EU TRADE EXPLORER

Market evolution: Chemical preparations (CN 38) — 2015–2025

Introduction

The miscellaneous chemical products covered by CN 38 form a broad and strategically important basket, ranging from biodiesel and industrial fatty acids to pesticides, additives for mineral oils, and diagnostic reagents. Over the past decade the European Union's extra-EU trade in these goods has expanded considerably in value terms, while the physical volumes and unit prices of exports and imports have followed strikingly different paths. This report examines the evolution of EU trade in CN 38 between 2015 and 2025, drawing on data from the EU Trade Dashboard. The analysis first dissects headline trends in value, quantity and price, then explores the reshaping of partner geography, and finally zooms into the product segments that have driven the aggregate dynamics. A concluding section summarises the main findings and their implications.

A tale of two trade flows: soaring values but diverging volume and price dynamics

Exports expanded strongly through price growth, while imports were lifted by surging volumes

Over the 2015-2025 window the value of extra-EU exports of CN 38 products rose by 51.5 %, from €26.3 billion to €39.9 billion. Imports grew even faster, up 60.0 % from €16.0 billion to €25.7 billion. The trade balance remained comfortably in surplus, improving from €10.3 billion to €14.2 billion (a 38.2 % increase).

Yet the physical dimension tells a very different story. Export quantities barely moved, edging down 1.2 % from 9.5 million tonnes to 9.4 million tonnes. The entire export value gain came from a 53.3 % jump in the average unit price (from €2 765 to €4 240 per tonne). In contrast, import quantities surged 60.7 % (from 6.5 million tonnes to 10.4 million tonnes), while average import prices were virtually flat (–0.5 %), oscillating in a range between €1 662 and €3 017 per tonne. The EU therefore appears to have exploited pricing power on the export side, selling higher-value, specialised preparations, while on the import side it absorbed larger volumes of relatively cheaper, often commodity-type chemicals.

Table 1 – Headline trade in CN 38, extra-EU (2015 vs 2025)

Indicator	Export 2015	Export 2025	Change	Import 2015	Import 2025	Change
Value (€ mn)	26 315	39 868	+51.5 %	16 049	25 678	+60.0 %
Quantity (kt)	9 515	9 404	–1.2 %	6 464	10 389	+60.7 %
Price (€/t)	2 765	4 240	+53.3 %	2 483	2 471	–0.5 %

Source: Overview – Trade values, quantities and prices

The EU's trade surplus grew despite a temporary spike in import values in 2022

Both flows peaked in 2022: exports reached €42.0 billion and imports climbed to €36.8 billion, the narrowest surplus of the period (€5.2 billion). The import spike was largely due to a global energy and commodity price surge, which inflated the bill for chemical intermediates and biodiesel. After 2022, import values fell back to €25.7 billion while exports remained elevated, restoring a comfortable surplus.

Shifting partnerships: geopolitical realignments and the diversification of sourcing

China and the United States became dominant suppliers, while traditional partners lost relative weight

The geography of EU imports of CN 38 underwent a deep transformation. The United States remained the single largest source (€4.7 billion in 2015, €7.0 billion in 2025), but its growth (+48.8 %) was outpaced by spectacular increases from China (+172.6 %, to €2.2 billion), Indonesia (+252.8 %, to €1.2 billion) and Argentina (+728.6 %, to €536 million). China's import share peaked at €7.6 billion in 2022, reflecting a temporary surge linked to pandemic-era demand for chemical inputs and biodiesel. Meanwhile, imports from the United Kingdom – now a non-EU partner – contracted by 16.4 %, from €3.9 billion to €3.3 billion.

Table 2 – Top extra-EU import partners, value and change (2015–2025)

Partner	2015 (€ mn)	2025 (€ mn)	Change
United States	4 706	7 003	+48.8 %
United Kingdom	3 946	3 300	–16.4 %
China	815	2 222	+172.6 %
Malaysia	720	1 411	+95.9 %
Indonesia	352	1 242	+252.8 %
Argentina	65	536	+728.6 %
Norway	210	316	+50.2 %

Source: Top partners – Imports

The concentration of imports, measured by the Herfindahl-Hirschman index (HHI), fell from 1 708 to 1 201, confirming a meaningful diversification away from a few dominant suppliers towards a broader set of trading partners.

Export markets expanded across the Americas and Asia, while Russia collapsed as a destination

On the export side, the United States solidified its position as the top market, with sales leaping 89.7 % to €6.0 billion. China absorbed €3.8 billion (+136.0 %), Switzerland €1.7 billion (+60.1 %) and Türkiye €1.9 billion (+75.9 %). The United Kingdom remained important, with a modest 21.8 % increase to €4.5 billion. In stark contrast, exports to the Russian Federation collapsed by 58.7 %, from €1.5 billion to €0.6 billion, almost entirely due to sanctions imposed after the 2022 invasion of Ukraine. Export market concentration remained low and stable (HHI between 554 and 685), confirming the EU's well-diversified customer base.

