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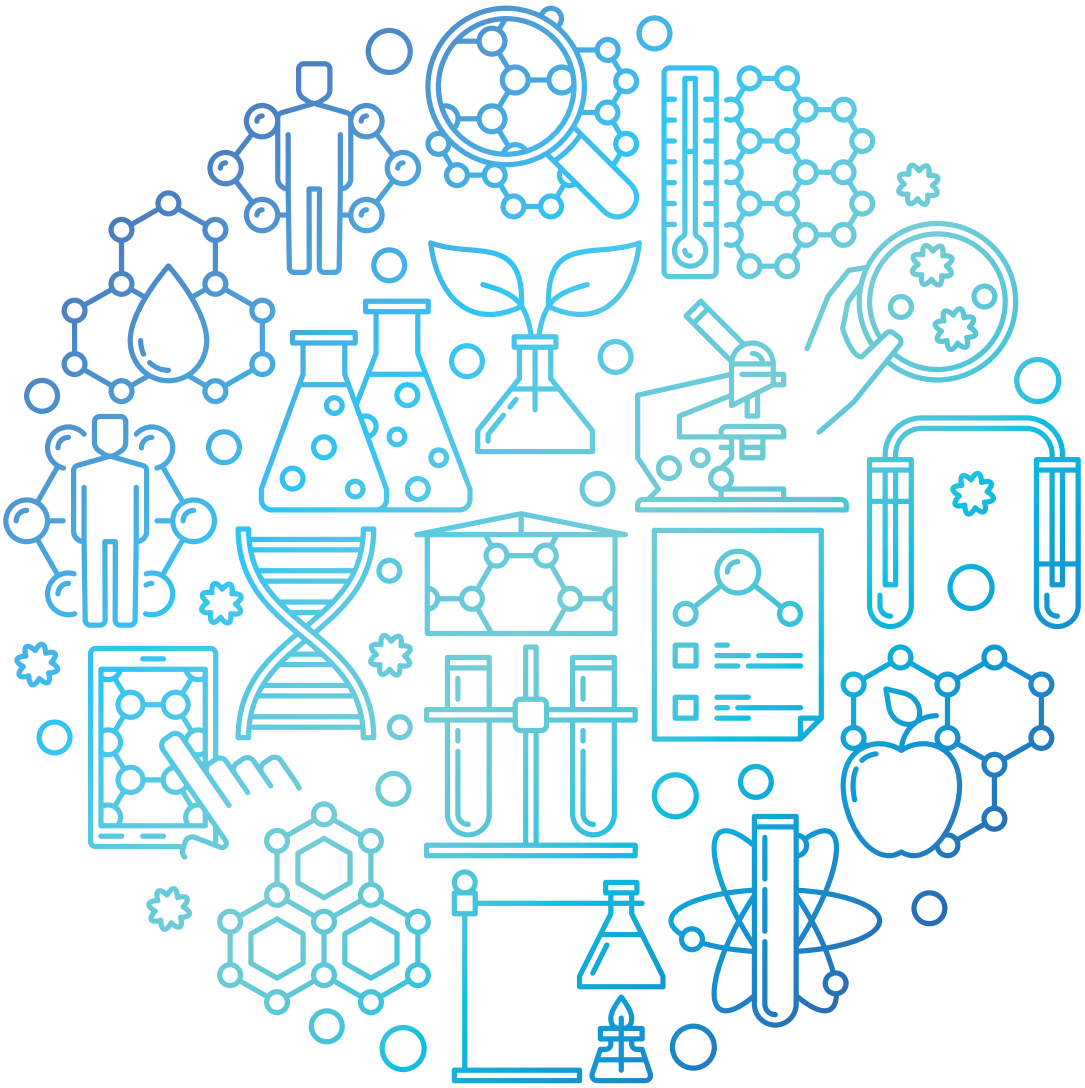


Chemicals Insights

Defence Chemicals: a hidden champion

In the summer 2025 issue of Chemicals Insights, we highlight the role of chemicals in the defence sector and emerging trends in this field. We also explore the business sentiment indicators from our latest CFO survey and provide insights into the global M&A outlook and the latest M&A activity in the chemical industry.

Hot topics in the market – defence chemicals: a hidden champion

We have seen a sharp rise in public interest in the defence industry over the past few years, as regional conflicts escalate and geopolitical uncertainty grows. These increasing global security concerns have also led to a surge in defence spending by Germany and its European allies. The German government is advocating for defence spending to be exempted from constitutional budgetary restrictions ("Sondervermögen")—beyond the €100 billion already approved in summer 2022—and for long-term easing of EU rules to strengthen military capabilities. Today's defence sector relies on a wide range of chemicals that serve critical functions far beyond their use in explosives. While high-energy substances are often the first to come to mind, a number of other chemicals also play a crucial role.

Defence chemicals fall into three main categories: energetic materials, advanced coatings and high-performance composites. These materials give aircraft and military vehicles better protection and performance and make cutting-edge electronic systems possible. Some chemicals are used for both civilian and military purposes, making it hard to put these applications into a single category. You can find these dual-use materials in consumer products as well as in advanced military technologies.

Market overview

There are a number of US and European chemical companies actively involved in the production of chemical intermediates and specialty chemicals for the defence industry. Due to the potential hazards and security concerns, there are often strict regulations and oversight imposed on the production of defence-related chemicals. Government agencies closely monitor the manufacturing, storage and distribution of these chemicals. Without the necessary certifications and high safety and security standards, it is impossible to enter this market and remain competitive.

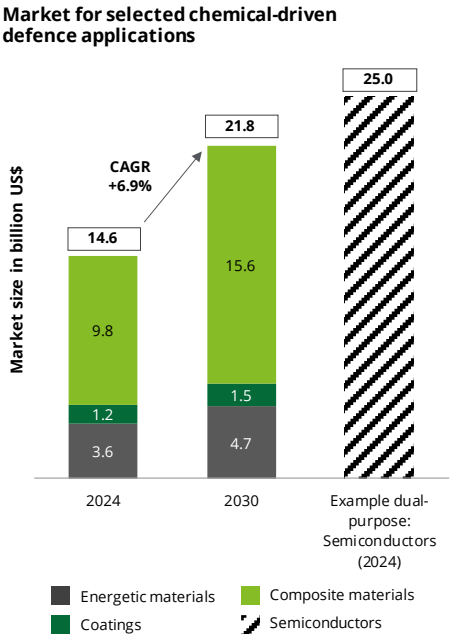


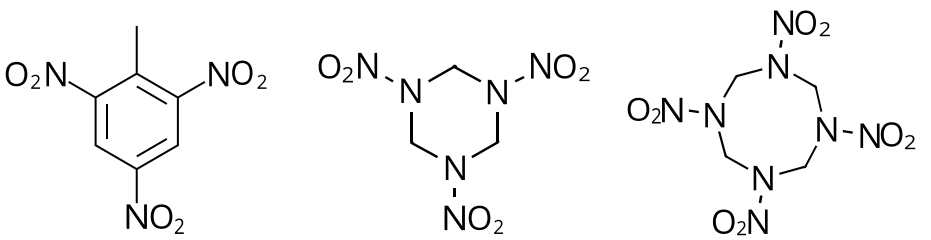
Fig. 1 – Markets for selected chemical-driven defence applications with semiconductors

