



THE EUROPEAN MARKET FOR FIBER-REINFORCED PLASTICS/COMPOSITES 2025

MARKET DEVELOPMENTS.
TRENDS. CHALLENGES.
OUTLOOK.

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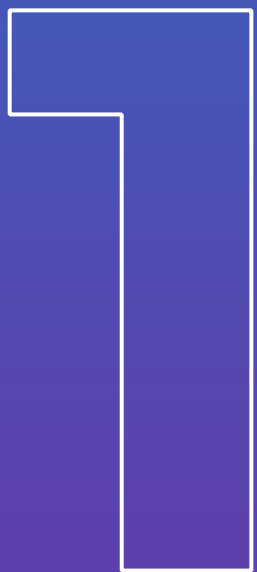
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ABOUT THE AVK

The AVK is the German trade association for fiber-reinforced plastics/composites and represents the interests of manufacturers and processors at national and European level. Its range of services includes specialist working groups, seminars, and conferences, as well as the provision of market-relevant information (www.avk-tv.de).

Nationally, the AVK is one of the five supporting associations of the GKV (German Plastics Processing Industry Association) and internationally a member of the European Composites Industry Association (EuCIA).

The AVK is a founding member of Composites Germany.



SUMMARY
INTRODUCTION

Downward trend in composites production in Europe slows / Positive outlook and rising demand

The underlying trend cannot be stopped, even in 2025. The challenges for the European composites industry remain. Against the backdrop of continuing macroeconomic weakness in many regions and, in particular, the situation of industrial production in key areas of application, a slight decline in European composites production is also expected for the current year. However, this decline is significantly lower than was forecast in mid-2025. Overall, production volume in Europe will decline by 3 %.

The reason for a generally more optimistic view of the overall situation than in previous years is a positive trend in the general demand for composite components. The disadvantage for European manufacturers and producers is that this demand is increasingly being met by non-European suppliers, both in terms of raw materials and products. Competition, especially from Asian suppliers, has increased significantly in recent months and years. There is a growing trend towards relocation of production and manufacturing, which is placing increasing pressure on the current situation of the European manufacturing industry.

This market report only considers production volumes within Europe, not demand volumes. Against the backdrop of the relationships described above, this can lead to misinterpretations of the actual market situation.

In addition to the already optimistic assessment of demand, there are also numerous opportunities and possibilities for the use of composites. The basic properties of the materials continue to favor the use of corresponding products in areas with challenging environmental influences, lightweight construction, and product optimization, but increasingly also in areas where sustainability assessments are becoming a focus. Composites show great potential here, not only for replacing existing material solutions, but also for enabling new, innovative products.

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THE MARKET UNDER CONSIDERATION

This analysis once again includes all glass fiber reinforced (GRP) materials with a thermo-setting matrix. NCF (non-crimp fabrics) continue to be reported separately. The thermoplastics market includes long fiber-reinforced thermoplastics (LFT), glass mat-reinforced thermoplastics (GMT), and continuous fiber-reinforced thermoplastics (CFRTP). In addition, the European production volume for short glass fiber-reinforced thermoplastics is reported separately.

On the application side, the figures are reported both for the two relevant material systems, thermoplastics and thermosets, and in aggregated form. Regionally, the analysis of the GRP market includes all thermosetting materials in the relevant countries in Europe whose production volumes can be reliably recorded.

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OVERALL ECONOMIC CONTEXT

The European composites market is currently facing major challenges. Against the backdrop of a growing global market, European production volumes have been declining since 2021. Since 2018, the market has lost almost 25 % of its total production volume. The reasons for this are manifold, and developments cannot be explained by individual indicators/triggers. Nevertheless, this chapter aims to place the current developments in an overall economic context, highlighting the reasons behind them, many of which lie outside the composites market (which should not be viewed in isolation).

