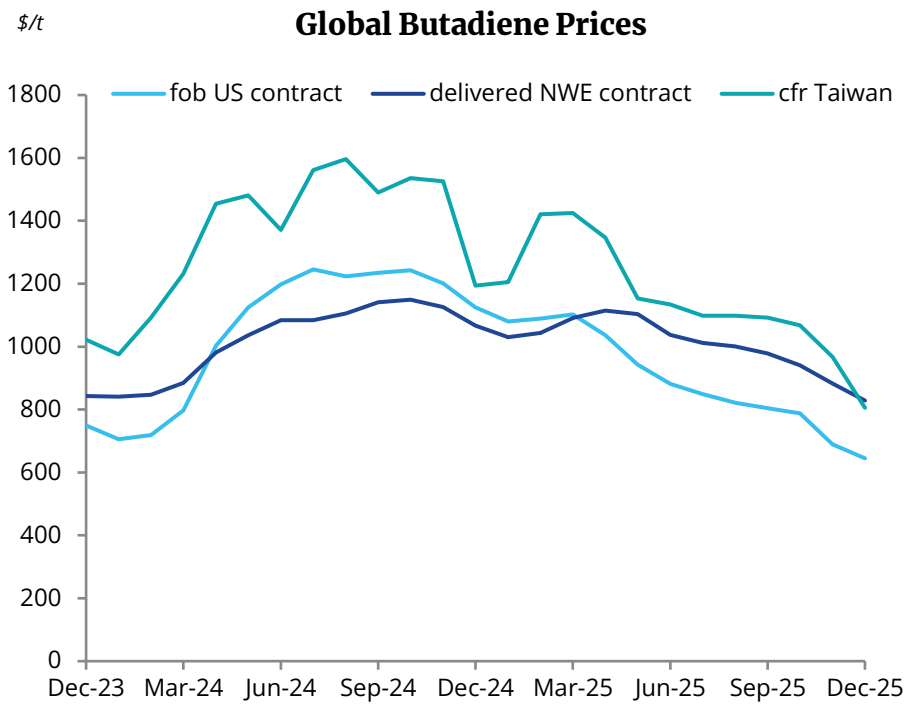
Butadiene

Supply

- The December *Argus* prevailing butadiene (BD) contract price (CP) in the US settled down by 2¢/lb to 29.25¢/lb ($645/t), its lowest level since September 2023. The latest CP was directionally aligned with spot price trends, reflecting a sharp decline in exporters' selling indications. Weaker cfr northeast Asian values in November and early December pulled down prices elsewhere, squeezing margins for US producers and limiting arbitrage opportunities. There have been lingering butadiene (BD) production issues across the US market which are since resolved, but this has attracted some buying interest in the spot market, tightening prompt conditions.
- The European butadiene (BD) monthly contract price (MCP) for December settled at €720/t ($828/t), also the lowest level since September 2023. BD supply in Europe remains ample, and both buyers and sellers are working to reduce inventories and manage working capital ahead of year-end. European butadiene (BD) producers continue to export material to northeast Asia as plentiful domestic supply persists.. The European monthly contract remains closer to that of northeast Asian BD prices, pressuring European export competitiveness.
- BD production volumes in Asia-Pacific remained reduced by low cracker run rates in Asia. Narrower ethylene margins have pushed South Korean cracker operators LG Chem, KPIC and YNCC to cut operating rates and extend maintenance in December, although seasonal pre-Lunar New Year stockbuilding from derivatives producers is expected to support downstream demand. More capacity is expected to be rationalized in 2026. In South Korea, LG Chem and Hyundai have already decided to consolidate their assets in the Daesan area. In addition, ExxonMobil in Singapore is highly likely to shut its no.1 cracker next year. In southeast Asia, turnarounds at several regional producers have also curbed northeast Asia-bound export volumes, further reducing supplies.

Demand

- The Asian butadiene (BD) price increased last week on expectations of tighter supplies, particularly from South Korea, because of reduced cracker rates, and price increases in the China domestic market. Trading activity remained muted as buying and selling price ideas differed widely, although price indications rose across the board. Buying ideas were generally discussed at between $850-900/t cfr northeast Asia last week, up from between $820-850/t the prior week. Meanwhile, offers were generally between $950-1,000/t cfr northeast Asia, compared to $850-880/t the previous week.
- Chinese domestic prices also rose on support from the downstream polybutadiene market. Sinopec raised its list price to 7,800 yuan/t last week, up by Yn450/t. Domestic Chinese spot prices rose to Yn7,600-7,800/t ($1,094/t), up by Yn350/t from the last session. Market participants expect more January-February spot buying to emerge in the near-term from procurers who have not concluded 2026 term contract negotiations. Further upsides were moderated this week as Chinese stockpiles remained high, with Chinese BD port inventories rising slightly by 100t on the week to 36,000t.
- European consumers are de-stocking and reducing intake. Excess tonnes are being redirected to northeast Asia, but this is putting downward pressure on regional BD prices, which are already under strain due to weak downstream demand. Buyers see poor domestic demand continuing into January.
- Market participants in the US aim to maintain minimum inventory levels at year-end. Ad valorem taxes typically diminish buying interest to control expenditures until restocking begins in the new year. The persistent supply-demand imbalance in the US market shows little-to-no sign of easing, fueling concerns that the current supply glut may continue into 2026. The situation is further complicated by the permanent shutdown of three US derivative facilities this year.



Monomers

Aromatic resin oil (ARO)

Supply

- Cracker cash margins within Asia-Pacific are in very negative territory for standalone naphtha cracking, with LPG (propane) margins oscillating between negative and mildly positive for some of 2025 but more negative once again during December. Cracker rates remain reduced in Asia-Pacific as they have been for an extended period. The US is running on an ethane based feedslate with standalone cracking margins mildly positive but much weaker than earlier in the year with lower spot ethylene pricing and stronger feedstock pricing. Europe continues to operate at much reduced operating rates with a number of permanent and temporary cracker shutdown announcements.
- ARO supply for tackifier resin production in Asia-Pacific outside of China continues to see tighter balances, while Chinese demand into C9 tackifiers for tires and asphalt modification remains weaker during the winter season and with C9 tackifier exports to the west generating very weak netbacks. China in general has seen adequate supplies of C9 feed for consumer use with slightly higher pricing in December with demand for use in diesel fuel improved but with C9 ARO demand remaining weaker for tackifier use.
- Available C9 ARO supply for Taiwanese consumers remains constrained with reduced production from YNCC with only two of three crackers operating. Reduced YNCC production of C9 ARO will also impact export customers in Europe and Japan. LG Chem restarted after a turnaround at its Daesan cracker through early December. CPC in Taiwan, another C9 ARO producer, started a two-month turnaround at cracker No. 4 in early November. The Formosa No. 1 cracker is shut down for an indeterminate length of time to maintain just two crackers in operation.
- Japanese C9 ARO supplies for HHCR production in Japan have benefitted from a lighter turnaround schedule for domestic producers as of late but C9 ARO flows to Japan from Korea continue to supplement domestic volumes for use in C9 HCR production. Next year sees a overall heavy turnaround schedule in Japan for crackers which may impact domestic production of what is typically smaller volumes of C9 ARO.
- C9 ARO production in the European region continues to decrease after the 2024 shutdown of the Sabic Geleen No. 3 cracker, and the shutdown of the Versalis Priolo cracker in July of this year. The absence of BASF in the supplier market in Europe has also been keeping balances tighter. C9 ARO continues to flow from the Synthomer assets on the Dow Boehlen site to the Netherlands, but Dow will permanently shutdown this cracker in later 2027. Some C9 ARO volumes continue to find their way from Asia-Pacific to Europe to supplement domestic production in the region and this may need to increase in the future. C9 feedstock supply for C9 tackifier production in Estonia remains more minimal with European sanctions on Russian feedstocks, with tackifier plant rates reduced to match much lower feedstock availability.
- Small volumes of C9 ARO imports from both Asia-Pacific and Europe had found their way into HHCR production on the US Gulf coast during 2024 and 2025 at one of the large USGC HCR producers, with a July arrival from Europe the most recent noted. There is no US C9 ARO production. These C9 ARO imports to the US should cease going forward with the permanent shutdown of the consuming facilities

Demand

- Many of the smaller C9 tackifier plants remain offline in China due to weak domestic demand and poor economics, reducing overall C9 resin feed consumption, particularly for lower quality feed. This remains particularly true for thermal grade producers of C9 HCR supplying the construction markets, which were weaker in China during all of 2025.
- Prices for crude C9 feed streams in China are slightly higher this month at 3,650 RmB/t ($518/t) ex-plant in the northeast to as high as 3,900 RmB/t ($554/t) in the south with demand into the fuels market providing some price support.
- Naphtha pricing within Asia-Pacific is lower versus this time last month and was assessed by *Argus* at $531/t cfr Japan as of 19 December with petrochemical consumption still weaker for the paraffinic grades with overall reduced rates and ongoing LPG and ethane cracking.
- Spot northwest European naphtha pricing is also lower since this time last month and was assessed by *Argus* at $494/t as of 19 December, but with spot European gasoline prices noticeably lower since this time last month and assessed at $583/t as of 19 December. European formula based C9 ARO priced off gasoline should be lower priced in the near term and pricing should retreat with gasoline pricing in the winter months. Demand for C9 ARO in Europe continues to generally exceed available domestic supply when coupled with domestic supplier shutdowns, and this is keeping regional balances tighter.

Outlook

- Gasoline futures prices are slightly backwardated (priced lower) through to early next spring. C9 ARO pricing for formula-based purchases tied to gasoline pricing may trend slightly lower over the next several months due to lower underlying gasoline futures prices provided pricing premiums to gasoline remain constant to 2025.
- European balances for C9 ARO are expected to remain tight given the loss of various C9 ARO streams as cracker shutdowns progress, short of us seeing another C9 feedstock supplier (re)enter the market, or significant additional volumes starting to flow from Asia-Pacific to the region. C9 ARO supplies to Taiwan are also expected to remain on the snug side given increased demand for Korean and other Asia-Pacific C9 ARO from Europe.
- Demand for ARO from smaller C9 HCR producers has been weaker in China, who are seeing weak overall domestic demand for C9 tackifiers. Demand for C9 ARO into HHCR production is stronger than for C9 HCR and is expected to remain that way with very competitive HHCR pricing in the China domestic market.

Argus C5 and HCR Publication Schedule 2026	
Argus C5 and Hydrocarbon Resins	26th January
Argus C5 and Hydrocarbon Resins	27th February
Argus C5 and Hydrocarbon Resins	27th March
Argus C5 and Hydrocarbon Resins	27th April
Argus C5 and Hydrocarbon Resins	26th May
Argus C5 and Hydrocarbon Resins	26th June
Argus C5 and Hydrocarbon Resins	27th July
Argus C5 and Hydrocarbon Resins	28th August
Argus C5 and Hydrocarbon Resins	28th September
Argus C5 and Hydrocarbon Resins	26th October
Argus C5 and Hydrocarbon Resins	23rd November
Argus C5 and Hydrocarbon Resins	21st December

Monomers

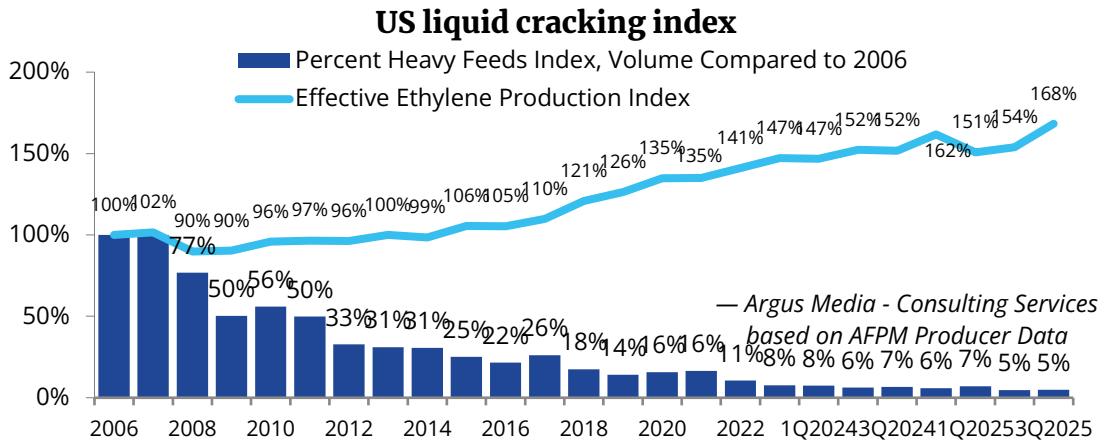
Ethylene production

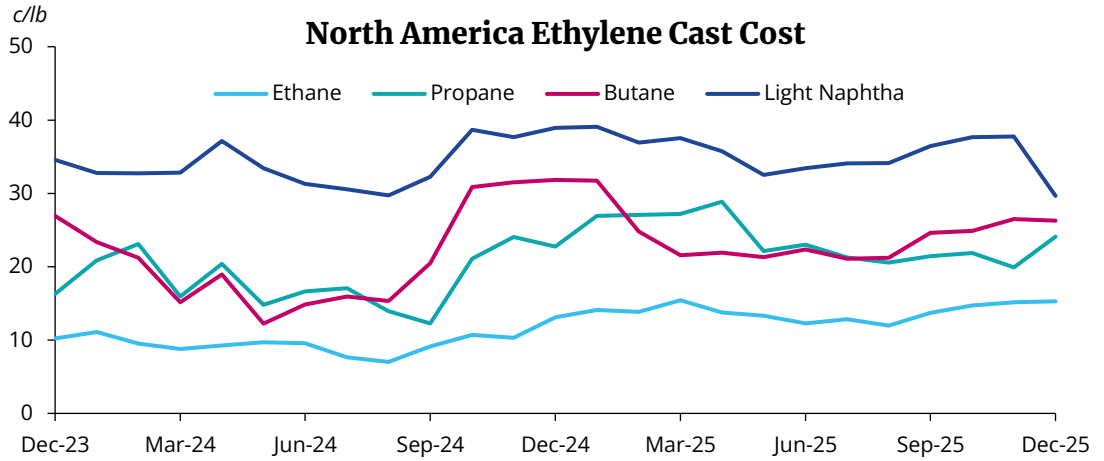
Supply

- Export demand and new derivative capacity are supporting cracker operating rates in the US. Higher ethane prices remain a risk if natural gas prices were to strengthen noticeably. Ethylene exports have been supported by new infrastructure projects operating or coming online this year. North American producers are expected to retain their cash advantage over other regions, but that advantage will narrow if lower crude and naphtha prices emerge relative to natural gas as a resulting of Opec+ tapering of crude oil production cuts. Cracker operators are adjusting rates to manage inventories.
- We continue to forecast only minimal growth in European producer spreads in the medium term as new global capacity additions and US tariffs weigh on operating rates. As a result, producers continue to look for support from local and EU initiatives such as the Critical Chemicals Alliance. Planned maintenance on a cracker in France is still taking place, while there is continued speculation on whether a cracker in Libya has restarted. It is also currently unclear what impact several planned cracker outages in the first half of 2026 will have on availability, but the announced permanent closure of a cracker in the UK in February will clearly remove some flexibility. Crackers rates remain heavily restricted to help manage aggressive downstream end-of-year inventory targets in the face of continued weak demand and increased competition from imports.
- Narrower ethylene margins have pushed South Korean crackers to cut operating rates and extend maintenance in December, including LG Chem, KPIC and YNCC. Fewer export cargoes are flowing into the spot market from South Korea despite some buying interest. Given weak production economics in Asia-Pacific and continuing global trade uncertainty, some new plants are likely to be delayed or cancelled. Going forward, successive cracker rationalization policies announced by China, South Korea and Japan are expected to provide a boost to the regional ethylene outlook. More Asia-Pacific capacity is expected to be rationalized in 2026. In South Korea, LG Chem and Hyundai have already decided to consolidate their assets in the Daesan area. In addition, ExxonMobil in Singapore is highly likely to shutdown its no.1 cracker next year.