The market for defence chemicals has seen strong and sustained growth in recent years, driven by rising defence budgets and increasing security demands. Investments in research and development are providing additional fuel for innovation and technological advancements. While a lot of defence chemicals, aside from explosives, are produced in the same facilities as conventional chemicals, they typically offer higher margins, making them a particularly attractive business segment.

The global market for energetic materials was valued at USD53.9 billion in 2024,[1] with USD3.6 billion[2] attributed to the defence sector (Figure 1). During the same period, the defence coatings market generated estimated sales of USD1.2 billion, while the composite materials market—with over 90% used in civilian applications—was valued at USD99.5 billion.[3] Some dual-use applications that fall outside these categories cannot be strictly classified as defence-related. A key example is semiconductors, which are essential for electronic components and rely on various chemicals in their production. In 2024, the global semiconductor market was valued at approximately USD480 billion,[4] with an estimated 5% allocated to defence applications.[5] Products and chemicals for these dual-purpose applications are often subject to export restrictions.

Energetic materials

The production of energetic materials such as explosives and propellants is one of the primary industrial applications for defence chemicals. These substances can release significant amounts of energy in certain chemical reactions, with potentially devastating consequences. They are used in a variety of different areas, including ordnance, propulsion and signaling.



TNT
2,4,6-trinitrotoluene

RDX
Hexahydro-1,3,5-trinitro-1,3,5-triazine

HMX
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

Fig. 2 – Chemical structures of TNT, RDX and HMX

1 Global Explosives and Pyrotechnics Market Size, Forecasts to 2033
2 Military Explosives and Propellants Market Size, Share & Trends to 2033
3 Composite Materials Market Size, Industry Share, Growth Forecasts to 2033
4 IFX+Annual+Report+2023+-+Review+of+the+semiconductor+industry.pdf
5 Military & Defense Semiconductor Market Size & Share - 2032

Many high-energy materials contain nitro groups (–NO_2) or nitrate ions (NO_3^-), which are synthesized from ammonia, ammonium nitrate, nitric acid or other derivatives. The chemical compounds commonly used in explosives include trinitrotoluene (TNT), royal demolition explosive (RDX) and high melting explosive (HMX) (Figure 2). In terms of sales volume, TNT accounts for the largest share, followed by RDX and HMX.

All three of these organic substances carry multiple nitro groups in a symmetric ring structure, which is essential for their high energetic state. Thanks to their comparatively high stability under standard conditions, they are safe to handle. An electric or pyrotechnic trigger is used to release the stored chemical energy you need to initiate the highly exothermic decomposition reactions. TNT is produced by multi-stage nitration of toluene, while RDX and HMX are synthesized from hexamine using the Bachmann-process.

A more straightforward and cost-effective option, but with less explosive power, is ammonium nitrate fuel oil (ANFO). ANFO is widely used in various industrial applications and does not require complex synthesis, making it cheaper to produce.

Propellants by contrast are designed to release more targeted energy and propel objects forward. When they are ignited in a combustion chamber, the resulting chemical reaction generates thrust by releasing large amounts of hot gases, such as carbon dioxide, nitrogen or water vapor, typically without a sudden explosion. Propellants can be in a solid or liquid state, depending on the properties required by the application. Typical solid propellants are made of a mixture of ammonium perchlorate (NH_4ClO_4) and powdered aluminum. A well-known example of liquid propellant for rockets is hydrazine (N_2H_4), which decomposes catalytically into primarily hydrogen and nitrogen. In both cases, the resulting gases expand rapidly and generate directed propulsion.

Military coatings

Coatings play a crucial role in the defence industry, protecting military equipment from corrosion, chemical threats and environmental extremes, as well as providing radar-absorbing properties for aircraft and other vehicles.

Coatings that are resistant to chemical agents are key for the defence industry, designed to protect military vehicles, equipment and uniforms from hazardous substances. These coatings rely on a multi-layered structure, often combining an epoxy primer for corrosion resistance, a polyurethane topcoat for protection against chemicals and UV exposure, and an enamel layer, which makes the objects more durable and easier to decontaminate. Corrosion is a persistent challenge, particularly for equipment exposed to saltwater and harsh climates. To prevent corrosion, protective coatings made from epoxy and polyurethane resins form a moisture-resistant barrier, while zinc-rich primers offer sacrificial protection by corroding instead of the underlying metal. Recent advancements have introduced self-healing coatings that autonomously repair minor damage, extending the service life of critical assets.

In addition to protective properties, coatings also play a key role in stealth technology. Radar-absorbing materials help to reduce an object's radar signature by using conductive polymers, ferrite compounds and carbon nanostructures designed to absorb radar waves and convert them into heat. The F-35 Lightning II, for instance, relies on RAM[6] coatings to improve stealth capabilities and make it harder to detect.

Composite materials

The equipment used in the defence industry is subject to extremely high standards, so materials offering excellent strength-to-weight-ratios and durability are in high demand for a variety of applications. Due to their demanding specifications and strict approval procedures, these materials offer higher profit margins than those used in other applications. Composite materials containing aromatic polyamides (aramids) and carbon fibers have chemical structures and intermolecular interactions that significantly improve their performance, e.g., more structurally stable products that are highly resistant to temperature and other external influences. This makes them particularly suitable for the use in the defence industry in safety equipment or as materials for drones and aircrafts.

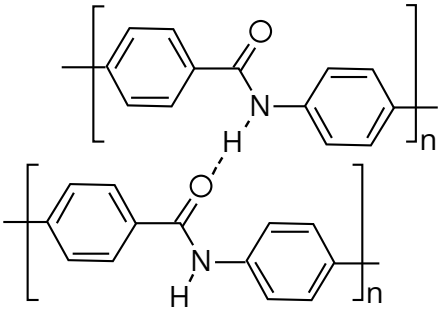


Fig. 3 – Sample chemical structure of a *para*-aramid

One example of a widely used component in composite materials are aramids, which consist of long chains of benzene rings linked by amide groups (R-CO-NH). These polymers are formed through a polymerisation reaction between terephthaloyl-chloride and an aromatic

Fig. 4 – AI illustration of a protective vest made of high-performance materials

diamine, such as *para*-phenylenediamine. Tensile strength and stiffness will vary based on the arrangement of the functional groups in *meta*- or *para*-position. The chains, very linear in structure, allow for a dense arrangement and strong intermolecular interactions.