The market for fiber-reinforced plastics is extremely heterogeneous in terms of both products and applications. Nevertheless, macroeconomic influences have a significant impact due to the two central areas of application: transportation and construction/infrastructure. Both areas, which are of central importance for composites processing, also have a significant influence on the European economy as a whole and are central pillars of industrial production.

In general, the market is currently characterized by increasing momentum with many uncertainties. The internationalization of markets and value chains is increasing, and international competitive pressure has also grown significantly. Individual events such as the coronavirus pandemic, the blockage of the Suez Canal by the container ship Ever Given, the ongoing war in Ukraine, the attacks in the Red Sea, and increasing protectionism, particularly in the US and China, have placed a heavy burden on the economy and industry as a whole, but especially on Europe. Added to this are increasing trends toward meeting demand in formerly important export markets with domestic supplies, as well as fierce price competition with non-European raw material manufacturers and producers, especially in the area of standard products, which European suppliers are currently unable to counter in some cases.

The automotive sector in particular, a key industry for the European composites industry, is currently showing weak development. After a prolonged period of weakness, the construction/infrastructure sector is also only slowly beginning to develop positively again. Many other economic indicators are currently placing additional strain on European competitiveness.

An initial basic assessment of the economic development of a country or region can be made on the basis of GDP (gross domestic product) and its development. Figure 1¹ shows the development of GDP at current prices in billions of US dollars for selected regions.

It can be seen that the largest economies in Europe (Germany, France, Spain) in particular have not been able to keep pace with the development of other regions of the world in recent years.

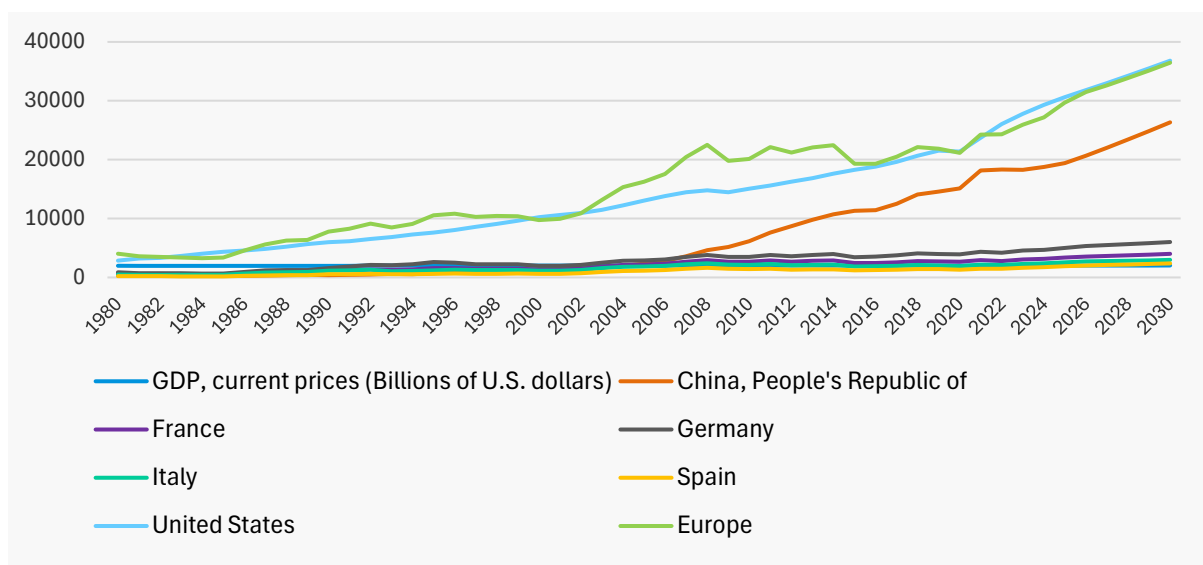


Figure 1: GDP development of selected countries

This trend is also evident when looking at the annual percentage change in GDP growth. Here, for example, China and the US currently show significantly higher values than most major European economies.