Demand

- New stand-alone production capacity for PE and PVC derivatives are helping balance the domestic merchant ethylene market in the US and heading into 2026. Global ethylene and derivatives capacity additions will pick up in 2026-27, affecting margins and operating rates. US spot ethylene prices have likely reached a bottom and will gradually rebound heading into 2026.
- It looks increasingly likely that the EU will finally ratify the EU-US trade deal in early 2026, opening the arbitrage further for monomer and polymer exports to Europe. There is the growing expectation in some quarters of potentially higher cracker rates in the new year as derivatives look to re-establish working inventories, but the overall demand outlook for 2026 remains similar to 2025.
- Asian ethylene prices remain at a two-year low in mid-December because of persistent sluggish demand. But the spread to naphtha is expected to rebound slightly in the short term because reduced spot ethylene availability is tightening the market balance.
- Ethylene buying interest remains limited owing to bearish sentiment in China, but seasonal stockbuilding before the lunar new year holiday is expected to support downstream demand. Meanwhile, new stand-alone units including ethylene vinyl acetate are due to start up by the first quarter of 2026, which will source merchant ethylene in the spot market.





1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Tackifying Resins

C5 tackifiers

Supply

- C5 tackifier operating rates in China are reduced overall, especially in the north, with some producers likely to shut down in January through the lunar new year holiday if demand does not improve. Supply for adhesive grades is normalized with both of Jinhai's trains back online after planned maintenance in October. Chinese domestic prices for C5 adhesive grade tackifiers are flat to weaker in December with overall supply plentiful. Pricing was most recently seen at 8,500 – 10,500 Rmb/t ($1,207/t - $1,491/t), but with some further discounting to move product noted. Prices remain above most competing HHCR grades but well below those of rosin esters. Feedstock piperylene prices are weaker this month with supplies more than ample. Competition from HHCR is impacting demand for both C5 HCR adhesive and road marking grades.
- Production volumes for C5 tackifiers in Japan continue to see reduced upstream cracker operating rates, with smaller C5 HCR exports to the west continuing. Exports of C5 HCR from Korea continue to all regions with what should be increasing C5 HCR flows to the US along with increased flows from Zeon from Thailand. Container freight costs continue to be slightly elevated for Asia-Pacific exporters, but after rates spiked much higher in early June and again in early November, they are trending toward levels seen prior to the Red Sea crisis in 2023.
- October exports of HCR from Thailand (which will be C5 HCR) , decreased to 1,756t but YTD export volumes are 21,301t, up 6.4pc from the same period in 2024. Thailand exported 23,336t of HCR in 2024, up 28pc from 2023. Export volumes to Italy, Belgium, Brazil and India are dominant in 2025. We saw weaker total exports from Thailand for June and July as an impact of a C5 HCR plant outage, but exports are generally higher since that time.
- Europe continues to receive growing C5 HCR tackifier imports from Asia-Pacific, with US C5 HCR exports to Europe dropping further with the ExxonMobil C5 HCR shutdown in the US. Chinese exports of C5 HCR to Europe continue to grow quickly, due to a combination of shortness in European domestic supply, the lack of any protective tariffs, the significant growth in Chinese productive capacity, and elevated US tariffs on Chinese C5 HCR imports. Europe has minimal C5 HCR production, and this is unlikely to change.
- Domestic sales volumes for the remaining US C5 HCR producer(s) should be stronger versus 2024 along with increased import volumes from Asia-Pacific. China, Korea, and Thailand exporters should all be beneficiaries of reduced US production. US imports of C5 HCR were stronger in the second half of 2024 and early in 2025 relative to the first half of 2024, but by far less than what Resin Solutions would have produced and sold domestically. Imports should increase going forward with the further decrease in US C5 HCR production, some of which will need to come from Chinese producers given the more minimal number of C5 HCR producers in Asia-Pacific outside of China.

Demand

- C5 HCR demand into the tapes and labels sector was weaker globally in 2025, with early 2026 looking much the same. China continues to see weaker C5 HCR demand for adhesive grades and road marking grades in December with the onset of winter in the north.
- The Chinese market remains very well supplied with C5 HCR and competitive waterwhite tackifier pricing is providing stiff competition for the available domestic demand in many sectors. There should be an opportunity for additional Chinese C5 HCR exports to the US, with suppliers selling lookalikes to US domestic grades which may no longer be produced. We may also see some US C5 HCR demand shift to HHCR or even smaller volumes of rosin esters as consumers look to formulate with tackifiers which may be more readily available in the domestic market.
- Prices for C5 HCR road marking grades in China are flat from November and were most recently seen in the 7,600 – 8,600 Rmb/t ($1,079/t - $1,221/t) range ex-plant. Sales margins for all C5 HCR remain under pressure but with producers unable to move pricing higher in the current competitive sales environment.
- Pricing has been more stable in the western markets, but with tariffs on all US imports at present and reduced US production we were expecting some upward pressure on pricing from both domestic and importing producers. But the competitiveness in the market appears to be keeping a lid on any price increases, and with larger consumers seeing very aggressive sales offers from importers. The current level of section 301, retaliatory and fentanyl tariffs (as of writing) on Chinese HCR exports to the US has not dampened the continued flow of product to the US to help meet demand. YTD through September (the latest USITC website data available), the US has imported 6,932t of C5 HCR while exporting 15,588t. Of the imports, 3,180t of C5 HCR, or 46pc are from China. Most of the remaining imports are from Korea, with smaller volumes from Thailand.
- Under a scenario of significantly higher tariffs for Chinese HCR exports to the US and lower retaliatory tariffs in place for other exporters to the US, we would normally expect to see Chinese C5 HCR import volumes taken out of the US C5 HCR market and some reduced competition. But as we close out 2025, the significant reduction in US domestic production of C5 HCR with current demand should necessitate larger structural Chinese imports, not less. When taken in the context of growing Chinese production which is overwhelming domestic demand, we continue to see Chinese C5 HCR imports to the US priced very aggressively to move volume in that direction.

Outlook

- All planned additions to C5 HCR capacity during 2025 and 2026 will occur in China. **Jinhai** has a new 30,000t C5 HCR line at Ningbo planned for 2026 start-up. **Ecisco** at Jieyang City will add 35,000t of new C5 HCR production and targets 2026 production for phase I of the project. **Henghe** is planning 50,000t of additional C5 HCR capacity at Nanjing for the second half of 2026. New capacity additions from a number of IED start-ups or expansions over the same period will provide additional feedstock.
- US C5 HCR exports to Europe will be minimal going forward. US imports of C5 HCR will increase with Asia-Pacific exporters looking to capture some of the available market share with the shutdown of **ExxonMobil** production in the US. The current tariffs in place for Chinese exports of C5 HCR to the US will continue to push Chinese volume towards Europe and other regions, but additional Chinese volumes will still be needed in the US to make up for the lost domestic production.
- Asia-Pacific C5 HCR volumes moving to Europe will continue to grow with no new planned domestic C5 HCR production in Europe, the shutdown of the **ExxonMobil** C5 HCR production facility at NDG in France last year, less C5 HCR imports from the US, and slow European demand growth. Most of this increased C5 HCR import volume should come from China barring any significant changes in tariff regimes for imports.

Unit Watch

- **Luhua (Zibo), Luhua (Wuhan), Ningbo Jinhai** (two trains), **Puyang Binder, Zhejiang Derong** (one of two lines), **Fushun Huaxing, Nanjing Yuangang (Henghe), Daqing Huake, Ningbo Yonghua (Henghe), Henghe (Ningbo Plant B), Puyang Xinyu, Shandong Ruisen** (two lines), **Lanzhou Xinlan, Ecisco (Huizhou), Xinjiang Tianli** (both lines), and **Luhua (Zhangzhou)** are all online but with average operating rates well below full capacity.
- **Sunion (Maoming)** is down for planned turnaround until mid-January.
- **Anhui Tongxin** shut down earlier this month with restart planned for after the lunar holiday.
- **Shanghai Jingsen** is permanently shutting down operations late in 2025 after being idled for an extended period.
- **Zibo Kaixin** remains offline as it has been for an extended period with restart unlikely.
- **Zeon** in Thailand and Japan is operating after planned outages in the summer.
- **ExxonMobil** has permanently shut down the C5 HCR line at NDG in France and their C5 HCR line at Baton Rouge in the US.

Tackifying Resins

C9 aromatic tackifiers

Supply

- Overall operating rates for C9 HCR plants in China remain very low during December with a surplus of production capacity and continued overall weak demand for C9 HCR. About 60pc (by facility count) of the C9 HCR producers are presently offline or idled for an extended period. Most adhesive grade producers continue to operate, while much of the idled or shutdown units are older thermal based production. This is unlikely to change soon.
- C9 ARO feedstock supply availability for resin producers in Taiwan remains improved in 2025 with YNCC production in Korea normalized to match cracker rates. CPC cracker operation in Taiwan has been more stable during 2025 (notwithstanding a current ongoing cracker outage), also helping feedstock supply. PCS cracker operating rates in Singapore will likely be stronger with an adjacent Aster cracker still offline. C9 HCR overall operating rates nonetheless remain reduced in Taiwan with challenging netback economics for C9 HCR exports to the west. C9 HCR production in Korea is steadier with regular exports to all regions including the US which is structurally short of C9 HCR. C9 HCR production in Japan from the two producing units is typically used domestically. Tosoh will be the only remaining domestic C9 HCR producer in Japan after a planned shutdown of the Eneos C9 HCR unit in several years time.
- C9 HCR production in Europe has at times been limited by available feed volumes which are structurally lower in Europe after the recent shutdown of several C9 feedstock suppliers, and in the future by the shutdown of the Dow cracker at Boehlen in 2027. Imported C9 feedstock volumes are helping to support C9 HCR operating rates. The shortage of crude C9 feedstock supply for the C9 HCR plant in Estonia is not expected to change until when and if the sanctions on Russian sourced feedstock are lifted. Export volumes of C9 HCR from Estonia are 15,397t YTD through October, up 21pc from the same period last year but well below highs seen prior to the sanctions on Russian feedstock. Nearly all the Estonian C9 HCR production is exported to within the EU, with the largest volumes to France, Germany and the Netherlands during 2025 as they were during 2024.
- C9 HCR production in the US continues to consist mostly of C9/DCPD hybrid resins using lower quality feed in place of C9 ARO with no growth in C9 ARO feedstock supply to support the structural domestic shortage of C9 HCR.
- Europe remains a preferred destination for all Chinese HCR exports including C9's looking to backfill any demand and take market share away from domestic production and the other Asia-Pacific key exporters including Korea and Taiwan. The US sees steady HCR imports from China typically dominated by C9 HCR, but with volumes smaller in comparison to the C9 HCR export volumes from China to Europe.
- Tariff increases for Chinese C9 HCR exports to the US and for C9 HCR imports from any other country should drive up the cost of C9 HCR in the US given a structural lack of supply, but we have yet to see this develop in a very competitive market. More elevated tariffs implemented on Chinese exports to the US would normally see more C9 HCR volumes flowing to other regions, but Chinese C9 HCR volumes cannot be entirely replaced by Korea or Taiwanese C9 HCR exports to the US, at least in the shorter term and China has a growing surplus of C9 HCR capacity relative to demand while the US will remain structurally short of C9 HCR.

Demand

- C9 HCR continues to see reasonable demand in Europe and with domestic producers working to keep up with demand and limited in some instances as noted by feedstock. Netbacks remain weak for C9 tackifier exports to the west from China (with punitive tariffs in the case of the US) and with slightly elevated freight costs still having exporters to the west looking to improve margins but having little to no opportunity to accomplish this in a very competitive market.
- Demand for C9 HCR in China remains weak relative to production capacity, for both the adhesive and thermal grades. Weaker construction demand in China is negatively impacting demand for C9 thermal grades, with lower overall operating rates seen for most of these producers. Tire demand for C9 HCR remains weaker. Adhesive grade C9 HCR sellers remain under significant pricing pressure in competition with C5 HCR and especially HHCR, with C9 HCR prices having generally trended lower in the second half of the year as a result.
- Spot pricing for lighter colored thermal C9 HCR grades in China is flat from end November and is seen recently at 5,050 – 5,500 RmB/t ($717/t - $781/t), with weaker demand into plastic modification and much of construction amid ultra thin margins.
- Dark color thermal C9 HCR pricing in China is also lower flat from end November and seen at 3,500 – 4,400 RmB/t ($497/t - $625/t) with many of the producers for thermal C9 HCR grades as noted offline.
- C9 HCR adhesive grade pricing in China is rangebound versus later last month with poor demand and was most seen recently at 8,500 – 9,000 RmB/t ($1,207/t - $1,278/t) with more demand shifting towards very competitively priced HHCR. HHCR pricing has been noted in many instances as lower than that of C9 HCR for adhesive grades in China as HHCR producers look to move volume and with DCPD feedstock pricing well below that of higher quality C9 ARO.
- In September (the latest USITC website data available), the US imported 1,671t of C9 HCR, with 1,166t of that from China. YTD through September the US has imported 12,695t of C9 HCR, with 52pc of the volume from China. For 2024, US C9 HCR imports from China were 10,247t, representing 61pc of Chinese HCR imports. Total US C9 HCR imports for the same period were 17,912t.
- Chinese C9 HCR volumes will be more difficult to replace in their entirety for US consumers should Chinese producers choose to export elsewhere in the future because of current or future US tariffs. Thus far, Chinese producers are continuing to export volumes to the US with very aggressive pricing. Taiwan and Korea remain the next largest C9 HCR exporters to the US, with Germany and Brazil exporting slightly smaller volumes. Brazilian exports to the US may remain difficult with the current 50pc tariff rate.

Outlook

- **Luhua (Zhangzhou)** added hydrogenation capacity during the July/August 2025 site outage to produce HHCR in place of the current C9 HCR at Zhangzhou, which has removed some thermal C9 HCR production from the market. The HHCR start-up is in progress after being delayed from early November given the weak HHCR market. **Luhua (Wuhan)** has started up new C9 HCR capacity recently, and like the Zhangzhou site, may look to add hydrogenation capacity to the unit in the future when market conditions are more favourable.
- Further rationalization of Chinese C9 HCR capacity is likely to occur over the next several years, given the surplus of capacity, including the smaller, older thermal plants not capable of producing higher grades of HCR. C9 HCR capacity is heavily concentrated in Asia-Pacific and China, even more so than for the other HCR families. If any C9 HCR capacity is built in the near to mid-term, when/if it occurs it will undoubtedly occur in China.
- C9 based HHCR and DCPD based HHCR will continue to replace C9 HCR in some applications given the current cost competitiveness of HHCR resins. C9 HCR demand is experiencing minimal to negative growth, we expect this pattern to continue over the next several years as HHCR continues to take market share.