With excellent energy absorption properties, aramid composites are mainly used in a honeycomb structure as protection against ballistics, e.g., in body armor to absorb incoming shrapnel or bullets. The properties of UHMWPE are similar to those of *para*-aramid.[7] The structure of the polyethylene allows for particularly strong intermolecular van der Waals forces, giving the composite an outstanding strength-to-weight ratio. Both materials are used for similar purposes, though the *para*-aramid offers better temperature resistance and UHMWPE higher abrasion resistance.

Other high-performance composites are reinforced with carbon fibers, which are made up of carbon atoms arranged in a hexagonal pattern. Typically made from the polymer polyacrylonitrile, these fibers undergo processes from spinning and stabilization to high-temperature carbonization in order to gradually remove nitrogen, oxygen and hydrogen. The result is a highly ordered carbon structure, which is the key to its exceptional properties. Carbon fiber is mainly used in combination with epoxy resin to form lightweight structural components that are extremely strong and have a low radar cross-section.

Outlook

The defence chemicals market is known for fast-growing demand, long-term contracts and significant barriers to entry. To secure a stable supply of essential materials and reduce supply chain risks, countries are strengthening domestic manufacturing and developing alternative supply routes. In 2024, the US Department of Defense awarded USD92.5 million[8] in contracts to establish domestic manufacturing capacity for critical defence chemicals by 2027. This underscores the strategic importance of the sector and the huge opportunities there are for companies in the defence chemicals market. It also makes those companies an attractive investment target—and that's why we should be paying special attention to companies that supply both the defence industry and the civilian market.

Aside from the expected market growth, what is driving the industry is the strategic importance of innovative materials that offer decisive advantages— cost issues play a secondary role here for customers. The chemical sector is currently focusing on highly developed, high-performance materials that meet the strict demands of hypersonic weapons and offer alternatives to substances that are harmful to the environment and health.

How we can support you

If you are looking to capitalize on opportunities in the defence sector, Deloitte offers specialized consulting services led by industry and subject-matter experts. These services build on our expertise in both the defence and chemical industries, including:

- Strategic advice backed by a deep understanding of current and future prospects, including the market/ competitive environment, regulatory framework and technologies
- M&A services that span the lifecycle of the deal, from identification and assessment of investment opportunities to financial and commercial due diligence to deal support
- Post-acquisition services that support business integration, growth perspectives, operational performance and SG&A related issues

Does this sound like what you are looking for? For more information, please contact the chemical & defence experts at Deloitte.

7 Ultra-high-molecular-weight polyethylene
8 DOD Awards $192.5 Million to Establish Domestic Manufacturing Capabilities for Critical Defense Chemicals > U.S. Department of Defense > Release

Global M&A outlook – first findings

The global chemical sector saw a 5% decline in M&A activity in 2024, reaching an all-time low of 434 transactions. In the USA and in the private equity sector, the trend has been reversed, with a slight increase in deal volume but a decrease in total value.

Survey highlights M&A trends in the chemical industry as trade policy evolves

A Deloitte survey about M&A in the chemical industry offers insight into the background and the current climate. More than 50 companies with sales exceeding USD 1 billion took part, mainly executives in M&A or strategy but also CEOs and financial managers. Geographically speaking, the survey focuses on Europe and North America, while around 60% of the respondents work in specialty chemicals. We should note that the survey took place in January 2025. That means the respondents were unaware of the recent developments in US trade policy, which could have a significant impact on survey results. We could see greater market volatility in response to the new tariff policy.

M&A and divestment trends: In 2025, companies eye expansion and focus on core business

According to our survey, 82% of participants are at least “somewhat likely” to engage in M&A activity in 2025. This is down 4% from 2024, although the share of "very likely” responses has increased. The main reasons cited for future M&A activity include expanding technical expertise and the portfolio, as indicated by more than 76% of respondents. Other drivers are geographical expansion, diversification and transformative change in their companies. Around 70% of participants indicate they are at least “somewhat likely” to pursue divestment, up roughly 16% on last year’s results. Many of the divestments discussed in 2024 are expected to proceed in 2025, driven by efforts to focus more on the core business and to sell underperforming assets.

Overcoming M&A challenges: Quality targets and strategic focus take center stage in 2024

In 2024, the biggest obstacle to M&A activity was a lack of quality targets, according to 32% of the respondents, and management focus on other corporate priorities, according to 23%. Valuation gaps, which were the top concern last year, ranked third this time around, while borrowing costs as well as access to capital markets dropped significantly in importance. Most companies factor ESG considerations into their M&A strategies, but their impact is limited at this stage, with only 14% saying ESG has a major influence on deals.

Navigating competitive markets: focus on healthcare, beauty and life sciences as tariffs hit hard

As mentioned above, US tariff policy will have an effect on these results. The most attractive sectors for this year’s acquisition targets might still be the healthcare, beauty and life sciences. We expect the market environment to be somewhat competitive, with competition increasing slightly. Companies are focusing primarily on organic growth and cost-cutting measures (incl. comprehensive strategic reviews), with smaller strategic acquisitions continuing to play an important role.

Germany - economic update: building resilience in the face of geopolitical uncertainty

According to the results of Deloitte's spring 2025 CFO study, the reciprocal tariffs announced by the US government are putting a damper on the current cautious economic recovery. We have seen a significant decline in business sentiment since April 2, and German companies are taking proactive steps as a result: Investments and employment are set to rise again, with a focus on becoming more resilient. Geopolitical risks are at the top of the CFO agenda for the coming year.

After the poor business sentiment numbers last fall, this spring's respondents were cautiously optimistic at first. The economic stimulus package and the prospect of a new government coalition raised hopes that we might have less uncertainty and a return to growth for the German economy. At +4 percent, the index value for business sentiment was up slightly again for the first 135 participants of our survey.

By April 2, however, the US government announced plans for reciprocal tariffs, including a 20 percent tariff on all imports from the EU. Business sentiment drastically declined on so-called 'Liberation Day', dropping to -25 percent in our participants' post-Liberation Day responses. The potential tariffs will hit large companies with 1+ billion euros in sales particularly hard. From a sector standpoint, the business sentiment worsened in banking and transport & logistics in particular.