The corresponding trend analysis by the IMF (International Monetary Fund) shows no change in the general trend at the present time, with a positive overall forecast (see Figure 2²). Europe, and in particular most of the major economies within Europe, are currently falling further behind global developments in Asia and the US.

¹ IMF: <https://www.imf.org/external/datamap-per/NGDPD@WEO/CHN/USA/EUQ/FRA/DEU/ESP/ITA?year=2025>

² <https://www.imf.org/en/publications/weo/issues/2026/01/19/world-economic-outlook-update-january-2026>

	ESTIMATE	PROJECTIONS	
Real GDP, annual percent change	2025	2026	2027
World Output	3.3	3.3	3.2
Advanced Economies	1.7	1.8	1.7
United States	2.1	2.4	2.0
Euro Area	1.4	1.3	1.4
Germany	0.2	1.1	1.5
France	0.8	1.0	1.2
Italy	0.5	0.7	0.7
Spain	2.9	2.3	1.9
Japan	1.1	0.7	0.6
United Kingdom	1.4	1.3	1.5
Canada	1.6	1.6	1.9
Other advanced economies	1.8	2.0	2.1
Emerging Market and Developing Economies	4.4	4.2	4.1
Emerging and Developing Asia	5.4	5.0	4.8
China	5.0	4.5	4.0

Figure 2: Global Economic Outlook – Growth Forecast

In its latest regional outlook for Europe, the International Monetary Fund stated: Global growth is expected to remain stable, with momentum in high-tech sectors slowing but continuing to partially offset declines in other areas.

Although tariffs and uncertainties are likely to continue to weigh on economic activity, their impact on growth is expected to diminish over the course of 2026 and 2027.

Growth in the euro area is expected to remain stable at 1.3 % in 2026 and 1.4 % in 2027.

The slightly faster growth in 2027 reflects the projected increases in public spending, particularly in Germany, and the continued strong performance in Ireland and Spain.

The impact of the planned increase in defense spending is not expected to be felt until the following years, as the targets are to be achieved gradually by 2035.

Compared to other regions, the euro area is benefiting less from the recent technology-driven investment surge.

The ongoing impact of rising energy prices following Russia's invasion of Ukraine will continue to weigh on production, with additional pressure coming from the real appreciation of the euro against the currencies of countries that export similar products.³

However, a highly aggregated value such as GDP is rather general in nature for any economy. The manufacturing sector is of particular interest to the composites industry. The manufacturing sector, and industry in particular, is currently unable to counteract the above-mentioned negative factors in their entirety. However, as already indicated, the current upheavals also offer numerous opportunities and possibilities.

Eurostat, the statistical office of the European Union, provides important insights into economic development for assessing the situation of the manufacturing industry. The relevant statistics show that the share of manufacturing in gross value added in the European Union reached its lowest level in ten years in 2024, at 15.7 % (see Figure 3)⁴. Current statistics show that in Germany in particular, this figure has fallen again by 1.3 % for 2025.⁵

³ <https://www.imf.org/-/media/files/publications/weo/2026/january/english/text.pdf>

⁴ Eurostat: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Industrial_production_statistics#Overview

⁵ DESTASTIS: https://www.destatis.de/DE/Presse/Pressekonferenzen/2026/bip2025/statement-bip.pdf?__blob=publicationFile&v=4#:~:text=The%20service%20sector%20presented%20a%20mixed%20picture.&text=There%20were%20differences%20between%20the%20sectors,but%20it%20is%20currently%20comparatively%20low.