Unit Watch

- Units online**: Shandong Qilong** (all lines), **Luhua (Wuhan), Guangdong Xin Huayue, Fushun Qilong, Henghe (**all lines**), Lanzhou Huifeng, Shandong Wudi Tongye, Daqing Huake , Zibo Zhengde, Linzi Xinzheng, Puyang Xintian**.
- Units offline**: Gaocheng Hongda, Tangshan Kerun, Fushun Huaxing, Anhui Dingcheng, Fushun Kelong, Qingdao Eastsun, Shandong Kete, Shandong Landun, Tianjin Jinye, Shandong Kerong, Anhui Tongxin, Xinjiang Tianli, Inner Mongolia Zhoujin Huixin, Dongfang Hongye, Beijing Xinlan**.
- C9 HCR capacity at **Luhua (Wuhan)** is online, and like Zhangzhou, may be converted to HHCR in the future if the market fundamentals are supportive.
- **Luhua (Zhangzhou)** C9 HCR is now in HHCR service.

Tackifying Resins

HHCR (waterwhite) tackifiers

Supply

- WW HCR production rates in China are the strongest of the HCR's, with nearly all HHCR plants in operation. Luhua (Zhangzhou) has begun start up of new hydrogenation capacity on the Zhangzhou C9 HCR unit.
- Korean HHCR facilities continue to export globally in direct competition to the Chinese with more volume noted flowing to the US since the summer period with current tariff situation for US imports from China and elsewhere. Korean HCR imports (which are mostly HHCR) to the US are up 65pc YTD through September and are the largest of the importers, with overall Chinese HCR imports to the US dropping thus far in 2025. Taiwanese HHCR exports continue, mostly to within Asia-Pacific, with operating rates higher overall during 2025 but with freight rates to the west remaining slightly elevated and further compressing margins. Japanese exports of HHCR's had been tracking lower recently with most exports occurring to within the Asia-Pacific region but should increase to Europe and the US going forward as the newer production line at Arakawa further optimizes production.
- HHCR production volumes in Singapore are expected to increase with imported feedstock required to supplement on-site feedstock production. Export HHCR volumes from Singapore had typically found their way to Asia-Pacific and Europe. But exports of HHCR from Singapore to the US have been arriving since July as ExxonMobil shuts down HHCR production in the US and shifts supplies for remaining HHCR customers to Singapore. Exports of HHCR from Singapore to Europe were trending well above last year's levels earlier in the year but have dropped to below 2024 levels through November, with higher volumes also remaining within Asia-Pacific on the back of stronger overall Singapore HCR exports in 2025.
- US producers are running closer to sold out for HHCR given current sales commitments. Feedstock piperylenes and DCPD remain readily available. C9 ARO demand for use in modified grades of HHCR will move to zero. Margins for domestic HHCR producers in the US remain better than for competing imports given what are still somewhat elevated container freight costs from China/Korea/Taiwan to the US and with tariffs that must be absorbed somewhere in the value chain. Tariffs on all exporters to the US have been more stable as of late as trade agreements progress but could ultimately distort typical trade flows to some extent.
- Europe is seeing reduced levels of domestic HCR production including HHCR. Only two HHCR producers remain, Synthomer and Rain Carbon. C9 ARO availability has the potential to constrain production volumes given the tightness in supply at present and especially going forward with several cracker shutdowns. Whether the EU will at some point implement anti-dumping duties to protect the remaining producers on HCR also remains to be seen.
- Container shipping costs were trending lower since early in the year with geopolitical developments and new container ship capacity. Rates spiked higher in early June and again somewhat in early November but should trend further downwards towards historical norms. Costs for shipping to Europe have been retreating at a slower pace than for US shipments.

Demand

- HHCR demand in China is weaker as we near the end of 2025 but remains stronger than for C5 HCR or C9 HCR. Demand remains more stable in the west with HHCR supply/demand in the US more balanced. European demand for HHCR is being increasingly met with Asia-Pacific imports as domestic production has dropped noticeably since 2023.
- Spot pricing for HHCR in China is close to flat in December from the previous month as larger producers continue to price aggressively to move volume and was noted most recently in the 8,000 – 8,400 RmB/t ($1,136/t - $1,193/t) range, lower than that of adhesive grade C5 tackifier pricing in the domestic market, well below pricing of rosin esters, and even on par or below pricing for many C9 HCR adhesive grades. Prices for term customers from new facilities are likely to be even below these levels. Feedstock prices in China remain very weak for DCPD, helping preserve some of the sales margin with current HHCR pricing. Significant new HHCR capacity in China is coming to the market through 2026 as noted in the HHCR Outlook section and will keep sales margins depressed for the foreseeable future.
- HHCR prices in the west had been more stable since later last year and while we had anticipated prices moving higher with reduced domestic production and the wave of new import tariffs, we have yet to see this materialize, and larger buyers continue to see aggressive pricing from importers to move volume in this very competitive market. HHCR pricing at a reduced premium to adhesive quality C5 HCR in most locales is anticipated to continue until HHCR demand comes much closer to the available productive capacity, which is being pushed further into the future with the HHCR capacity additions in China. The US will need to replace lost domestic production from the ExxonMobil shutdown with increased imports from any or all of China, Korea, Japan, Taiwan or Singapore. HHCR pricing for European customers is seen as very competitive from Chinese suppliers in particular, with Europe being a growing and key outlet for Chinese HHCR production.
- Overall EU HCR import volumes continue to grow substantially to meet demand. YTD through October, the EU has already imported 249,828t of HCR from outside the region, up 5.6pc from the same period in 2024. For all of 2024, the EU imported 255,676t of HCR from outside the region. Any growth in HHCR demand in Europe continues to see increased HHCR imports and reduced volumes of domestic production. Total HCR import volumes from China, Singapore and Thailand to Europe are higher in 2025 versus 2024, with Korean imports for Europe slightly lower year over year and US volume dropping significantly as expected. Korean import volumes for Europe will be mostly HHCR.
- Overall Chinese exports of HCR including HHCR continue to grow rapidly with capacity increases outpacing increases in domestic demand. YTD through November, China has already exported 481,405t of HCR, up 14pc from 2024. Chinese exports of HCR totaled 461,846 for 2024, 15pc above 2023.
- The US has imported 19,242t of HHCR YTD through September (the latest USITC website data available) out of a total of 38,963t of HCR imports. During the same time frame, the US has exported 17,875t of HHCR out of a total of 34,711t of HCR exports. The US is moving from being a net exporter to a structural net importer of HHCR after the shutdown of the ExxonMobil US HHCR production.

Outlook

- **Derong** commenced commercial operations at their 40,000t HHCR plant in 2025. **Henghe (Ningbo Plant B)** also started up 60,000t of new DCPD based capacity in 2025. **Luhua** is starting up 50,000t of new HHCR hydrogenation capacity at Zhangzhou to hydrogenate existing C9 HCR production. **Henghe** is expected to start-up 100,000t of new HHCR capacity at Nanjing in late 2026. Another 50,000t of additional DCPD based HHCR capacity from **Jinhai** at Ningbo is expected to start-up in 2026, along with 70,000t of C9 based HHCR capacity. Collectively, these 2025 and 2026 HHCR capacity additions could add as much as 370,000t of new HHCR capacity into an oversupplied market and keep sales margins depressed for producers.
- European HHCR capacity is greatly reduced with the permanent shutdown of two HHCR producers since 2023. HHCR imports to Europe continue to grow, with volumes currently led by Korean exporters but with Chinese import volumes growing to likely overtake the Korean volumes. HHCR exports from Singapore to Europe may grow further if production is increased in 2026. **Synthomer** and **Rain Carbon** remain the only two HHCR producers in Europe but are competing against very aggressively priced Chinese HHCR imports and a tighter supply balance for C9 ARO feedstock.
- The US is expected to become a net importer of HHCR in 2026 after the shutdown of **ExxonMobil** production. Additional imports from Korea, China, Singapore, Japan and Taiwan are anticipated with relative volumes being somewhat import tariff dependent.

Unit Watch

- **Synthomer (Nanjing)**, **Lanzhou Huifeng, Luhua Tianjin** (both lines), **Luhua (Wuhan)**, **Luhua (Zhangzhou** DCPD HHCR), **Ningbo Jinhai** (both lines) , **Henghe** (Ningbo Plant A and Plant B), **Zibo Kaixin**, **Shandong Ruisen**, **Ecogreen (Zhangzhou), Derong,** and **Tianli** (DCPD HHCR) are all operating.
- **Luhua (Zhangzhou)** has added hydrogenation capacity for thermal C9 HCR, with start-up in progress this month.
- **Shandong Qilong, Taixing Tianma** and **Xinjiang Liming Xintong** remain in extended shutdown having never operated commercially.
- **ExxonMobil** has permanently shut down the HHCR line at NDG in France, and will shut down the HHCR line at Baton Rouge, US before the end of the current year. We may see increased rates at their Singapore plant beginning in 2026, contingent on sufficient feedstock being produced on-site or imported.

Tackifying Resins

Rosin

Supply

- Oleoresin tapping is winding down in China during December as winter approaches with some ongoing activity in the south. Overall production volumes remain smaller than anticipated during the current tapping season. Supply of *Pinus massoniana* oleoresin remains more limited with production volumes looking lower relative to 2024 volumes. Supply of Pinus elliotti oleoresin has been more abundant with some producers waiting until late in the season to collect and sell the feedstock, with ample supplies being the result..
- Gum rosin ester pricing in China is slightly stronger from November for *Pinus Elliotti* based grades, with 12 December *Argus* assessments of $1,601/t for gum rosin glycerol ester and $1,615/t for gum rosin pentaerythritol ester, both ex-works. Rosin ester pricing in China remains well above that of domestic C5 HCR, C9 HCR and HHCR pricing.
- Chinese imports of gum rosin YTD through November were 87,509t and showed a YoY decrease of 10pc. November imports showed a year-on-year increase of 28pc at 11,501t. Average pricing for Chinese gum rosin imports during November was $1,130/t on a CIF basis, much below domestic pricing levels. Indonesia and Vietnam continue to provide most of the import volumes but in quantities well below last year's levels. Gum rosin imports from Brazil, Argentina and Uganda are tracking well above last year's levels to make up most of the difference.
- Brazil oleoresin supply is increasing with the start of the new tapping season but with supplies remaining more limited until the first and second quarter of next year. Pricing has been steadier as of late with competition for the feedstock, with buyers maintaining bids at levels to secure feedstock in a competitive market. Increasing volumes in the coming months could reverse the upward trajectory on pricing seen over the previous months. Brazil gum rosin exports in November were 36pc lower from October during the tapping off-season at 5,687t according to GTT data, with much of the export volume destined for China and to a lesser extent Portugal and Turkey, with very minimal exports to Spain. Competitive pricing for hydrocarbon resins and tall oil rosin could serve to limit price increases for Brazilian oleoresin. Margins for gum rosin producers remain thin at current price levels for oleoresin feed. Several gum rosin producers have halted operations for the holiday season.
- In September, US export volumes of crude tall oil (CTO) dropped to just 14,221t, down 22pc from the same period in 2024 and 65pc lower from August. YTD through September however, CTO export volumes are 44pc above 2024 levels at 270,268t. Most of the export volume was headed to Finland and Japan during September. In 2024, 85pc of total CTO export volumes found their way to Finland and Sweden. US supply of CTO is expected to drop with recent closure announcements for several pulp mills, and with the purchase of the Ingevity North Charleston CTO processing site by Mainstream Products, we could potentially see increased processing of CTO within the US and some reduction in CTO exports.

Demand

- Gum rosin pricing in China is higher this month with reduced inventories and firmer downstream markets and was heard trading mid-December at Yn12,100/t ($1,719/t) exw Guangxi for WW grade *Pinus massoniana*. WW grade *Pinus elliotti* pricing was also higher and was heard quoted at Yn9,400/t ($1,335/t) exw Guangxi. Imported gum rosin to China has a very limited impact on *Pinus massoniana* pricing given the rosin's unique characteristics. *Pinus massoniana* gum rosin prices have averaged $1,763/t fob thus far for December. November CGR market prices for *Pinus massoniana* averaged $1,669/t fob, up $90/t from October. Profitability for many gum rosin factories continues to come predominantly from gum turpentine sales volumes.
- Brazilian gum rosin producers continue to see squeezed margins with higher feedstock costs and slower sales into key European markets with buyers in Europe turning to tall oil rosin or securing competitively priced derivative alternatives like TOR esters or HCR. Brazilian *Pinus elliotti* gum rosin remains a key feedstock for rosin ester production in Portugal, Spain and China. Export demand for Brazilian rosin esters to the US has dropped dramatically with the current 50pc tariff on Brazilian exports. Movements to the US continue to face uncertainties over trade policy and tariffs but could rebound if tariffs are reduced. *Argus* last assessed *Pinus elliotti* gum rosin 15 December at $1,025/t fob Brazil, lower from mid-November.
- Prices for US CTO have been relatively stable during 2025 after trending lower for the previous two years. *Argus* last assessed spot US CTO pricing 15 December at $606/t southeast US port fob for smaller spot volumes. With less fractionation capacity currently online in the US, CTO balances remain long, and CTO exports should continue at increased levels until eventually starting to trend lower in the future as additional US pulp mills cease operations and in turn their production of CTO.
- TOR and GR esters continue to see changing supply dynamics in the US with the reduced CTO processing, and with 50pc tariffs and expensive container freight for Brazilian gum rosin ester exports to the US weighing heavily on Brazilian import volumes. Sweden and Mexico are supplying much of the rosin ester import volume for the US. Brazilian export volumes of rosin esters should however start to increase overall as we move towards the peak of the next tapping off-season.
- Fourth quarter ex-mill drum contract CTO pricing in Europe was close to flat from the third quarter and assessed at 34.59¢/lb, with soft demand and US spot volume readily available.

Outlook

- The current tapping season in China is starting to wind down, with oleoresin supply volumes clearly below initial expectations. Current downstream demand for gum rosin remains tepid and is keeping pricing in check thus far against this reduced supply backdrop.
- CTO balances remain long in the US with the reduction in CTO processing capacity. Most CTO exports are finding their way to Sweden and Finland with lesser volumes to Japan, and this trend is expected to continue. Export volumes should trend lower further in the future as pulp and container mill closures continue in the US and with US CTO processing capacity potentially more fully utilized with the Ingevity sale of the North Charleston CTO processing assets.
- Oleoresin production in Brazil is moving toward the peak production season. Container freight costs have weighed on what might otherwise be higher Brazilian gum rosin derivative exports. The current 50pc tariffs on Brazilian exports to the US are providing further headwinds, but we may yet see a finalized trade agreement between the two countries with lower US import tariffs which may kickstart export volumes higher.
- Rosin ester producers in China are looking to gum rosin imports as a cheaper alternative to domestic gum rosin to help meet feedstock requirements. Indonesia and Vietnam continue to supply most of these gum rosin imports, but we could see a further increase in volumes from Brazil, Uganda and Argentina if pricing is supportive.