The US's U-turn in trade policy is contributing to the tense geopolitical risk environment. Uncertainty in the economic and financial environment for companies is rising to record levels. This is also reflected in risk assessments: Companies rate weak domestic demand as the top risk overall, but we are also seeing a sharp rise in the relevance of geopolitical risks. The risk of weaker foreign demand and adverse exchange rates is becoming more significant as well. CFOs are not only concerned that broad-based tariffs could curb demand from the US, but also that the US dollar might lose its stabilizing influence as the world's dominant reserve currency.

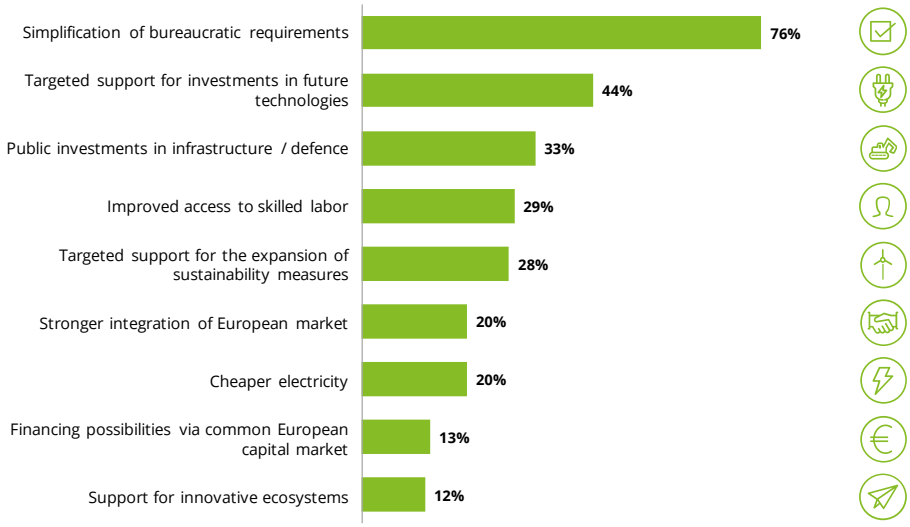


Fig. 5 – Political measures needed to realize postponed investments

Investment plans to proactively build resilience

While the tariff announcement had a negative effect on business sentiment, it had the exact opposite effect on investment and employment planning: since April 2, companies have budgeted more for investments and new hires.

CFOs had already made plans to increase investments, with a positive index value of +8 percent for the first time in a year and a half. After the tariff announcement, that figure rose further to +13 percent. In other words, almost one third of the companies we surveyed are planning to increase investments again. And while recruitment plans were still in negative territory before the announcement, companies now want to hire more staff.

Current investments are mainly focused on resilience and digital transformation, though companies are increasingly scaling back sustainability efforts and even planned expansions in production. CFOs are looking to invest more, but they are more concerned with securing future viability and crisis resistance than with growth.

Similarly, the geographical focus of investments has shifted. We have seen a stronger trend towards reshoring back to Germany since the announcement of US tariffs.

Expanding geopolitical resilience

As they refocus on resilience, today's companies are better able to mitigate the impact of geopolitical risks than we expected a year ago. Half of CFOs now say their companies are well-prepared for geopolitical risks, while it was only about a third in 2022. Among the measures used to better prepare companies for geopolitical risks, scenario analyses and stress tests are particularly widespread. Companies also continue to work towards minimizing dependencies in supply chains and sales markets.

If you want to learn more about the latest economic trends or the study itself, click here: Deloitte CFO Survey Spring 2025

Recent multiple developments – Cautious M&A activity

Faced with various macroeconomic challenges and shifting market dynamics, global chemical companies struggled with changes in US tariff policy in the first half of 2025. This increased margin pressure and added urgency to cost-cutting measures, market share gains and competitive improvements. Strategic reviews and divestment plans play an important role in achieving targeted performance improvements.

Increase in trading multiples

Table 1 shows trading multiples, including enterprise value (EV)/EBITDA multiples and price-to-earnings (P/E) ratios, for 28 listed chemical companies across a range of sub-sectors and regions. The multiples are based on the latest financial data and stock prices.

Globally, average EBITDA multiples for chemical companies are slightly higher than in the past. The average EV/EBITDA multiple for the chemical sector is 12.4x in the first half of 2025, compared to only 11.0x in 2024.

A number of interrelated factors will play an important role moving forward, including fears of recession and high interest rates, ongoing conflicts and supply chain disruptions as well as US trade policy.

The focus will be on particularly attractive, high-growth segments. Companies from the consumer chemicals sector have the highest valuation multiples with an average of 16.6x EV/EBITDA, followed by industrial gases at 15.9x and polymers at 13.2x. Companies operating in the specialty chemicals and diversified sectors have the lowest multiples, with EV/EBITDA valuations of 7.6x and 6.5x, respectively.

Transaction multiples converge

With so many regions facing economic uncertainty, this has been a challenging period for the chemical industry in terms of M&A activity—the volume of transactions was particularly low in early 2024. The industry stabilized somewhat in the second half of 2024, when the number of transactions went up, but the value of the transactions went down. Table 2 provides an overview of transaction multiples in the chemicals industry over the past three years.

During the first half of 2025, there was a slight increase in multiples for strategic acquisitions in the chemicals sector, although numbers have not yet returned to 2023 levels. The multiples for strategic buyers have been higher than those for financial investors over the last three years. With only two deals initiated by financial investors in the first half of 2025, the median value for financial investors is higher than that of strategic buyers, although the enterprise values of these transactions are comparatively low (roughly USD394m).

Outlook

Overall, we are cautiously optimistic about an increase in chemical M&A activity in the second half of 2025, as companies remain under margin pressure and liquidity is gradually recovering. Strategic acquisitions in particular are likely to increase again, driven by companies looking to expand their portfolios and their expertise. In order to boost efficiency and growth, we expect the chemical industry to focus on innovation, sustainability and resilience. And we will likely see more consolidation and specialization in many segments of the chemical sector.