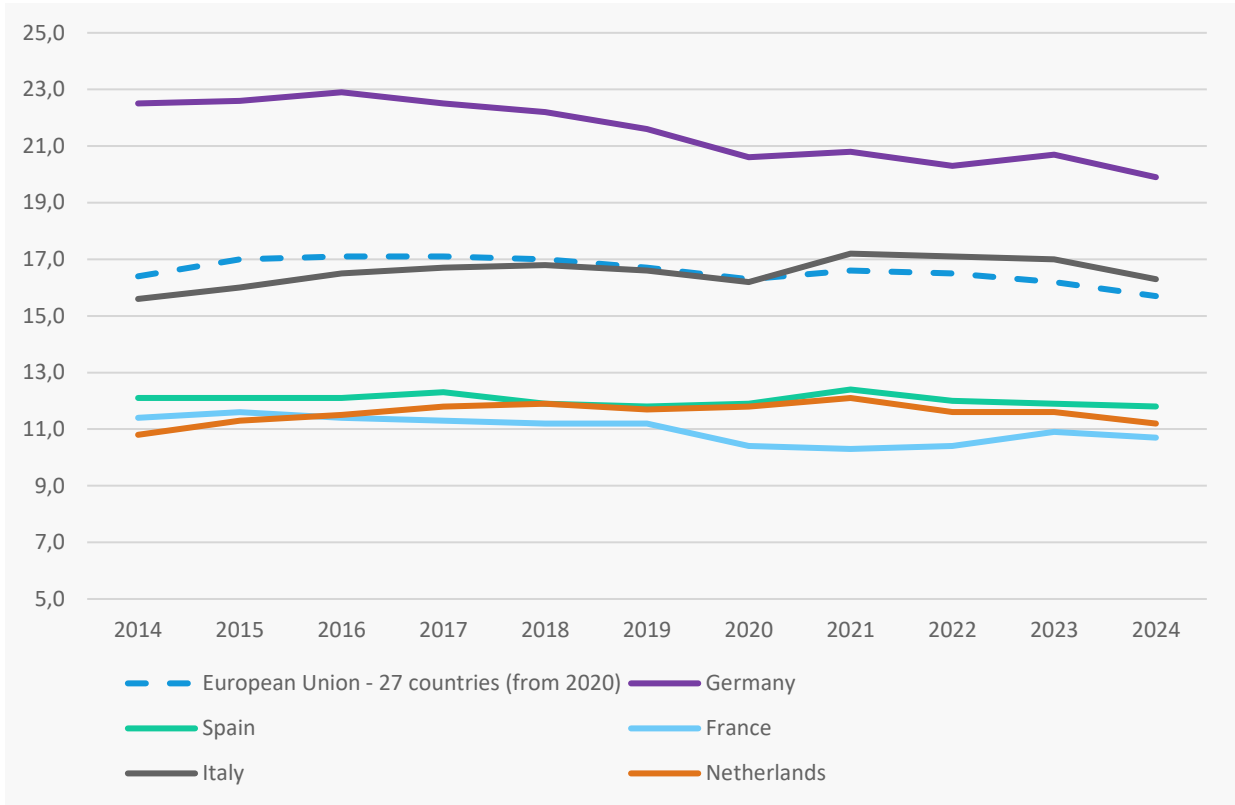


Figure 3: Share of manufacturing in gross value added (annual/percent)

Looking at pure industrial production in the European Union, which is the most important sector for composite materials production, initial positive trends are also evident here, in line with the cautiously positive assumptions regarding overall economic development (GDP). After a long period of weakness, an increase in industrial production (2021=100; seasonally adjusted series) can be observed for 2025 (see Fig. 4⁶).

⁶ EUROSTAT: <https://ec.europa.eu/eurostat/web/products-euro-indicators/w/4-15012026-ap>