Tackifying Resins

Natural terpene-derived resins

Supply

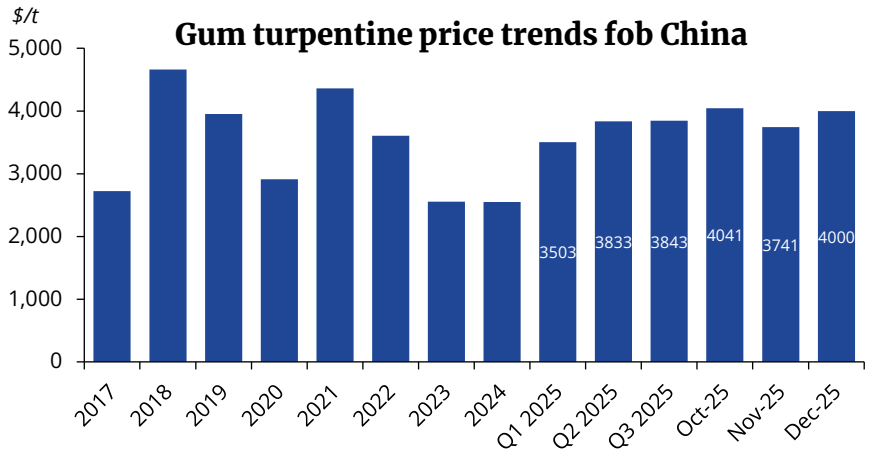
- Supply of gum turpentine in China has clearly been below expectations for the current tapping season and generally supportive of higher prices, with December seeing more trading activity.
- Gum turpentine pricing saw mid-December offers at Yn28,700/t ($4,076/t) for both *Pinus massoniana* and *Pinus elliotti* super grade material, both exw Guangxi.
- Indonesia, Vietnam and Brazil continue as the dominant gum turpentine exporters to China in 2025. Vietnam and Brazil were the largest gum turpentine exporters to China for 2024 and 2023, supplying 76pc of the import volumes during 2024.
- Brazilian supplies of gum turpentine should start to increase as we move towards the peak for the current tapping season in the first and second quarters with accompanying increases in gum rosin production, but limited supplies at present are providing support for Brazilian gum turpentine pricing. Some producers will idle capacity over the holiday break awaiting the increase in oleoresin supply for processing. Gum turpentine pricing has provided much of the margin for oleoresin processors in Brazil with margins on gum rosin sales remaining thin.
- Brazilian exports of gum turpentine were 9.4pc higher in November than October at 1,814t with India, France and Japan seeing most of the exports along with some volume to Mexico and China.
- Average total orange juice sales have decreased 11.4pc year-over-year according to the 29 November data released by the Florida department of Citrus in the US, which could limit the availability of d-limonene derived from those sources.

Outlook

- Supply of domestic gum turpentine in China has increased during the current tapping season, but with production clearly below expectations and providing price support despite what is tepid market demand.
- With current domestic gum turpentine pricing, China will continue to import volumes from exporters at prices much below those of the domestic gum turpentine market. Indonesia has provided most of the import volumes for China YTD. Brazil was the leading supplier of gum turpentine volumes to China during 2024,
- India continues as the largest export market for Brazilian gum turpentine, but with growing volumes destined for the Mexican market. Brazilian gum turpentine exports to the US have dropped significantly versus a strong 2024 and if the current import tariff regime remains in place could drop further during early 2026.

Demand

- Stronger feedstock pricing and lower product inventories are providing support for Chinese gum turpentine pricing again this month, with prices firming as a result.
- *Pinus massoniana* gum turpentine prices in China averaged $3,741/t fob in November, down $300/t from October. December fob prices are currently averaging $4,000/t, noticeably higher from this time last month.
- YTD through November, Chinese gum turpentine imports were 7,142t, up 98pc from the same period of 2024. Average pricing for November imports of 576t was $3,130/t, well below current domestic pricing levels and flat to October import pricing levels.
- Brazilian gum turpentine export demand has been steady with more limited supply and with most export volume destined for the Indian, Chinese and Mexican markets. Pricing in Brazil is steady to stronger with steady demand into aroma chemicals, camphor and house cleaning products. Buyers continue to look for cheaper alternatives to gum turpentine including competing crude sulphate turpentine where it is available, but this alternate supply has been tighter and prices firmer given the recent pulp mill shutdowns in the US.
- India remains the largest export destination for Brazilian gum turpentine and received 50pc of total Brazilian exports in 2024 and 46pc of the exports YTD through November. Brazilian gum turpentine exports to Mexico jumped by 58pc for 2024 and this trend is continuing for 2025 to a slower extent with exports up 17pc YTD through November versus 2024. Exports of Brazilian gum turpentine to the US are down by 52pc versus 2024. Brazilian gum turpentine exports to the US had increased for 2024 as compared to 2023, up by 54pc at 3,713t. The current import tariffs at 50pc are resulting in much reduced exports on this trade lane.
- *Argus* assessed Brazilian *pinus elliotti* gum turpentine pricing on 15 December at $3,088/t fob, up very slightly from mid-November.



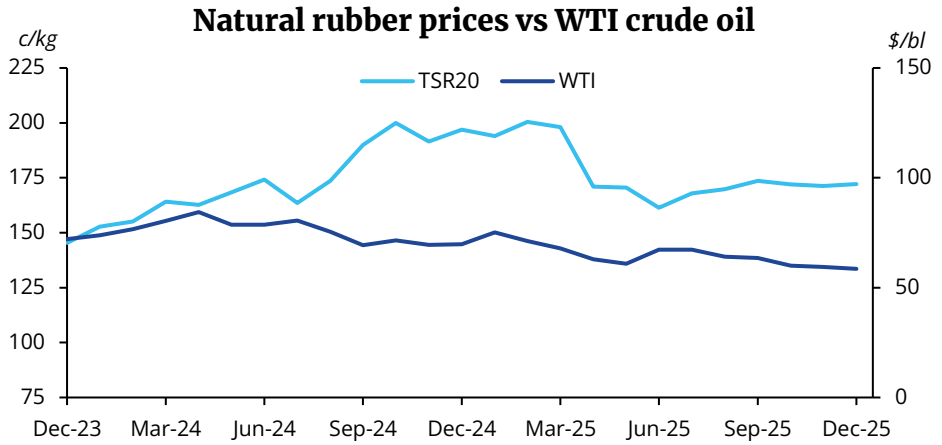
1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Polymers

Natural rubber (NR)

Supply

- TSR20 natural rubber (NR) futures on the SGX settled at $1,753/t on 18 December, a slight increase from prices earlier in the month which were as low as $1,719/t on 1 December. Prices have average $1,729 MTD, up from $1,712 in November.
- Recent oscillations in Asia's rubber futures prices have been attributed to concerns over supply disruptions from Thailand from escalation of the conflict between the world's largest producer and Cambodia.
- The top five exporting countries of Thailand, Ivory Coast, Indonesia, Viet Nam and Malaysia have accounted for 89pc of all NR exports YTD through September. Total NR exports from all nations total 6.410mn t YTD, about 3.9pc below last year's levels. These same five countries accounted for 86pc of global natural rubber exports in 2024.
- Global natural rubber prices were under pressure in October, according to the 28 November release by the Association of Natural Rubber Producing Countries (ANRPC). Natural rubber production was improved and exports higher on the back of higher prices earlier in the year, while demand remained subdued.
- Recent updates from ANRPC member nations indicate that global natural rubber (NR) production is projected to rise modestly by 1.3pc in 2025 compared to 2024, with the forecast flat from the previous month.



Demand

- Demand for natural rubber is expected to grow by 0.8pc in 2025 according to the November ANRPC release, no change from the prior month. This anticipated growth occurs amid increasing worries about a possible global economic slowdown, driven by the complexities of US tariff policies and a forecasted decline in demand growth. The ANPRC indicated market sentiment is mixed with some signs of trade improvement in select tire markets.
- The November US Tire Manufacturers Association (USTMA) forecast is projecting a very minimal increase in tire shipments in the US during 2025 relative to 2024 with shipments at 337.4mn units, which would be a new record. The recent forecast was prepared without August or September US government data, so the USTMA asserts a higher-than-normal estimate error is likely. See the *Industry News* section for further detail.
- Sales of replacement tires in the EU were broadly flat on the year in the third quarter, according to industry association Tyres Europe (formerly ETRMA). Its members' replacement tire sales volumes were 63.9mn in January-September, compared with 64.3 in the same period a year earlier, a decrease of around 1pc. Sales volumes between January to September were 186.4mn units, down from 187.2mn a year earlier, a decrease of around 0.4pc.
- In a refreshing bit of good news for the European tire market, Kumho announced that it will construct it's first tire plant in Europe, located in Opole, Poland. The plant is slated for 2028 start-up and will be able to produce 6mn tires/yr. See the *Industry News* section for further details.

Polymers

Polyisoprene (IR)

Supply

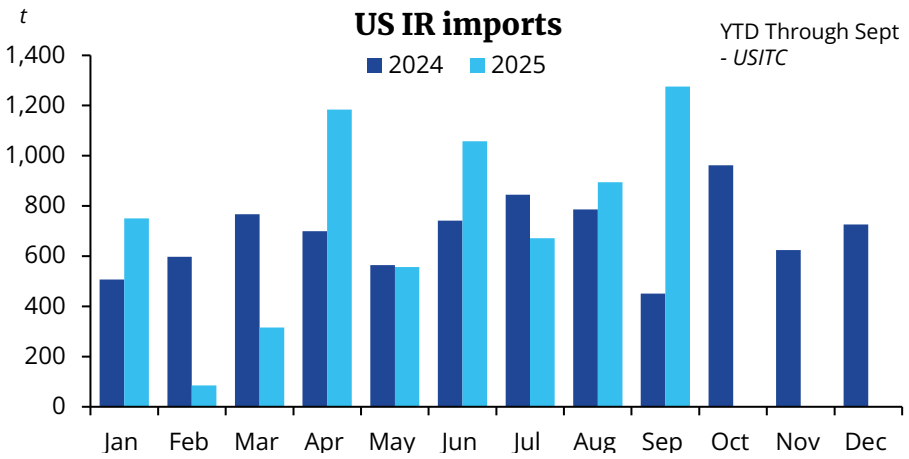
- Chinese IR production has been steady from November with one producer returning to service last month after turnaround.
- US exports of IR totalled 2,094t for September (the latest data available) and were 1.6pc lower relative to the same period in 2024, with export volumes to Canada and Brazil the strongest. For 2025 YTD through September, US exports of IR are 19,653t, down 4.6pc from 2024. Most of this export volume will be used in tire production with smaller volumes to medical applications.
- US import volumes of IR were 1,275t during September and 6,791t YTD for 2025, with imports remaining very weak overall with reduced Russian IR exports to the US. Russian has overtaken Japan as the largest supplier of IR to the US (44pc of the total), with this volume more commodity type grades of IR. Average CIF pricing for US IR imports from Russia was just $1,530/t in September.
- IR export volumes from Singapore continue to grow as the new Cariflex plant ramps up operation, with 4,185t of exports YTD through November per GTT data, up 645pc from the same period of 2024, and will grow further entering 2026. November IR exports dropped to 213t after strong October exports. DL Chemical of Korea, the owner of Cariflex, has indicated that the business is for sale as we first highlighted last month.
- Japanese production of IR should be normalized with all producers online. Japan remains a larger net exporter of IR, with much of the volume remaining within Asia-Pacific. Weaker domestic ethylene production and cracker rationalization have the possibility of negatively impacting Japanese IR production in the future.
- Russian IR exports were 54,787t YTD through March, the latest Russian export data available, up 85pc from 2024. The United Arab Emirates and Hong Kong were amongst the largest recipients of Russian exports of IR in early 2025. We could see some natural rubber imports for domestic tire production in Russia replaced with isoprene rubber which will help sustain higher IR production at domestic producers. This would reduce Russian reliance on NR imports for tire production and potentially reduce IR exports.
- Isoprene rubber exports from Brazil dropped to 651t in November. IR export volumes are tracking 18pc below 2024 volumes YTD at 9,490t, with some of this decrease YTD likely attributable to the start-up of the noted IR latex capacity in Singapore. We may yet see additional volumes exported as Brazilian isoprene production could preferentially finds its way into Brazilian isoprene rubber production to avoid the current US tariffs.

Demand

- Japanese exports of IR, typically used in medical and other higher end applications, are tracking 12pc lower YTD through October versus 2024 at 33,593t. Japan exported 3,233t of IR in October, down 15pc from the same period in 2024 with at least some of this likely attributable to reduced operating rates at domestic crackers generating less feedstock.
- Chinese demand for IR was stronger early in 2025 with stronger demand into tires. Since then, NR prices have moderated, with IR prices and overall demand trending lower as a result. Domestic IR pricing is flat from last month and was most recently seen at 14,000 RmB/t ($1,988/t). Demand for the higher grades of tires utilizing IR in China is being impacted more than lower grade economy tires by the current reduced operating rates.
- IR demand appeared to be flat to slightly stronger in the US in 2025 versus 2024, with noticeable imports of isoprene feedstock in support of IR production going to a larger IR domestic producer seen during 2025 YTD supplementing their own isoprene production.
- Russian origin landed IR exports (based on GTT mirror data from all receiving countries) have totalled 175,335t YTD through October, up 16pc from 2024. European imports of Russian IR have been closer to zero as expected since sanctions were full implemented 1 July of last year. Much of the Russian IR export volume (70pc) is finding its way to China and to a lesser extent Turkey (12pc). Smaller volumes are flowing to Brazil, India, Thailand and Mexico. The EU is importing volumes of IR from Japan, the US and China, but YTD these represent just 33pc of 2024 volumes for the same period.
- China has imported 130,492t of Russian IR through November, up 63pc from the same period of 2024. This represents 95pc of all Chinese IR imports YTD. November imports of Russian IR to China were 8,531t, down 29pc from the same period of 2024, and 41pc below the previous month. Average pricing for Chinese IR imports from Russia was just $1,400/t (cif basis) for November, much below noted domestic pricing levels.
- Overall IR import volumes for China are up 58pc YoY through November as China continues to increasingly rely on imported IR to meet domestic demand while at the same time exporting some IR volumes to southeast Asia and India.
- China and the US see little trade of IR between the two countries with the current round of the trade/tariff wars between the two countries expected to have little impact on trade flows.

Outlook

- Russian IR export volumes continue to be offered at very aggressive prices primarily to China. China continues to export smaller volumes of IR to India and other southeast Asia-Pacific countries while their imports of IR from Russia have grown at a much faster rate this year.
- We may in the future see some natural rubber imports to Russia replaced with additional domestic isoprene rubber production, which would allow for higher operating rates than at present for Russian IR producers and help make up for the lost European demand. Weaker NR pricing since earlier in the year will provide some economic headwinds to these plans.
- Overall demand for IR has dropped with European sanctions on Russian product. The US will continue to be a smaller net exporter of IR, primarily from Goodyear. Only more minimal volumes of IR find their way to Europe from the US but export volumes to Romania have been growing.
- Global IR latex production continues to increase with the recent start-up of the Cariflex Singapore unit serving the healthcare and medical sectors. Brazilian exports of IR latex have dropped so far this year with the additional IR latex capacity online in other regions but should grow in the future as organic demand grows for IR latex and possibly in the shorter term as more Brazilian isoprene production is channelled to Brazilian isoprene rubber production to avoid the current 50pc US tariffs on isoprene imports.