Tab. 1 – Public Company Valuation Statistics

Company	Country	Share price	Market Cap	EV/Revenue					EV/EBITDA					EV/EBIT					P/E				P/BV			
				LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	LTM	2023	2024	2025E
		EURm	EURm	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
Consumer Chemicals																										
Croda International	UK	35.6	4,972	2.9	2.9	2.9	2.8	2.7	13.4	13.5	13.4	11.7	10.5	20.0	19.3	20.0	15.9	14.0	31.9	29.4	19.9	20.6	1.8	1.8	2.1	1.8
Givaudan	CH	4,305.5	39,724	5.6	5.9	5.6	5.4	5.1	25.0	30.0	25.0	22.1	21.1	29.5	36.7	29.5	27.5	25.9	44.8	59.3	30.7	31.2	8.1	9.3	7.9	7.4
Novo-zymes	DK	58.4	27,052	7.5	11.9	7.5	6.7	6.2	26.4	37.7	26.4	17.9	16.0	33.9	46.8	33.9	25.0	22.0	34.2	43.1	30.5	30.3	1.5	8.6	0.3	2.3
Symrise	DE	104.3	14,466	3.3	3.5	3.3	3.2	3.0	16.8	20.6	16.8	14.9	13.8	23.0	30.5	23.0	20.6	18.5	36.3	50.7	27.2	27.0	3.7	4.0	3.4	3.3
			Median	4.4	4.7	4.4	4.3	4.0	20.9	25.3	20.9	16.4	14.9	26.3	33.6	26.3	22.8	20.3	35.2	46.9	28.9	28.7	2.7	6.3	2.8	2.8
			Average	4.8	6.0	4.8	4.5	4.2	20.4	25.5	20.4	16.6	15.3	26.6	33.3	26.6	22.2	20.1	36.8	45.6	27.1	27.3	3.8	5.9	3.4	3.7
Fertilisers																										
Grupa Azoty	PL	5.2	518	1.0	1.0	1.0	0.9	0.9	NM	NM	NM	12.0	7.8	NM	NM	NM	NM	18.1	NM	NM	NM	NM	0.4	0.4	0.5	0.7
K+S	DE	15.4	2,758	0.8	0.8	0.8	0.8	0.8	7.1	3.9	7.1	4.9	4.6	NM	8.3	NM	35.8	24.5	NM	14.7	58.1	58.1	0.4	0.4	0.4	0.4
OCI	NL	7.4	1,567	0.4	0.4	0.4	0.4	0.4	NM	NM	NM	10.1	4.3	NM	NM	NM	NA	NA	NM	NM	NM	NM	0.7	1.9	0.7	0.8
Yara Interna-tional	NO	28.9	7,333	0.8	0.8	0.8	0.8	0.8	7.0	9.1	7.2	5.2	5.2	13.8	24.9	15.8	9.2	9.8	22.1	33.8	9.5	9.6	1.1	1.1	0.1	1.1
			Median	0.8	0.8	0.8	0.8	0.8	7.0	6.5	7.1	7.6	4.9	13.8	16.6	15.8	22.5	18.1	22.1	24.3	33.8	33.8	0.6	0.8	0.5	0.7
			Average	0.8	0.7	0.7	0.7	0.7	7.0	6.5	7.1	8.0	5.5	13.8	16.6	15.8	22.5	17.4	22.1	24.3	33.8	33.8	0.7	0.9	0.4	0.7

Tab. 1 – Public Company Valuation Statistics (Continued)