Table 3 – Top extra-EU export partners, value and change (2015–2025)

Partner	2015 (€ mn)	2025 (€ mn)	Change
United States	3 169	6 010	+89.7 %
United Kingdom	3 675	4 475	+21.8 %
China	1 604	3 786	+136.0 %
Türkiye	1 068	1 878	+75.9 %
Switzerland	1 069	1 712	+60.1 %
Norway	498	682	+36.9 %
Russian Federation	1 505	621	–58.7 %

Source: Top partners – Exports

Commodity volatility vs. specialty stability: unpacking the product-level drivers

Biodiesel and industrial fatty acids dominated import growth, but with high price and volume volatility

Seven product groups account for the bulk of extra-EU imports. Biodiesel (CN 3826) exhibited the most dramatic trajectory: its import quantity tripled from 0.7 million tonnes in 2015 to 3.7 million tonnes in 2019, then retreated to 1.6 million tonnes by 2025. At the same time unit prices oscillated between €709 and €1 601 per tonne, illustrating the exposure of biofuel markets to policy changes and global feedstock costs. Industrial fatty acids and fatty alcohols (CN 3823) saw quantities rise strongly from 1.3 million tonnes to 2.0 million tonnes, with a notable price increase of 54 % (from €812 to €1 251 per tonne). Chemical preparations n.e.s. (CN 3824) remained the largest import group by value (€4.3 billion in 2025), reflecting their role as intermediate inputs for EU industry.

Table 4 – Top import sub-segments, quantity and price (2015 vs 2025)

Sub-segment (CN)	Quantity 2015 (kt)	Quantity 2025 (kt)	Price 2015 (€/t)	Price 2025 (€/t)
3825 (waste/residues)	1 166	2 803	14	21
3826 (biodiesel)	696	1 567	909	1 275
3823 (fatty acids/alcohols)	1 291	2 007	812	1 251
3824 (chemical preparations)	738	1 623	2 500	2 657

Source: Product segment breakdown – Imports

The import data also reveal episodes of extreme price disruption. A shock centred on 2018 in imports from Israel saw the price per tonne leap by 3 335 % while quantities collapsed, indicating a sudden trade disruption for a specific niche import. China's import prices jumped 142 % in 2021, even as quantities contracted slightly, before stabilising.

Exports were dominated by high-value chemical preparations and pesticides, with steady price appreciation

Extra-EU exports are heavily concentrated in a few high-value categories. Chemical preparations (CN 3824) alone generated €8.1 billion in 2025, up from €5.9 billion in 2015, with unit prices climbing from €1 782 to €2 550 per tonne. Pesticides and agrochemicals (CN 3808) reached €5.4 billion (€5.1 billion in 2015), while prices rose moderately from €7 361 to €7 852 per tonne. Additives for mineral oils (CN 3811) and refractory cements (CN 3816) each contributed around €2.3 billion and €0.6 billion, respectively. These four groups underline the EU's strong competitive position in formulated, technology-intensive chemical products.

Table 5 – Top export sub-segments, value and price (2015 vs 2025)

Sub-segment (CN)	Value 2015 (€ mn)	Value 2025 (€ mn)	Price 2015 (€/t)	Price 2025 (€/t)
3824 (chemical preparations)	5 891	8 120	1 782	2 550
3808 (pesticides, etc.)	5 050	5 427	7 361	7 852
3811 (additives for mineral oils)	2 000	2 316	2 974	3 636
3816 (refractory cements)	513	572	614	790

Source: Product segment breakdown – Exports

Export price events were less disruptive than on the import side. Canadian export prices experienced a 71 % spike centred on 2022, and Brazilian export prices a milder 22 % increase in the same year, both normalising soon afterwards. These events likely reflected logistical bottlenecks and temporary demand pulses rather than structural breaks.

National specialisation patterns highlight a clear core-periphery divide within the EU

The 2025 specialisation data show that Ireland (RSCA 0.28), Belgium (0.25), France (0.14) and the Netherlands (0.10) hold a strong comparative advantage in exporting CN 38 products, meaning these chemicals represent a disproportionately high share of their total extra-EU exports. Germany, though not the most specialised by this measure, accounts for 25 % of total EU CN 38 exports (€13.6 billion). At the opposite end, Malta, Slovakia and Romania display strongly negative RSCA values, indicating that CN 38 products play a marginal role in their export baskets.

Conclusion

EU trade in miscellaneous chemical products has undergone a decade of robust value growth, but the underlying story is one of differentiation. Exports expanded through rising unit prices, underscoring the bloc's position as a supplier of high-value, specialised preparations. Imports, meanwhile, grew overwhelmingly through increased volumes of often lower-priced feedstocks and biofuels, making the EU a large buyer in global commodity chemical markets. The partner landscape shifted decisively towards China, the United States and fast-growing Asian and Latin American suppliers, while Russia's share evaporated and the UK saw its role diminish on the import side. Big-ticket product segments such as biodiesel injected substantial volatility, whereas core export items like chemical preparations and pesticides delivered more stable price appreciation. These findings reflect both the EU's technological strengths and its exposure to global commodity cycles and geopolitical risks, a duality that will continue to shape the bloc's chemical trade.

Generated on 2026-07-24 based on data from tradedashboard.eu

If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at this address.