Polymers

SIS

Supply

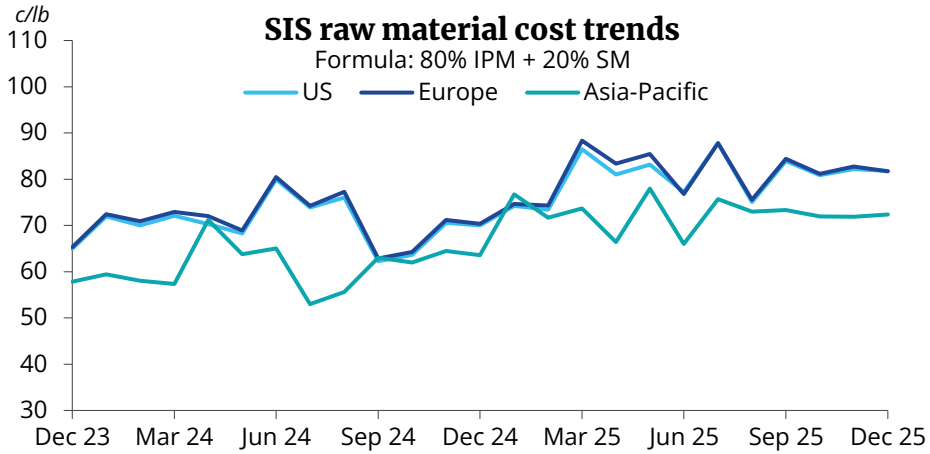
- Overall rates for SIS producers in China remain reduced. Baling continues to run at reduced rates. Jinhai, TSRC, Sunion, Jusheng, Luhua (Zhangzhou) and Luhua (Zibo) are all operating but at reduced overall rates.
- New capacity for SIS and SEPS in China in 2025 and early 2026 will further reduce overall operating rates given the current demand situation. Jinhai commenced operations on the fourth SBC line (and third SIS line) at Ningbo prior to October's turnaround. Ecisco has started up their new SIS/SEPS line at Jieyang City. Sinopec Baling has started trials on their new SIS/SEPS capacity in Shanghai.
- Zeon in Japan is online with the extended turnaround in the summer complete for this year.
- Operating rates at US domestic SIS producers remain on the tepid side overall approaching year end with limited export opportunities and challenging cost economics with feedstock isoprene pricing stronger in 2025 and into 2026. SIS flows from China to the US are more minimal with tariffs much higher on Chinese imports than for the export competition but are likely to increase over the course of time with reduced SIS production in the US.
- Production of SIS in Europe remains minimal to close to zero with reduced volumes of feedstock isoprene having been exported to the region to facilitate production during 2024, and only 1,651t of isoprene exports to Italy noted thus far this year, with all the volume originating in China.
- SM feedstock spot pricing is mixed in the west and slightly lower in Asia-Pacific during December relative to November. US pricing was slightly lower at $893/t fob USGC as of 19 December. European spot pricing was slightly higher at $937/t fob ARA as of 19 December. Asia-Pacific spot pricing was lower at $813/t cfr east China as of 19 December.
- SIS exports from Taiwan and Japan to Europe and the US are likely to continue under the current tariff regime along with growing Chinese exports to Europe and eventually the US. Margins on SIS exports to the west remain weak, with freight costs still above historical norms but trending lower to the US.
- US retaliatory tariffs are 15pc for Japan and Korea and 20pc for Taiwan under announced trade deals. The retaliatory rate for China is currently 10pc on top of existing section 301 and base duties and the fentanyl related tariff of 10pc.

Demand

- SIS global demand remains weaker at the end of 2025 and looks likely to remain much the same way entering 2026. SIS demand into the tapes and labels markets is well below the recent peaks of 2021 and early 2022. The market in all regions is likely to take three to four years at minimum to return to the demand levels seen during that period.
- Domestic ex-plant spot pricing for SIS in China is flat from last month with isoprene costs lower with market supply constrained with lower operating rates to balance demand and was seen most recently at 15,700 RmB/t ($2,230/t +/-) for ex-plant east China. Domestic demand remains tepid, but larger suppliers are providing some price support to the market through management of production rates.
- Spot container freight rates to the US were seen last week at $3,150/FEU for main port Asia to the USEC, with prices to the USWC closer to $1,964/FEU according to Freightos data. Rates below these numbers remain possible where contract or regular movements are involved.
- Spot main port Asia to northwest Europe container rates remain stickier and were seen near $2,449/FEU. Most but not all traffic continues to reroute around South Africa instead of transiting the Suez with its accompanying risks.
- European SIS demand will continue to be serviced primarily by Chinese, Taiwan and other Asia-Pacific producers who will be exposed to these container ship freight rates as part of their cost structure.

Outlook

- Global operating rates for SIS remain reduced awaiting demand improvement from the tape and label sector. Chinese domestic demand for SIS remains weak. Margins will remain squeezed for producers for the foreseeable future given the global surplus of capacity in a weaker demand environment, More elevated isoprene feedstock costs should carry into early 2026 before more length on IPM balances should begin to weigh on spot pricing, although contractual formula pricing for 2026 will look very similar to 2025.
- New Chinese capacity for SIS/SEPS from Jinhai, Ecisco and Baling/Shanghai Petrochemical JV has started up in 2025, providing further surplus capacity to the market.
- Economics for US SIS producers shipping for sale outside of the US will continue to be challenging with competition from Chinese and other Asia-Pacific producers. Sales in the US market will continue to be protected by US tariffs on Chinese SIS imports. European SIS production is expected to be very minimal at best with Europe relying almost exclusively on imports to meet demand, dominated by supply emanating from Asia-Pacific. Taiwan and Japan will continue to export to Europe with some volumes to the US.



Polymers

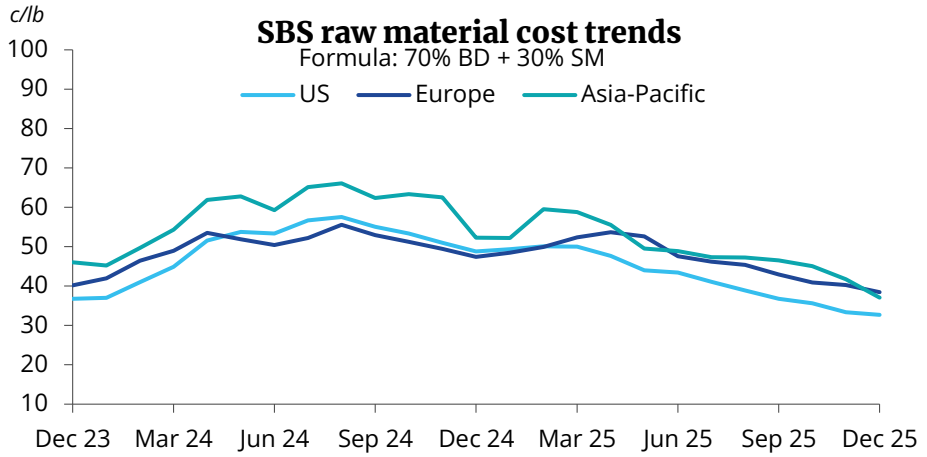
SBS

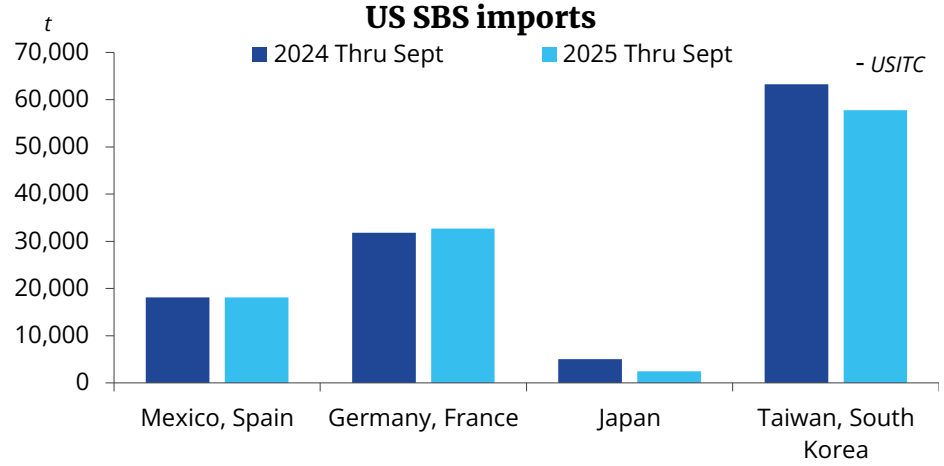
Supply

- SBS feedstock costs in Asia-Pacific are higher since end November with spot BD pricing. Feedstock BD pricing movements are lower in the west with December BD contract pricing in the US and Europe both lower from November but with styrene pricing slightly higher in Europe and slightly lower in the US during mid-December versus the end of November.
- In China, overall SBS operating rates have been steadier but reduced with integrated producers running at the highest rates. Most major SBS producers have at least some idled capacity.
- SBS supply capacity has increased in China with the start-up of new SBS capacity from Petrochina Guangxi and the Sinopec Shanghai/Baling JV during the fourth quarter.
- Domestic operating rates in much of the west will retreat at year end with the winter weather and seasonal destocking at customers.
- Europe is becoming increasingly dependent on imports from outside the EU to balance their SBS demand as the region is now in a net import position. Korea (31pc), Taiwan (27pc), and China (24pc) are the largest SBS exporters to the EU YTD in 2025, which imported 116,774t of SBS during 2024. Imports to the EU are 2.4pc higher YTD through October versus 2024 at 104,636t. Volumes from Korea and Taiwan have increased at the expense of Russian import volumes.
- Kraton announced in October that they will halt SEBS production in Berre, France to streamline operations in the midst of a global oversupply of HSBC production capability. With the current global oversupply for both USBC's and HSBC's, we would expect some further rationalization of capacity in both the west and Asia-Pacific.
- Domestic SBS producers in the US continue to see significant import competition from Asia-Pacific, Europe and Mexico. Domestic producers of SBS in the US do however benefit from a more favourable feedstock cost position, unlike their SIS counterparts. Minimal volumes of SBS currently flow to the US from China and represented less than 1,000t of imports during all of 2024.
- Russian SBS exports for 2024 totalled 79,602t, up 35pc from the same period of 2023. Russia substantially increased SBS exports to China, despite the surplus production capacity available in that country, with Turkey also receiving much increased volumes. This trend continued in early 2025, with China and Turkey collectively receiving 91pc of Russian SBS exports.
- Mexico has recently placed anti-dumping duties on imports of Chinese SBS which have been priced very aggressively into the market.

Demand

- SBS consumption in China for modified asphalt is weaker during December with colder temperatures in the north, with demand in other sectors including footwear and residential construction remaining weaker and with inventories at elevated levels . Recent domestic spot SBS pricing is slightly higher from the end of last month with feedstock costs and seen recently at 10,400 RmB/t +/- ($1,477/t +/-) ex-plant for south and east China. Pricing may move higher in the near term with stronger domestic BD pricing last week.
- September US SBS imports (the latest data available) were 43pc higher than August at 12,276t and up 13pc YoY as we exit the peak demand period. Imports from Taiwan, Germany and Mexico are higher YTD while those from South Korea, France, Japan, Spain, and China are all lower this year. South Korea has accounted for 35pc and Germany 20pc of all US imports through September. US imports of SBS from Russia remain very minimal. The average value of SBS imports to the US in August was $2,370/t on a CIF basis, slightly higher from August.
- European SBS demand remains lower with slower economic growth and production. European SBS exports to outside the EU are 12pc higher YTD through October versus 2024 at 58,421t, but with imports to the EU noticeably higher than exports thus far in 2025, continuing last year's new annual trend. The US has accounted for about 47pc of the European SBS exports to outside the EU in 2025.
- EU imports of SBS from Russia have dropped to near zero with the full implementation of sanctions on synthetic rubber imports from Russia effective 1 July of 2024, with Korea, Taiwan, and China as noted supplying most of the volumes in place of Russia, with volumes from Mexico and the US also noted.





Polymers

SBR

Supply

- Chinese domestic synthetic rubber prices were generally higher week-on-week last week amid gains made in the futures market early in the week.
- For SBR 1502, domestic prices dipped slightly to 11,000-11,100 yuan/t, down by Yn50/t. SBR 1712 prices in the Chinese domestic market rose to Yn9,900-11,000/t, up by Yn550/t compared with the previous week. PBR 1500 prices were at Yn10,600-10,800/t, up by Yn150/t.
- Meanwhile, SBR 1502 and SBR 1712 prices were assessed at $1,450-1,500/t and $1,350-1,400/t cfr China respectively this week. For PBR 1500, prices were assessed at $1,450-1,500/t cfr China.

Demand

- Replacement of natural rubber with synthetic rubber decreased with declining natural rubber pricing since earlier in the year, although geopolitical events in southeast Asia have the potential to provide some ongoing volatility to NR pricing.
- US emulsion styrene butadiene rubber (eSBR) 1502 and 1712 mid-December pricing is lower from this time last month at $1,642/t and $1,640/t, down $30/t in both cases. The December prevailing US BD contract price is lower versus November at 29.25¢/lb, down 2¢/lb.
- European eSBR 1502 and 1712 prices decreased to $1,787/t and $1,705/t respectively for mid-December, a decrease of $9/t in both cases from last month. The December European monthly contract price for butadiene is 40€/t lower from November at €720/t.
- Tire company operating rates in the west remain mixed amongst the top tier producers with weakening demand for synthetic rubber into tires in China. This also remains true for higher grades of tires in China consuming much of the synthetic rubber.
- Continental, who saw weaker tire volumes in the third quarter, is considering selling their business interests in France (see the *Industry News* section for further detail).

Polymers

Unsaturated polyester resins (UPR)

Supply

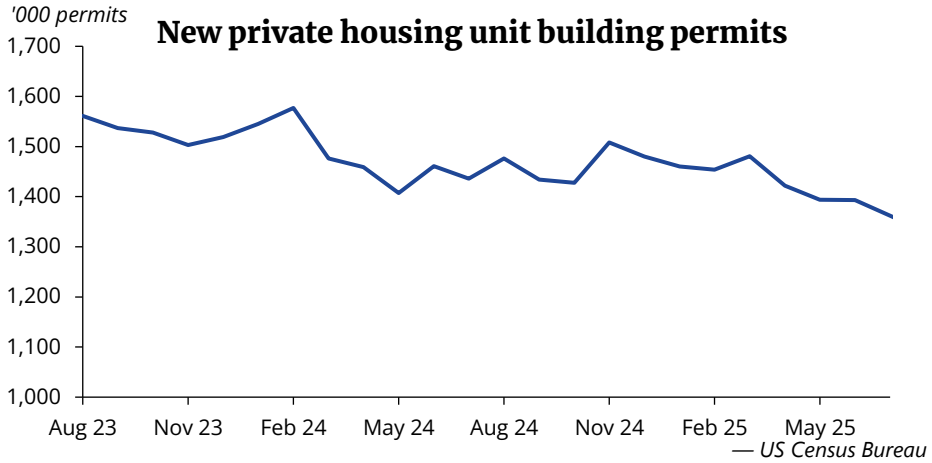
- UPR production rates in China remain reduced and in the overall range of 35pc and may fall further as we progress through the typically slower winter season. Rates for western UPR producers remain much reduced approaching year end with further destocking of supply possible given a weaker economic outlook.
- Domestic UPR spot pricing in China is flat from November and was most recently seen in the 6,800 - 7,100 RmB/t range ($966/t - $1,008/t) with prices on the lower end of the range in east China and the higher end in southern China. The lower prices are squeezing margins for UPR producers.
- Raw material pricing in China is seeing smaller price differences this month between phthalic anhydride and maleic anhydride, favouring production of phthalic grades. DCPD pricing in China is weaker in December with an ongoing surplus of supply in the north. Spot SM feedstock prices were mixed in the west and lower in Asia-Pacific and were seen recently for the US at $893/t, Europe at $937/t and Asia-Pacific at $813/t cfr east China.
- DCPD feedstock supply for UPR consumption in the US continues to flow mostly from domestic producers who can also produce ultra-high purity DCPD. We expect some smaller DCPD imports to the US to continue in 2026 in support of UPR production, particularly when UPR demand increases further in the future and as demand for ultra-high purity DCPD in the US increases.