Com-pany	Country	Share price	Market Cap	EV/Revenue					EV/EBITDA					EV/EBIT					P/E				P/BV			
				LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	2026E	LTM	2023	2024	2025E	LTM	2023	2024	2025E
		EURm	EURm	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
Specialty Chemicals																										
AkzoNobel	NL	57.8	9,786	1.3	1.3	1.3	1.3	1.3	12.3	10.7	11.6	9.3	8.6	16.1	13.3	15.0	12.1	11.0	24.0	20.6	13.2	13.2	2.1	2.3	2.1	2.0
Arkema	FR	67.0	5,035	0.8	0.8	0.8	0.8	0.8	5.8	5.9	5.8	5.1	4.7	11.6	10.8	11.6	9.0	8.0	13.2	12.2	8.3	8.3	0.7	0.8	0.7	0.7
Clariant	CH	9.9	3,237	1.1	1.1	1.1	1.1	1.1	8.4	7.7	8.4	6.6	6.0	13.0	11.0	13.0	10.7	8.8	16.9	14.7	10.9	11.5	1.3	1.5	1.4	1.3
Evonik Industries	DE	19.8	9,190	0.8	0.8	0.8	0.8	0.8	7.3	6.9	7.3	5.9	5.5	14.9	20.5	14.9	11.6	10.2	22.8	37.2	12.6	12.5	1.0	1.0	1.0	1.0
Fuchs Petrolub	DE	45.6	5,189	1.4	1.5	1.5	1.4	1.4	9.8	10.4	9.9	9.3	8.7	11.8	12.4	11.8	11.3	10.4	NA	24.2	18.2	18.3	NA	3.4	2.9	2.9
Johnson Matthey	UK	15.3	2,562	0.2	0.2	0.2	0.8	0.9	6.2	5.0	6.0	5.1	4.8	8.3	6.4	8.2	7.6	6.9	12.4	9.5	9.3	9.3	1.0	1.0	1.2	1.0
LANXESS	DE	26.4	2,269	0.7	0.7	0.7	0.7	0.7	9.0	11.1	9.0	7.7	7.1	203.1	NM	203.1	55.8	33.7	NM	NM	17.7	17.6	0.5	0.5	0.5	0.5
Sika	CH	223.5	35,859	3.3	3.4	3.3	3.2	3.1	18.1	18.2	18.1	16.4	15.2	22.4	22.0	22.4	21.5	19.7	34.1	33.7	24.9	25.5	4.8	5.6	4.6	4.3
Umicore	BE	8.2	1,972	0.2	0.2	0.2	1.0	1.0	NM	3.2	NM	4.7	4.5	NM	4.3	NM	7.5	7.3	NM	4.5	8.4	8.4	1.0	0.5	0.9	0.9
Wacker Chemie	DE	67.4	3,348	0.8	0.7	0.8	0.7	0.7	7.0	6.4	6.5	6.0	4.8	23.7	14.4	18.0	19.9	10.3	35.6	15.5	16.6	19.7	0.7	0.8	0.7	0.7
			Median	**0.8**	**0.8**	**0.8**	**0.9**	**0.9**	**8.4**	**7.3**	**8.4**	**6.3**	**5.8**	**14.9**	**12.4**	**14.9**	**11.4**	**10.2**	**22.8**	**15.5**	**12.9**	**12.9**	**1.0**	**1.0**	**1.1**	**1.0**
			Average	**1.1**	**1.1**	**1.1**	**1.2**	**1.2**	**9.3**	**8.5**	**9.2**	**7.6**	**7.0**	**36.1**	**12.8**	**35.3**	**16.7**	**12.6**	**22.7**	**19.1**	**14.0**	**14.4**	**1.5**	**1.7**	**1.6**	**1.5**
Polymers																										
Covestro	DE	58.8	11,034	1.0	1.0	1.0	0.9	0.9	18.8	16.6	18.8	12.1	9.3	201.2	81.0	201.2	47.0	22.2	NM	227.3	92.9	92.3	1.7	1.7	1.7	1.7
Ems-Chemie	CH	656.2	15,347	6.7	6.2	6.7	6.7	6.3	23.7	25.7	23.7	22.9	21.0	25.8	28.0	25.8	25.0	22.9	42.6	47.0	30.4	30.4	7.8	8.2	8.0	7.5
Lyondell-Basell Industries	US	51.5	16,547	0.7	0.7	0.7	1.0	1.0	8.0	5.9	6.6	9.2	7.2	12.9	8.2	9.9	16.3	10.9	16.3	9.4	12.9	15.2	1.5	1.4	1.4	1.6
Victrex	UK	10.1	880	2.6	2.6	2.6	2.6	2.4	10.0	7.4	10.0	8.6	7.6	13.7	8.9	13.7	12.0	10.1	29.2	15.0	14.8	14.8	1.6	1.5	1.9	1.6
			Median	**1.8**	**1.8**	**1.8**	**1.8**	**1.7**	**14.4**	**12.0**	**14.4**	**10.7**	**8.4**	**19.7**	**18.4**	**19.7**	**20.7**	**16.5**	**29.2**	**31.0**	**22.6**	**22.8**	**1.6**	**1.6**	**1.8**	**1.6**
			Average	**2.7**	**2.6**	**2.7**	**2.8**	**2.6**	**15.1**	**13.9**	**14.8**	**13.2**	**11.3**	**63.4**	**31.5**	**62.7**	**25.1**	**16.5**	**29.3**	**74.7**	**37.8**	**38.2**	**3.1**	**3.2**	**3.3**	**3.1**
Industrial Gases																										
Air Liquide	FR	185.0	1,06,808	4.4	4.3	4.4	4.2	4.0	16.1	16.9	16.1	14.0	12.9	23.0	24.6	23.0	20.3	18.5	35.9	39.2	26.5	27.3	4.0	4.4	3.7	3.7
Linde	UK	401.2	1,89,093	6.8	7.0	6.5	6.9	6.6	17.4	18.9	16.9	17.7	16.5	24.6	27.6	24.1	23.3	21.5	37.9	43.5	27.2	27.8	5.4	5.4	4.9	5.6
			Median	**5.6**	**5.6**	**5.4**	**5.6**	**5.3**	**16.8**	**17.9**	**16.5**	**15.9**	**14.7**	**23.8**	**26.1**	**23.6**	**21.8**	**20.0**	**36.9**	**41.3**	**26.8**	**27.5**	**4.7**	**4.9**	**4.3**	**4.7**
			Average	**5.6**	**5.6**	**5.4**	**5.6**	**5.3**	**16.8**	**17.9**	**16.5**	**15.9**	**14.7**	**23.8**	**26.1**	**23.6**	**21.8**	**20.0**	**36.9**	**41.3**	**26.8**	**27.5**	**4.7**	**4.9**	**4.3**	**4.7**
Diversified																										
BASF	DE	42.5	39,619	1.0	0.9	1.0	1.0	0.9	10.3	10.2	10.1	8.1	7.0	23.2	22.2	22.0	16.8	13.4	30.4	32.6	12.6	13.9	1.1	1.1	1.1	1.1
Solvay	BE	34.3	3,543	1.0	0.9	1.0	1.1	1.1	6.2	3.3	6.2	5.0	4.8	8.9	6.3	8.9	7.3	6.9	10.9	7.5	8.7	8.6	2.7	2.9	2.5	2.5
			Median	**1.0**	**0.9**	**1.0**	**1.0**	**1.0**	**8.3**	**6.7**	**8.2**	**6.5**	**5.9**	**16.1**	**14.2**	**15.5**	**12.0**	**10.1**	**20.7**	**20.1**	**10.7**	**11.2**	**1.9**	**2.0**	**1.8**	**1.8**
			Average	**1.0**	**0.9**	**1.0**	**1.0**	**1.0**	**8.3**	**6.7**	**8.2**	**6.5**	**5.9**	**16.1**	**14.2**	**15.5**	**12.0**	**10.1**	**20.7**	**20.1**	**10.7**	**11.2**	**1.9**	**2.0**	**1.8**	**1.8**
Chemical Distribution																										
Brenntag	DE	59.4	8,519	0.7	0.7	0.7	0.7	0.6	10.1	8.7	10.1	7.4	6.9	12.8	10.5	12.8	10.3	9.4	19.6	15.1	12.1	12.0	1.8	2.0	1.7	1.7
IMCD	NL	119.0	7,020	1.7	1.9	1.7	1.7	1.6	15.4	15.9	15.4	13.5	12.6	19.1	19.2	19.1	17.5	15.9	30.7	28.6	18.8	18.8	3.2	3.9	2.9	2.9
			Median	**1.2**	**1.3**	**1.2**	**1.2**	**1.1**	**12.7**	**12.3**	**12.7**	**10.4**	**9.7**	**16.0**	**14.8**	**16.0**	**13.9**	**12.7**	**25.1**	**21.8**	**15.4**	**15.4**	**2.5**	**3.0**	**2.3**	**2.3**
			Average	**1.2**	**1.3**	**1.2**	**1.2**	**1.1**	**12.7**	**12.3**	**12.7**	**10.4**	**9.7**	**16.0**	**14.8**	**16.0**	**13.9**	**12.7**	**25.1**	**21.8**	**15.4**	**15.4**	**2.5**	**3.0**	**2.3**	**2.3**
Chemical Sector			**Median**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**10.1**	**10.3**	**10.1**	**9.2**	**7.4**	**19.5**	**19.2**	**18.5**	**16.6**	**13.4**	**30.4**	**28.6**	**17.1**	**17.9**	**1.5**	**1.8**	**1.5**	**1.6**
			Average	**2.1**	**2.3**	**2.1**	**2.1**	**2.0**	**12.6**	**12.7**	**12.5**	**10.5**	**9.3**	**33.8**	**20.7**	**33.4**	**19.1**	**15.2**	**27.7**	**34.7**	**22.0**	**22.4**	**2.3**	**2.8**	**2.2**	**2.3**