Demand

- UPR demand has been very weak during December in China. Weak construction activity in China has kept overall demand lower, especially for maleic grades, with winter weather further weakening demand in the north. Slightly better UPR demand is seen in the auto sector, which normally makes more use of phthalic based grades. Demand in the west continues to remain weak and well off the demand peaks seen in 2021 and 2022 awaiting a stronger housing market.
- The US Census Bureau and US Department of Housing and Urban Development release on 17 September (still the latest available given the recent US Federal Government shutdown) showed seasonally adjusted August new building permits for privately owned housing units were at 1.312mn. This is 3.7pcpc below the revised July rate and an 11.1pc decrease compared to August 2024. Housing starts decreased 8.5pc from July to August and were down 6.0pc from August 2024. Housing completions increased 8.4pc from July to August but dropped 8.4pc from August 2024.
- The US Federal Reserve reduced target interest rates by 25 basis points on 10 December after similar reductions in September and October. The next Fed Open Markets Committee (FOMC) meeting occurs Jan 27/28, with a strong majority of the market expecting rates to remain steady through the next FOMC meeting. Smaller reductions of 25 basis points seem more likely until target rates return to the 3-3.5pc range. The US Bureau of Labor Statistics report for November showed a 2.7pc inflation rate over the previous 12 months.
- Interest rates at the more elevated levels continue to limit demand for purchases of larger discretionary items that help drive UPR consumption including housing, autos and recreational vehicles, but US inflation remains above the target 2pc rate.

Outlook

- Figures from the December US National Association of Home Builders/Wells Fargo Housing Market Index release show home builder confidence at 39 in December, up 1 point from November and the highest since April.
- The China National Bureau of Statistics (NBS) real estate investment statistics for January to October 2025 showed China's national investment in real estate development was down 14.7pc year-on-year. The real estate development climate index, often referred to as "China's real estate climate index" was 91.90 for November, slightly lower from October.
- Tariffs on Chinese imports to the US appear likely to remain in place for an extended period going forward with final numbers on top of the current section 301 tariffs at this point an additional 20pc (sum of retaliatory plus fentanyl supply chain) given the latest US and Chinese government announcements.



Polymers

PE, PP and EVA

PE Supply

- In the US, minor supply disruptions are noted, including a potential disruption at a gulf coast LDPE plant along with a Shell ongoing turnaround with start-up anticipated closer to year end. November PE production rose to 2.3 mn t. Operating rates are estimated at 90pc.
- European PE markets are mostly stable at low price levels as the year ends. An unplanned shutdown at a large LDPE unit has provided slight upward momentum for LDPE spot pricing. Producers and converters are running at low levels and focusing on inventory management.
- Chinese plants coming back online pushed average operating rates to 83pc, increasing supply availability. Polymer inventories rose to 690 ktons. Persistent oversupply and weak demand will weigh on producer margins and limit any price recovery.
- Brazilian buyers are looking to imports from locations other than the US, due to the $200/t anti-dumping duties in place. Asia-Pacific, including China and Korea is becoming the main potential source of imported PE for the Brazilian market, with increasing volumes from Egypt also noted. Overall imports are expected to decline with converters avoiding overstocking.

PE Demand

- Demand in the US continues to be weaker with the food related segments as the key area for growth. Most buyers are limiting purchases to avoid inventory build at year-end. Some tightening of grades is reported by producers, but no grade was reported as tight. Buyers can source product as needed.
- Oversupply and weak demand fundamentals will override any short-term tightness with more global capacity and import competition on the horizon in Europe. Pressure from PE and semi-finished/finished plastic goods imports will remain high.
- Market demand in Asia-Pacific remains tepid as convertors maintain a cautious stance on building inventory. We could see a slight uptick in demand prior to the lunar new year, but oversupply and weak demand will limit any uptick in pricing.
- Demand remains subdued across Latin America, with buyers cautious and inventories generally adequate.

PP Supply

- December contracts in the US/Canada polypropylene (PP) market appear likely to settle flat, tracking the rollover in December polymer-grade propylene (PGP) contracts. Spot PP availability remains limited; with many suppliers saying they are sold out of material for the rest of the year. Market participants said some producers may be holding inventory for planned turnarounds coming up in the first quarter.
- European producers could find some support from unattractive import arbitrages as spot prices remain below import parity prices. This has encouraged sellers in the Middle East and Asia-Pacific to explore export opportunities to other regions, in search of better netbacks. This could help reduce some of the external supply pressure in the European market in the coming months. This could reinforce signs of European PP spot prices having reached a bottom, despite the bearish developments in upstream feedstock prices. Furthermore, firming freight rates from east of Suez-origins could also raise the price floor for imports into Europe. But the wide premiums on contract prices have encouraged many European buyers to reduce their contractual offtakes for next year and, where possible, switch to more spot volumes in their procurement mix to optimize costs.
- On the supply front, average operating rates at Chinese PP plants decreased to 81pc this week. Jinneng Petrochemical shut its 450,000 t/yr PP line this week for a half-month-long maintenance. Shaoxing Sanyuan shut its 200,000 t/yr PP unit this week without a clear restart date. Yulong Petrochemical shut its 300,000 t/yr PP unit this week for a short maintenance. PP raffia prices in east China inched down by 75 yuan/t this week to Yn6,150-6,350/t ex-works. PP co-polymer prices in east China went down by Yn25/t to Yn6,300-6,850/t ex-works this week.

PP Demand

- Demand in December remains slow with many US buyers already having purchased volumes to hedge against first-quarter price increases, and few expressing any interest in building more inventory. Companies are preferring to hold on to cash, rather than sink it into inventory, particularly with little expectation that prices will rise significantly in the first of the year. Bearish economic fundamentals are keeping buyers cautious.
- With expectations of weaker crude oil prices in the first quarter of next year, many buyers are now re-evaluating their earlier views of European PP contract prices having reached a bottom.. The picture points to prolonged fundamental weakness for PP, owing to weak demand and oversupply. Some producers' early ideas are of targeting widening margins in January, with hopes of finding support from seasonal restocking demand. But European contract prices are at wide premiums to spot prices and at a disconnect to global prices.
- In the Chinese import market, end-users were conscious over restocking inventories as they expected downstream operating rates to decline further during the seasonal demand lull. Over the past few months, PP prices were continuously trending down, leading to sluggish willingness among traders and end-users to buy higher-priced spot cargoes and build inventories.

EVA Supply

- Chinese EVA operating rates were at 89pc last week, up from the previous weeks 85pc. Sinopec Yanshan Petrochemical's three EVA units, with a combined capacity of 300,000 t/yr, have been under maintenance since April. Market participants anticipate that these units may not restart because of policy pressures and margin concerns. Sinopec Yangzi restarted after planned maintenance. Sinopec Quanzhou is down for maintenance with a February restart anticipated.
- US exports of EVA during September were 15,015t, up 15pc from the same month in 2024. For 2025 YTD through September exports are down 6.6pc from 2024 at 136,495t. Mexico (23pc) and China (16pc)remain the two largest recipients of US EVA exports during 2025, with reduced exports to China accounting for most of the drop in US export volumes YTD. US EVA export volumes will need to increasingly seek destinations outside of China where production will grow rapidly over the next several years.
- Canadian exports of EVA for September (the latest data available) were 6,387t, down 1.4pc from the same period in 2024. EVA exports from Canada YTD through September are 63,916t, down 15pc from the same period of 2024. The US (65pc) and China (29pc) were the recipients of nearly all this volume, with the drop in Canadian exports to the US accounting for the decreased volumes YTD while exports to China have increased.
- The EU has exported 94,531 t of EVA outside the region YTD through October, down 33pc from the same period of 2024 with weaker EU production. Thus far in 2025 the EU is a small net importer of EVA as production lags, with exports to Turkey, China and India remaining the strongest.

EVA Demand

- The Chinese ethylene vinyl acetate (EVA) market extended losses last week amid increasing domestic supply.
- PV-grade EVA prices were 200Yn/t lower last week from the previous week at Yn8,600-8,800/t ex-works in east China, with prices 650 Yn/t lower from end of November. Foaming-grade EVA grade prices were 550Yn/t lower from the previous week at Yn8,300-9,300/t ex-works in east China, down Yn 900/t from the end of November.
- Tradeable import prices for EVA PV-grade were assessed at $1,000-1,025/t cfr China, down by $20/t from the previous week. Workable import price levels for EVA foaming-grade were assessed at $965-1,085/t cfr China, down by $60/t from the previous week.
- EVA imports to China for 2025 YTD through November were 643,911t, down by 23pc from the same period in 2024. Imports during November were 46,692t, down 20pc from October and down 14pc from the same period in 2024. The reduced quantity of imports continue to reflect increasing Chinese EVA production capacity.

Polymers

PE, PP and EVA

PE Outlook

- Ethane prices in the US will move higher with natural gas as LNG exports increase this year and next. Ethane production has increased despite limited growth in shale oil output. North American ethylene producers are expected to maintain their cash cost advantage over other regions, but that advantage will narrow if lower crude and naphtha prices emerge with Opec+ unwinding production cuts.
- Operationally, rates remain low in Europe, with demand for PE derivatives weak. It is looking increasingly likely the EU will ratify the EU-US trade deal in early 2026, opening the door for increased monomer and polymer exports from the US to Europe. We could see volatility in pricing and trade flows if tariffs shift or global economic conditions worsen.
- China is expected to add 4.5 mn t of new PE capacity in 2026. When combined with sizable HDPE plant additions in the US, global competition will intensify and put further pressure on regional producers' margins, especially in Asia-Pacific where oversupply is already a concern.
- PE pricing in Latin America faces uncertainty with oversupply, weak demand, volatile trade policies, high freight costs, and economic instability in key countries including Brazil. This is creating a challenging environment with buyers cautious and pressure on local producers from environmental initiatives and potential trade barriers for exports.

PP Outlook

- Near-term demand improvement will require prices to fall enough to make US PP more competitive in the export market. For now, prices are still too high to make exports attractive globally. Volumes are continuing to move to Mexico, but demand is weak as the market is well-supplied.
- Cracker and refinery closures in Europe will reduce propylene supply but this will be offset by derivative closures. The expected start-up of a PDH unit in Belgium during the second half of 2026 will test the market's logistical capacity and balance once again. Europe will also continue to struggle against other regions for derivative exports, owing to a combination of higher costs and overinvestment in new capacity — mainly in China — over the next 2-3 years, which will reduce propylene derivative margins globally.
- The Opec+ production plan is expected to eventually lower crude and naphtha prices which will put pressure to lower PP prices in NE Asia. The long supply and tepid demand combined with upstream feedstock impacts add more stress toward the market.
- A wave of investment in cracker projects and PDH capacity is likely to weaken margins for Asia-Pacific propylene plants, which will have to reduce their operating rates for an extended period, probably until 2028. But recent rationalization policies announced by China, South Korea and Japan are expected to ease the pressure from growing propylene capacity and bring forward the turning point in the industry's recovery.

EVA Outlook

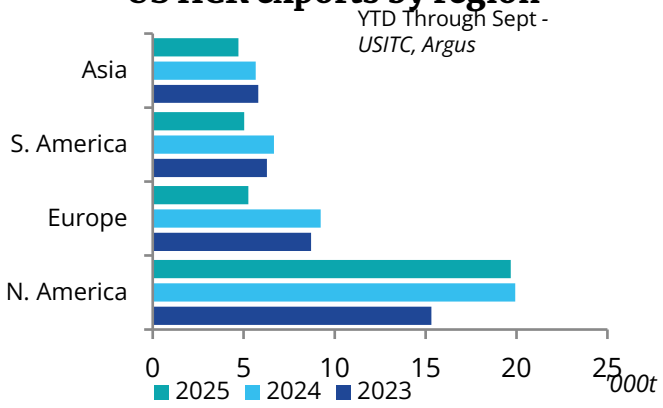
- Export volumes from China are growing including for the lower VA content grades. Exports are up 23pc YTD through Novemberr versus the same period of 2024. Exports remain widely scattered across the globe to many non-OECD countries.
- EVA imports to China will continue in significant volumes for the next several years until the rapid growth in higher VA content production catches up with domestic demand for the PV sector. Chinese domestic capacity for EVA production will more than double from 2021 to 2025.
- Levima Advanced Materials new 200,000 t/yr EVA unit has started operations and Zhejiang Petrochemical's 300,000 t/yr EVA unit is close to commissioning, which will bring China's total EVA capacity to 3.8 mn t/yr. 2026 will see significant new capacity additions from a number of producers.
- Competition in export markets will intensify for western and other Asia-Pacific producers as China moves to a surplus position for EVA production over the next several years. Barring a change in the tariff regime, Chinese EVA volumes to/from the US will remain more minimal. Margins for producers in all regions who export are likely to be pressured lower as Chinese EVA exports grow, following the lead of many other petrochemicals which have seen a surge in Chinese production and export volumes.

1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

C5 and HCR Trade Data

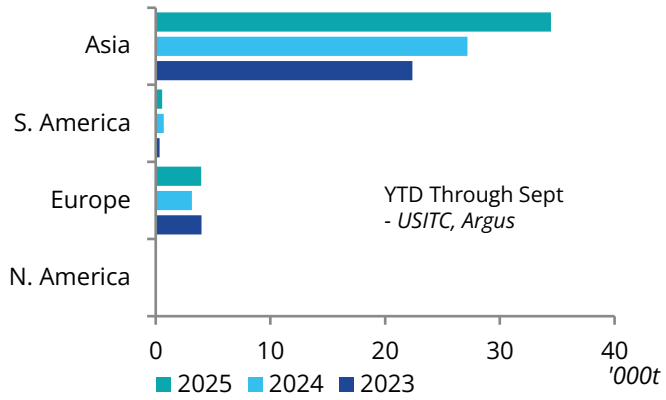
US imports and exports

US HCR exports by region



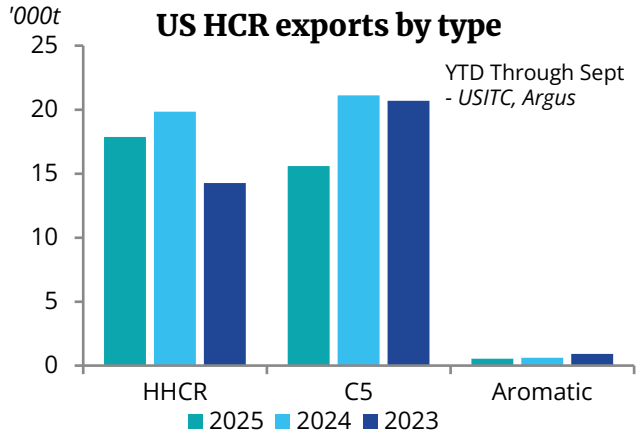
- US HCR exports decreased to 2,730t in September from 3,836t in August.
- 55pc of all US exports YTD remained within North America. Europe received 15pc, Asia-Pacific 14pc and South America 15pc of exports.

US HCR imports by region



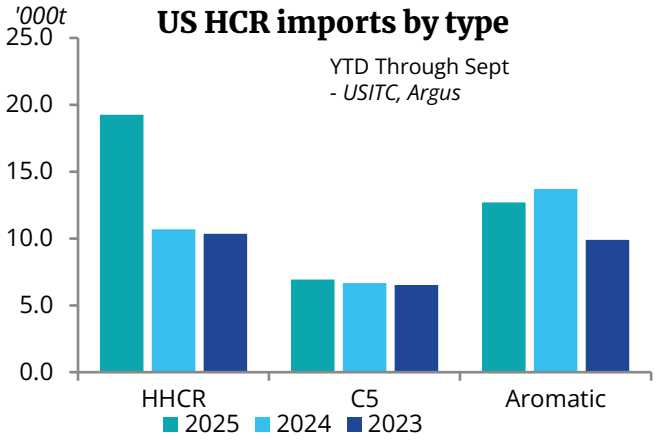
- 88pc of all HCR imports YTD have originated from Asia-Pacific.
- Europe has exported 35pc more volume of HCR to the US YTD, 3,957t YTD versus 3,160t in 2024.
- Asia-Pacific originated imports accounted for 5,101t of all US imports for September.

US HCR exports by type



- Total YTD HCR exports (34,711t) are down 16pc versus 2024.
- C5 exports decreased by 287t and HHCR exports decreased by 807t.
- 48pc of September exports were HHCR tackifiers, with another 52pc of the exports being C5 tackifiers.

US HCR imports by type

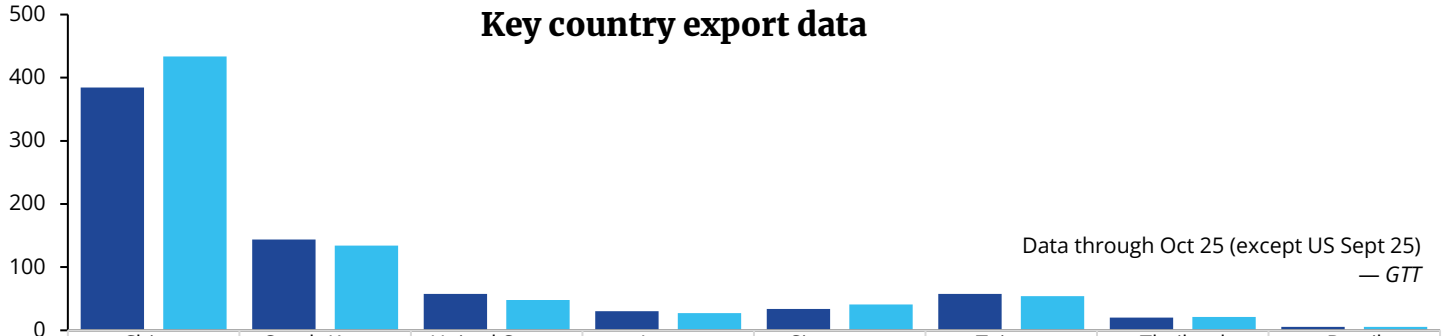


- In September, total HCR imports to the US were 5,617t, which was a large increase from 4,234t in August.
- HHCR tackifiers have seen increased imports in 2025 with an 80pc increase YTD in imports compared to 2024, much of this volume from South Korea.

C5 and HCR Trade Data

Key country and regional trade data

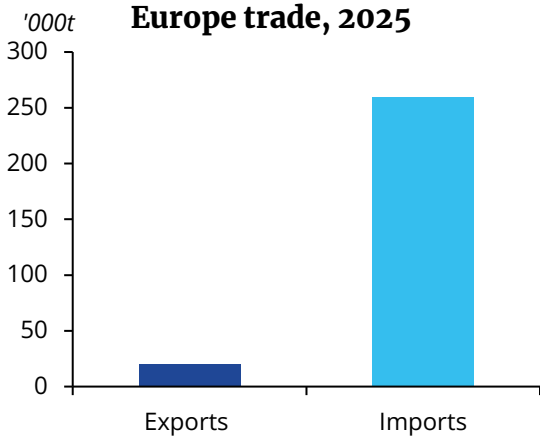
Key country export data



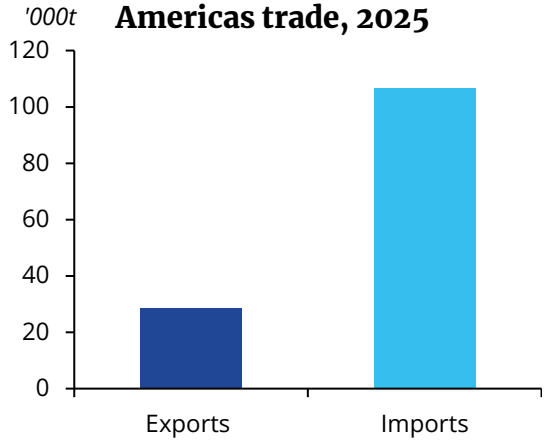
	China	South Korea	United States	Japan	Singapore	Taiwan	Thailand	Brazil
YTD 2024	384.5	143.6	57.7	30.5	33.7	57.5	20.0	5.3
YTD 2025	433.8	134.1	48.2	27.5	41.1	54.3	21.3	5.4

- Chinese HCR export volumes are up by 13pc YTD through October year on year with China accounting for 57pc of all key country exports thus far in 2025.
- South Korea have exported lower volumes than 2024, exporting 9,400t (7pc) less YTD in 2025 than 2024.
- The US, Taiwan and Japan have exported slightly less volume YTD than in 2024.
- Singapore, Thailand and Brazil have exported slightly higher volumes YTD than in 2024.

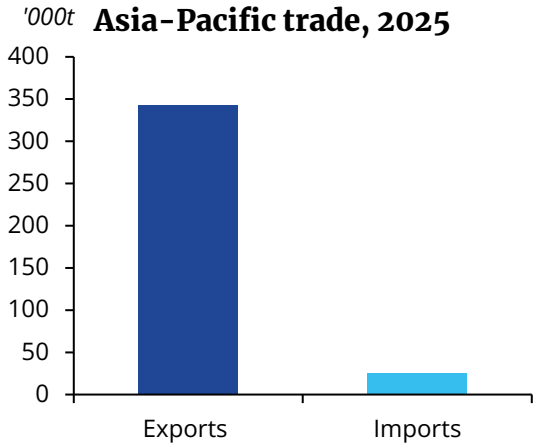
Europe trade, 2025



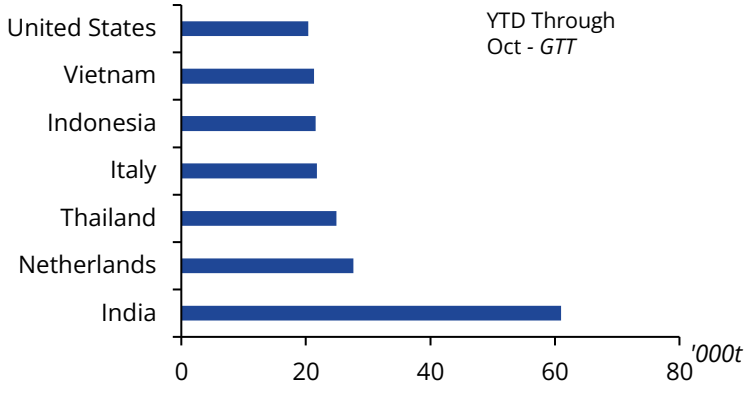
Americas trade, 2025



Asia-Pacific trade, 2025



China top HCR export destinations

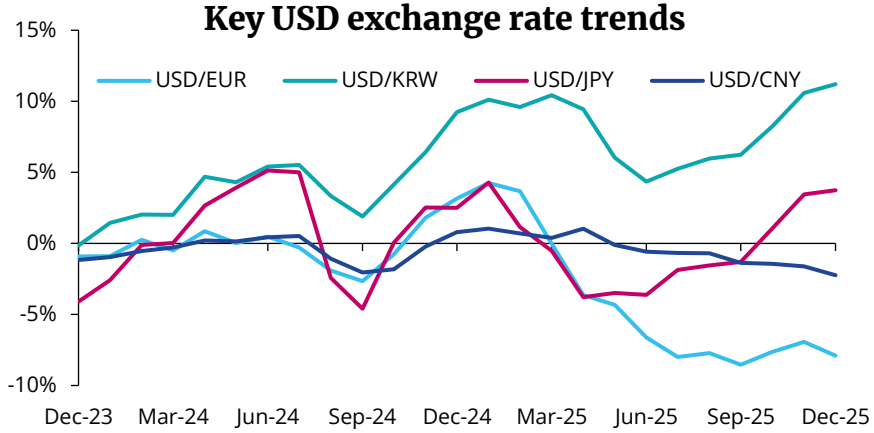


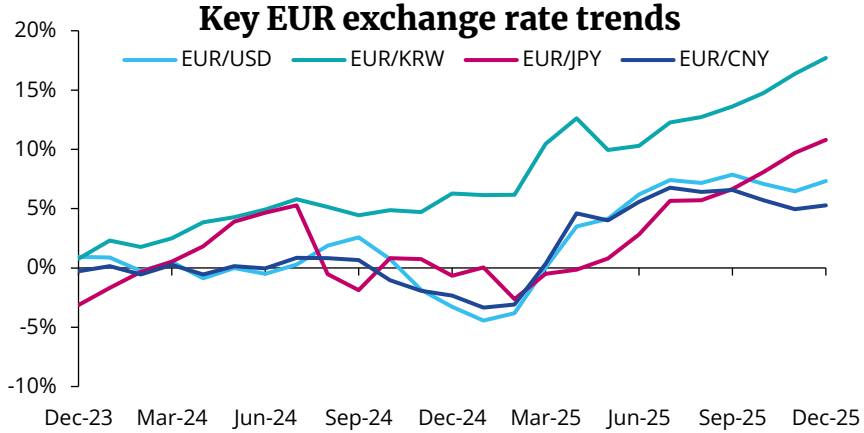
1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Economic and Energy Insight

Macroeconomics

- US Federal Reserve policymakers cut their target interest rate on 10 December by a quarter point, the third reduction of the year, as they focus on shoring up a weakening labor market that they see as a greater threat to the economy than stubbornly elevated inflation. The Fed's Federal Open Market Committee (FOMC) last Wednesday cut the federal funds rate by 0.25pc to 3.5-3.75pc, following quarter point cuts in September and October. The Fed is largely operating in an information desert because the 43-day partial federal government shutdown halted the flow of most government economic data, including the vital labor market and inflation reports that are the mainstay of the Fed's dual mandate to maintain maximum employment and stable prices.
- Mexico's industrial production rose by 0.7pc in October from the prior month, with strength in construction after four consecutive monthly declines. The October increase in the industrial activity indicator (IMAI), reported on 12 December by statistics agency Inegi, followed revised contractions of 0.4pc, 1.1pc and 0.3pc in June, July and September, respectively. A faster-than-expected start to government public infrastructure works helped drive a 3.8pc monthly growth in IMAI's construction component, well above Mexican bank Banorte's 0.9pc estimate. Manufacturing output contracted by 0.3pc in October, reversing a 0.2pc increase the previous month, despite 10 of 21 categories expanding.
- The Bank of England cut its main interest rate 0.25 percentage points to 3.75pc, its sixth reduction since UK interest rates peaked at 5.25pc in 2024. The bank said consumer price inflation (CPI) has fallen since its previous meeting to 3.2pc in November — from 3.6pc in October and 3.8pc in September. Although still above its 2pc target, the bank expects CPI to ease to 3pc in the first quarter of 2026 and move "closer to 2pc" in the second quarter. The UK's economic growth remains weak. GDP rose by just 0.1pc in the third quarter, below the 0.2pc that the bank forecast in its November report. GDP declined by 0.1pc in October, and the bank said that it expects no growth this quarter.
- German manufacturing output in October increased on the month for the second consecutive month, but the economy and energy ministry (BMWE) expect no noticeable recovery in industrial activity before the end of 2025. Calendar and seasonally adjusted manufacturing in October were at 92.7, against a 100-point index in 2021, data from German statistical office Destatis show. Manufacturing in October rose by 1.5pc from September and did so for the second consecutive month this year. The ministry attributed the rise to a significant increase in capital goods production, with a rise in data processing equipment output, pharmaceutical production and mechanical engineering output driving the overall increase. Manufacturing output was in line with a year earlier, in contrast to falls in eight out of the previous nine months of the year. Gains in consumer and intermediate goods output and food production were enough to offset losses in other sectors on the year.
- China's surging exports have been partly driven by an undervalued currency, the IMF said, potentially adding to pressure on Beijing to curb its record trade surplus. "Low inflation relative to trading partners has led to real exchange rate depreciation, contributing to strong exports and supporting growth, but also exacerbating external imbalances," the IMF said in its latest update on China's economy released on 10 December. The unusually direct reference to China's currency comes as the country's trade surplus hit $1 trillion in January-November, already exceeding the previous record set in 2024. The rise in exports has intensified trade tensions with the US and EU, among others. The IMF repeated calls for China to reform its economy to reduce debt and support growth. The IMF welcomed China's efforts to prioritize consumption in its latest five-year plan but said more action is needed to overcome deflation and boost domestic demand. Still, China's economy has shown "remarkable resilience" and now contributes about 30pc to global growth, the IMF said. It raised its projections for China's GDP growth to 5pc this year and 4.5pc in 2026, up by 0.2 and 0.3 percentage points respectively from its previous forecasts in October, citing the impact of fiscal stimulus and lower-than-expected tariffs on exports.