Sources: S&P Capital IQ, Deloitte analysis; priced as of 05 May 2025

Fig. 6 – EV/Revenue, 2025e

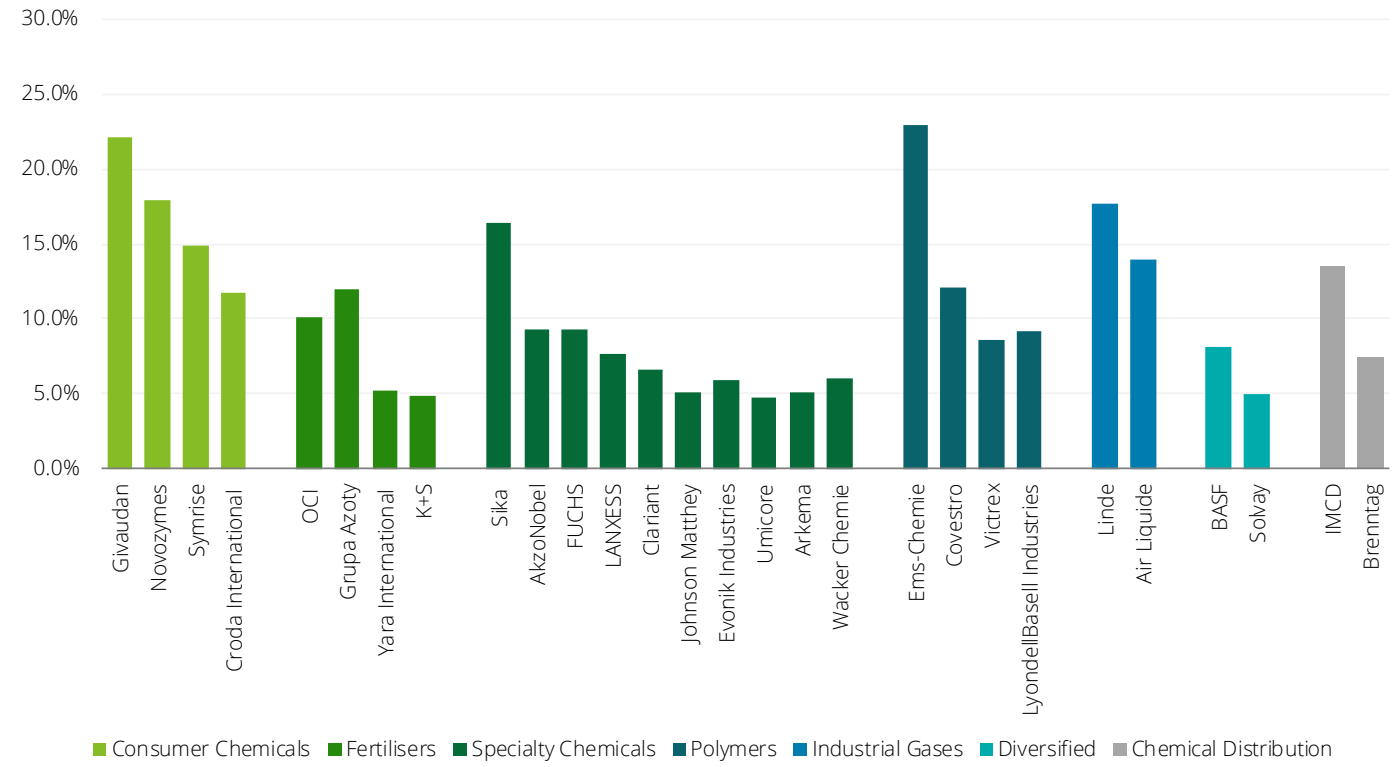
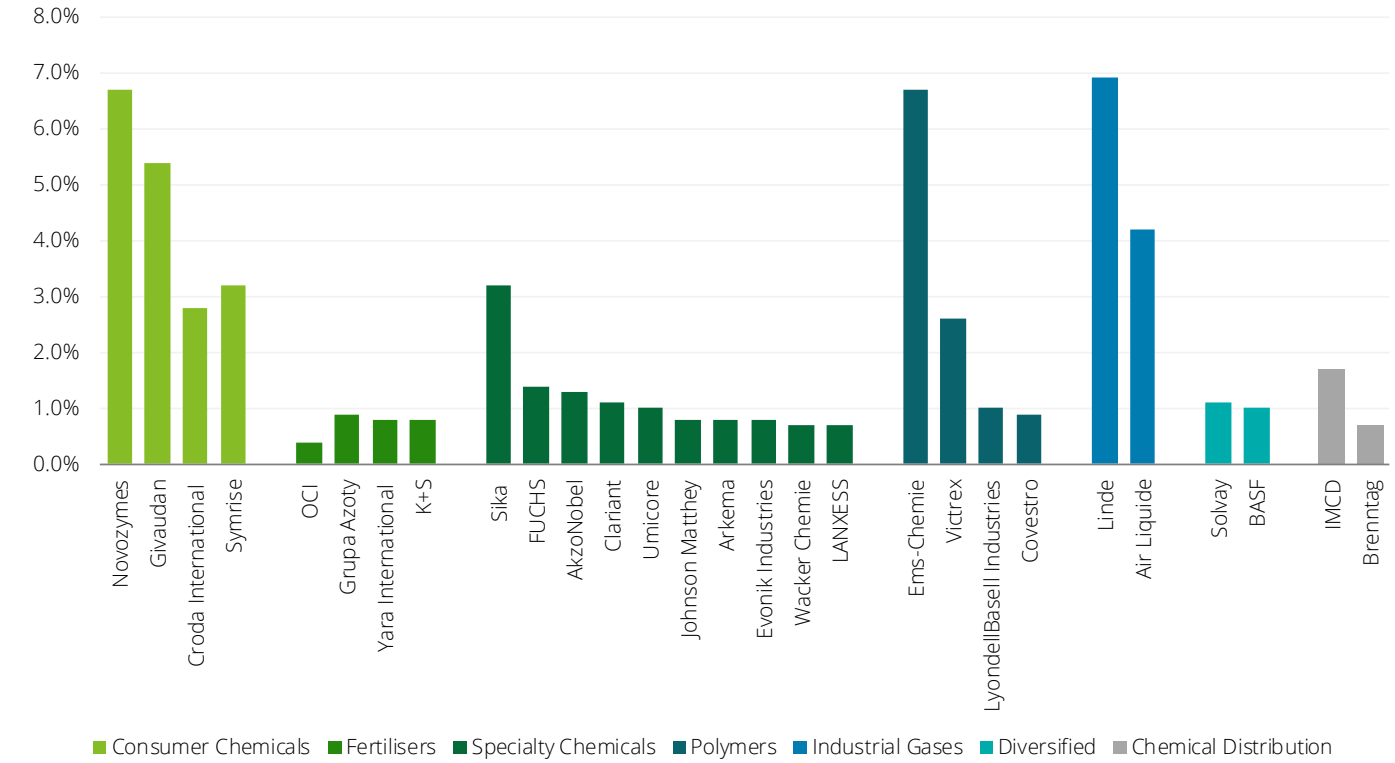


Fig. 7 – EV/EBITDA, 2025e



Sources: S&P Capital IQ, Deloitte analysis.