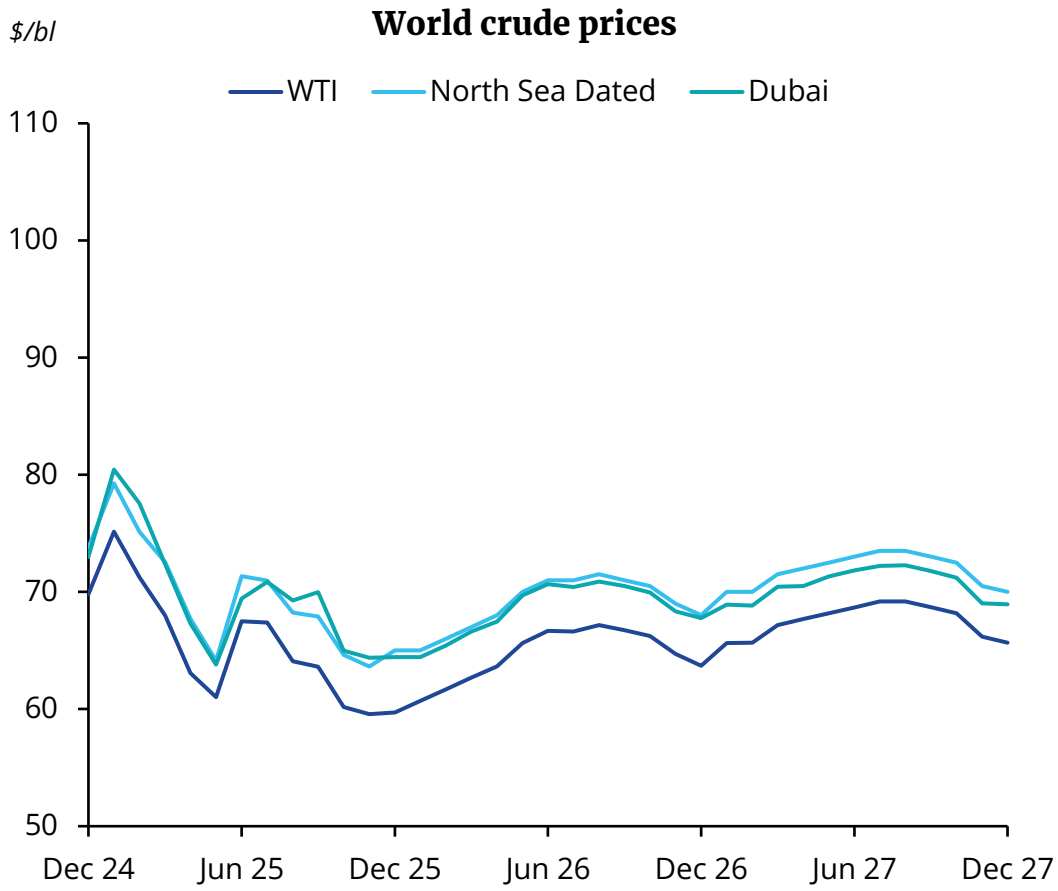




Economic and Energy Insight

Crude and LPG

- Opec+ has agreed to pause output hikes for the first quarter to account for a seasonal drop in demand. The current surplus of around 3.3mn b/d is masked by Chinese stockpiling and rising volumes of crude at sea. North Sea Dated is expected to average $65–70/bl in 2026, with December steady at around $65/bl despite November's slight dip. Sanctions on Russian crude, Ukrainian attacks on infrastructure and Venezuelan upgrader disruptions have supported the December price, moderated somewhat by higher post-maintenance refinery runs. Price correction risks may emerge for 2026 as muted demand with weak macro indicators from China and Europe coincides with crude inventories moving onshore, Brazil and Guyana supply growth and with CPC blend loading disruptions expected to be short-lived.
- Propane fundamentals remain balanced into winter. Cold spells will support heating demand and prices, despite temperatures rising slightly in the recent days. Elevated LPG prices could give greater feedstock displacement in coming months. US inventories are drawing slowly despite the seasonal trend. Exports have been struggling to keep pace with high production numbers. Freight rates should stay steady with firm charter demand. Propane AFEI is expected to hold at 90-95pc of naphtha for the remainder of winter.
- Pressure on LPG fundamentals will remain in 2026. Middle East supply will ramp up with increasing speed, with Jafurah and Abu Dhabi's Meram being the main projects to watch. Rationalizations of South Korean and Japanese petrochemical units will also limit the ability of the market to absorb excess LPG product.



Economic and Energy Insight

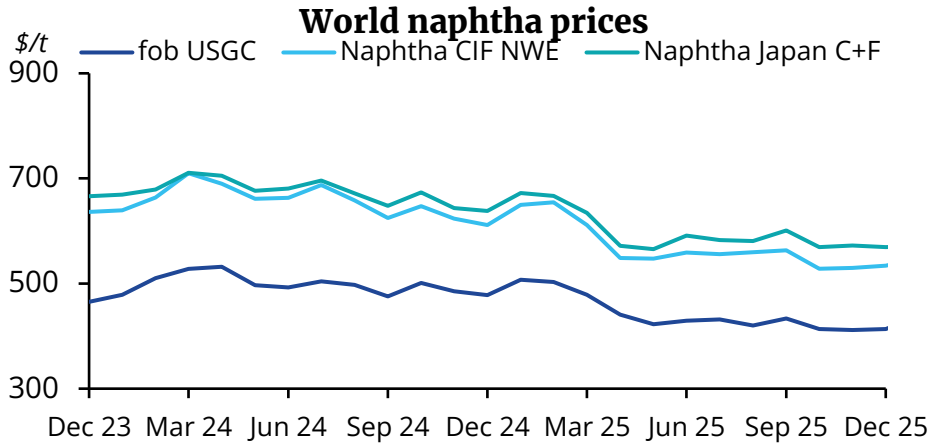
Naphtha, gasoline and natural gas

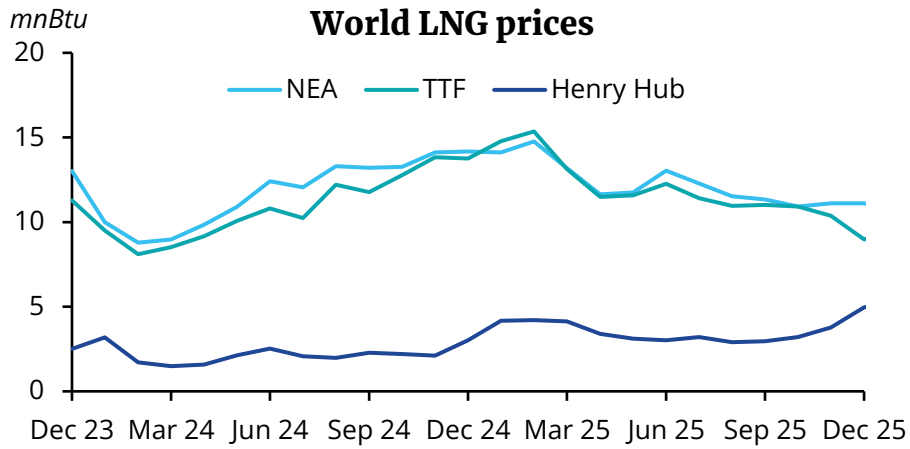
Naphtha and Gasoline

- Northwest Europe naphtha cracks strengthened in November and should stay firm into early December, supported by strong blending demand and stockbuilds at Dangote (Nigeria) ahead of CDU and RFCC maintenance, with two light naphtha cargoes (16,000t) expected to boost gasoline output. However, blending demand is expected to ease as refiners return from maintenance and seasonal gasoline demand softens. Combined with weak petrochemical demand and year-end inventory drawdowns, this will likely pressure naphtha cracks lower. In Asia, demand for non-Russian naphtha increased, attracting flows from NWE, while Russian exports fell by 32pc month-on-month, making European volumes dominant.
- Gasoline cracks remained unusually strong in November across all regions, supported by tight supply from autumn refinery maintenance and robust demand. European flows to West Africa surged ahead of Nigeria's tariff exemption ending mid-month, though cracks softened after the tariff was scrapped. Additional strength came from ARA barge delays and low Chinese exports, with December volumes expected even lower, keeping markets tight. Indonesia's firm buying added support, while upcoming RFCC maintenance at Dangote may sustain West African demand despite uncertainty over increased local sales.

Natural Gas and Ethane

- Ethane prices will move higher with natural gas prices as US LNG exports increase this year and next. Producers remain confident about ethane supply as production has increased despite limited growth in shale oil output.





1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Industry news

US Fed cuts target rate by quarter point
Read the full article here

IMF adds to pressure on China over huge trade surplus
Read the full article here

China's industrial output growth slows in November
Read the full article here

US inflation slows to 2.7pc in November
Read the full article here

Mexico approves 50pc tariffs on China, others
Read the full article here

EU targets January for Mercosur trade deal signature
Read the full article here

Eurozone manufacturing contracted again in November
Read the full article here

Mexico GDP growth outlook downgraded to end 2025: IMEF
Read the full article here

Brazil GDP growth slows to 1.8pc pace in 3Q
Read the full article here

Mexico industrial output swings to expansion in Oct
Read the full article here

EU inches forward with EU-US trade deal
Read the full article here

US adds 64,000 jobs in November, jobless rate climbs
Read the full article here

Opec+ eight boost production in November
Read the full article here

IEA forecast signals market reality: KPC chief
Read the full article here

Opec+ lays future foundations
Read the full article here

Trump unveils exploitative foreign policy goals
Read the full article here

Mexico's light vehicle exports, output fell in Nov
Read the full article here

China November EV sales continue rising on firm demand
Read the full article here

China's auto output hits new monthly high in November
Read the full article here

Brazil's Nov EV sales dip with total car sales
Read the full article here

US vehicle sales edge up in November
Read the full article here

EU agrees to recycled content for cars
Read the full article here

US tire shipments to hit record high in 2025: USTMA
Read the full article here

Kumho Tire to open Polish plant in 2028
Read the full article here

Continental mulls sale of French retail business
Read the full article here

Germany's Continental plans cost-cutting, staff layoffs
Read the full article here

Trade associations urge STB to scrutinize rail merger
Read the full article here

Korean petrochemical firms step up last-minute restructuring push
Read the full article here

China naphtha demand growth to slow in 2026
Read the full article here

ExxonMobil to shut Singapore cracker in 2026
Read the full article here

Korea's Hyundai Chem, Lotte Chem file for plant merger
Read the full article here

Ineos to invest in Grangemouth cracker, backed by UK
Read the full article here

IG4 moves closer to Braskem control
Read the full article here

Synthos sells Plock butadiene project to Orlen
Read the full article here

Japan's Mitsui, Idemitsu to decommission cracker
Read the full article here

China's Tianjin port receives first ethane cargo
Read the full article here

Ineos considering withdrawal from China petchems JV
Read the full article here

French bio-butadiene plant hits on-spec polymer grade
Read the full article here

Adnoc completes purchase of chemical firm Covestro
Read the full article here

Ineos to exit Singapore on phenol plant closure
Read the full article here

NAW seeks injunction to block Oregon EPR law
Read the full article here

Kraton Corporation announces price increase for tall oil fatty acids in the EMEA
Read the full article here

Kuraray announces price increases
Read the full article here

Global bioplastics production set to rise
Read the full article here

US tariffs hit Brazil rosin ester sales for 1Q 2026
Read the full article here

EU parliament approves deforestation law delay
Read the full article here

1. Executive Summary
2. Monomers
3. Tackifying Resins
4. Polymers
5. C5 and HCR Trade Data
6. Economic and Energy Insight
7. Industry News
8. Appendix

Argus HCR experts

Steve Williams

VP, C5 and Hydrocarbon Resins

Steve has been with Argus since 2020 and has more than 40 years of experience in the petrochemical industry. He spent 28 years with The Dow Chemical Company (now Dow Inc.), a global petrochemical company, as well as seven years with Chemium International, a Houston-based petrochemical trading firm. Mr. Williams served in numerous roles at Dow, including sourcing feedstocks for ethylene production, managing NGL joint venture interests and managing the Americas aromatics and derivatives businesses. As a part of his aromatics business responsibilities, he was exposed to many C5 monomer suppliers and developed an extensive knowledge of feedstock, olefin and downstream operations. Steve is an expert in pygas-related co-products, including C5 monomers, DCPD and related aromatic processing co-products serving as feed for hydrocarbon resin production.

Simon Sheppard

Analyst

Simon is an analyst in the London Consulting office focusing on hydrocarbon resins. He holds an MSc in Chemistry from the University of Manchester. Before joining Argus, he worked as a chemical emergency responder for the National Chemical Emergency Centre.

Argus Acronyms

- aBCP asymmetric block copolymers
- APAO amorphous poly alpha olefin
- APO amorphous poly olefin
- ARO aromatic resin oil (C9 resin feed)
- AMS alpha methyl styrene
- ASTM ASTM International, formerly American Society for Testing and Materials
- b/d barrels per day
- BD/C4 butadiene
- bl barrel (42 US gallons)
- BLS black liquor soap
- bn billion
- BOPP biaxially oriented polypropylene
- BR butadiene rubber (polybutadiene)
- Btu British thermal unit
- BTX benzene, toluene, xylene
- C2 ethylene
- C3 propylene
- C4/BD butadiene
- C5 HCR piperylene based C5 aliphatic tackifier resins
- C9 HCR aromatic resin
- CAGR compound annual growth rate
- CC5 crude C5 stream
- CGR Chinese gum rosin
- CI coumarone-indene
- COC cyclic olefinic copolymer
- COP polycyclic olefin polymer
- CPD cyclopentadiene
- CST crude sulfate turpentine
- CTL coal to liquids
- CTO coal to olefins
- CTO crude tall oil
- DACP 1:1 xylene and 4-hydroxy-4-methyl-2-pentanone
- DCPD dicyclopentadiene
- ENB termonomer ethylidene-norbornene
- EPDM ethylene propylene diene monomer
- EVA ethylene vinyl acetate
- FDA US Food and Drug Administration
- GDP gross domestic product
- GR gum rosin
- HCR hydrocarbon resin
- HDPE high-density polyethylene
- HEVA EVA with >18% vinyl acetate content
- HHCR hydrogenated hydrocarbon resin (waterwhite)
- HMA hot-melt adhesive
- HMPSA hot-melt pressure sensitive adhesive
- HSBC hydrogenated styrene block copolymer
- IED isoprene extractive distillation unit
- IIR isobutylene isoprene rubber (butyl rubber)
- IPM isoprene monomer
- IR isoprene rubber (polyisoprene)
- LDPE low-density polyethylene
- LPG liquefied petroleum gas (propane, butane)
- mn million
- Mn number average molecular weight
- mPO/mPP/mPE metallocene catalyzed polymers
- MTO methanol to olefins
- Mw molecular weight
- NDG Notre-Dame-de-Gravenchon, France
- NGL natural gas liquids (ethane, propane, butane, condensate)
- NR natural rubber
- OBC olefin block copolymer
- OCP oil cloud point
- OMS odorless mineral spirits
- PA phthalic anhydride
- pc percent
- Pd polydispersity
- PE polyethylene polymers
- PHR per hundred rubber
- PIPs C5 piperylene stream
- PMR pure monomer resins
- PP polypropylene polymers
- PSA pressure sensitive adhesive
- PSTC Pressure Sensitive Tape Council
- PV photovoltaic solar cell
- RIM reaction injection molding
- SB styrene butadiene
- SBCs styrenic block copolymers
- SBS styrene butadiene styrene block copolymer
- SBR styrene butadiene rubber
- SEBS styrene ethylene butylene styrene block copolymer
- SEPS styrene ethylene propylene styrene block copolymer
- SIS styrene isoprene styrene block copolymer
- SM styrene monomer
- SR synthetic rubber
- st short ton
- t metric ton
- t/yr tons per year
- Tg glass transition temperature
- TOR tall oil rosin
- TPO thermoplastic polyolefins
- UPR unsaturated polyester resins
- USBC unsaturated styrene block copolymer
- USG US gallon
- WBPSA water-based pressure sensitive adhesive
- WCP wax cloud point
- WW waterwhite
- WWT waterwhite tackifier resin (HHCR)
- VA vinyl acetate
- VOC volatile organic compounds
- yr year

Registered office
Lacon House, 84 Theobald's Road,
London, WC1X 8NL
Tel: +44 20 7780 4200

ISSN: 2399-9403

.