Tab. 2 – Chemicals M&A Activity (Selected Transactions)

Strategic Buyer **Median Strategic Buyer 10.0x** Financial Buyer **Median Financial Buyer 7.5x**

	Date	EV ($m)	Target Company	Country	Bidder Company	EV/EBITDA (reported)
2025	Mar-25	154	Dipsol Chemicals Co Ltd (100% Stake)		Quaker Houghton	10.5x
	Mar-25	2,919	Asia-Potash International Investment (Guangzhou) Co Ltd (5% Stake)		Huineng Holding Group Co Ltd	13.0x
	Mar-25	304	Tenma Corporation (66.85% Stake)		FHL Holdings Co Ltd	26.9x
	Mar-25	24,303	Borouge plc (64% Stake)		Borealis AG; OMV AG	9.9x
	Mar-25	13,400	Nova Chemicals Corp (100% Stake)		OMV AG; Abu Dhabi National Oil Company PJSC	7.5x
	Mar-25	1,225	Genesis Energy LP (Alkali Business) (100% Stake)		Kew Soda Ltd; We Soda US LLC	2.5x
	Feb-25	89	Lotte Chemical Pakistan Ltd (75.01% Stake)		AsiaPak Investments; Montage Oil	6.5x
	Feb-25	2,165	Sumitomo Bakelite Co., Ltd. (5.91% Stake)		Sumitomo Bakelite Co., Ltd.	7.9x
	Jan-25	7,550	Zangge Mining Co Ltd (24.82% Stake)		Zijin Mining Group; Zijin International Holdings Co Ltd	27.4x
2024	Dec-24	49,250	Shin Etsu Chemical Co Ltd (1.01% Stake)		Shin Etsu Chemical Co Ltd	8.2x
	Dec-24	643	Hyosung Chemical Corp (Specialty gas business) (100% Stake)		Hyosung TNC Corp	15.9x
	Nov-24	16,468	Hanwha Corp (6.09%)		Hanwha Aerospace Co Ltd; Hanwha Energy Corp	5.4x
	Oct-24	4,350	AOC LLC		Nippon Paint Holdings Co Ltd	8.2x
	Oct-24	2,912	Alpek SAB de CV (82.09%)		Existing Shareholders	6.0x
	Oct-24	6,624	Arcadium Lithium plc		Rio Tinto Plc	21.1x
	Sep-24	2,292	Sumitomo Bakelite Co., Ltd. (7.02%)		GIC Pte Ltd	7.5x
	Sep-24	957	Ningbo Changhong Polymer Scientific & Technical Inc. (11.3%)		Shenzhen Hanmo Tiancheng Investment Management Co Ltd, etc.	30.5x
	Sep-24	13,054	Qinghai Salt Lake Industry Co Ltd (12.54%)		China Salt Lake Industry Group Co Ltd	13.1x
	Aug-24	594	CI Takiron Corp (44.31%)		Itochu Corp; API LLC	7.2x
	Jul-24	2,252	Asia-Potash International Investment Co Ltd (9.01%)		Huineng Holding Group Co Ltd	10.0x
	Jul-24	10,841	Qinghai Salt Lake Industry Co Ltd (5.73%)		Sinochem Corp	11.1x
	Jul-24	1,444	Xinjiang Xuefeng Sci-Tech (Group) Co Ltd (21%)		Guangdong Hongda Holdings Group	7.8x
	Jun-24	16,685	Covestro AG		Abu Dhabi National Oil Co	16.3x
	Jun-24	3,416	Lenzing AG (15%)		Suzano SA	11.2x
	May-24	1,042	Xi'an Manareco New Materials Co., Ltd. (11.74%)		Qingdao Development Zone Investment Construction Group	8.2x
	Feb-24	1,580	Saras SpA		Vitol Holding BV; Vitol Netherlands Cooeperatief UA	2.2x
	Jan-24	2,248	Chambal Fertilisers & Chemicals Ltd (3.74%)		Chambal Fertilisers & Chemicals Ltd	8.9x
2023	Dec-23	561	Shanghai Nar Industrial Co., Ltd. (7.07%)		Keyuan Holding Group Co Ltd	31.4x
	Dec-23	7,302	Fertiglobe PLC (50%)		Abu Dhabi National Oil Company for Distribution PJSC	6.3x
	Sep-23	1,015	Ciech SA (22.3%)		Kulczyk Investments SA	4.3x
	Aug-23	6,214	Clariant AG (1.9%)		40 North Management LLC	7.0x
	Aug-23	1,428	Nanjing Red Sun Co Ltd (23.71%)		Goho Asset Management Co Ltd, etc.	9.8x
	Jul-23	1,308	Chase Corp		KKR & Co Inc	13.9x
	Jun-23	6,926	JSR Corp		JIC Capital Ltd	28.9x
	Jun-23	766	Flex Composite Group SA		Compagnie Generale des Etablissements Michelin SA	3.5x
	Jun-23	14,159	Braskem SA (34.37%)		Unipar Carbocloro SA	4.5x
	May-23	2,936	RHI Magnesita NV (19.99%)		Rhone Group LLC	5.7x
	Apr-23	3,014	Vilmorin & Cie SA (28.78%)		Groupe Limagrain Holding SA, etc.	21.8x
	Apr-23	1,209	Blackmores Ltd		Kirin Holdings Company, Ltd.	22.8x
	Apr-23	1,162	Enchem Co., Ltd. (9.36%)		JungKang Oh (Private Individual)	33.1x
	Mar-23	54,431	Rongsheng Petro Chemical Co., Ltd. (10.66%)		Saudi Arabian Oil Co; Aramco Overseas Company B.V.	12.5x
	Mar-23	8,170	Univar Solutions Inc		Abu Dhabi Investment Authority Ltd-ADIA, etc.	7.8x
	Feb-23	936	Ciech SA (48.86%)		Kulczyk Investments SA	5.7x
	Feb-23	975	Fuso Chemical Co Ltd. (5.92%)		Kunpusha Co Ltd	5.7x
	Feb-23	545	Thai Central Chemical pcl (16.55%)		Sojitz Corporation; ISTS (Thailand) Co Ltd	14.4x
	Feb-23	10,645	Hengyi Petrochemical Co Ltd (6.4%)		Zhejiang Hengyi Group Co Ltd	17.4x

Median: 9.9x Median: 7.4x
Median: 8.9x Median: 7.5x
Median: 14.4x Median: 7.4x

Note: Selected deals with the enterprise value of a target company in excess of USD500 million.
Sources: Mergermarket, Deloitte analysis.

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