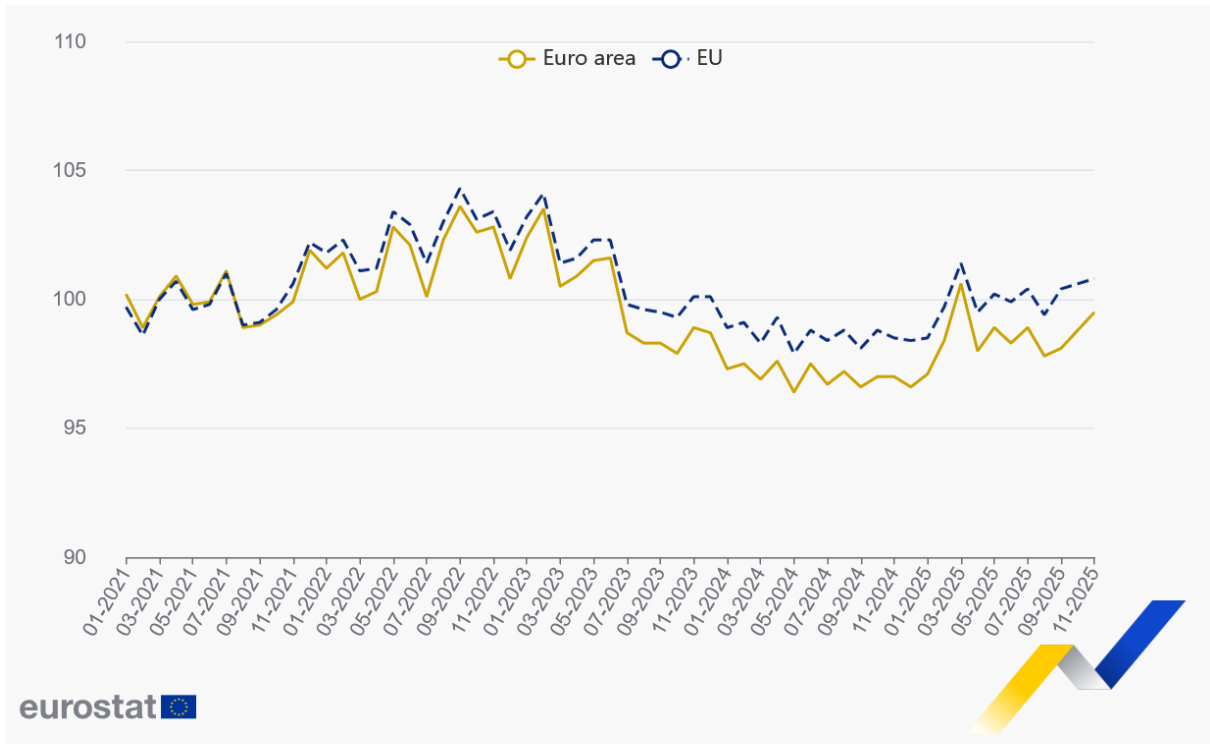


Figure 4: Industrial production in Europe (2021=100; seasonally adjusted)

Despite this initially positive trend, manufacturers in the European Union face numerous challenges. On behalf of the WsK (Wir sind Kunststoff/We Are Plastics) network, a survey was conducted in the middle of last year to identify the factors that are perceived as obstacles to European competition. A total of 146 companies from the plastics processing and manufacturing sector were surveyed. Although the survey focused on Germany as a business location, it nevertheless highlights key areas for improvement.

Overall, Germany receives a score of 4.1 as a business location, with 1 being excellent and 6 being unsatisfactory. The main advantages cited are proximity to customers (2.4), proximity to suppliers (2.5), and industrial networks (2.6).

Significant obstacles include bureaucracy and regulatory burdens (5.2), energy costs (5.1), and increasing legal and environmental regulations on plastics (4.8)⁷. In many cases, high wage/unit labor costs are also mentioned.

There are therefore many areas where there is a great need for action, which must be addressed both by the industry itself and with the help of economic policy in order to translate the current burgeoning optimism into a measurable recovery. In the course of this report, individual sub-sectors of the composites market will be analyzed in more detail.

⁷ GKV - <https://www.gkv.de/de/service/presse/kunststoff-verarbeitende-industrie-fordert-wachstumsagenda.html>



**OVERALL
DEVELOPMENT OF THE
COMPOSITES MARKET**

According to current estimates by JEC (JEC World is the global trade fair for composite materials), the volume of the global composites market in 2025 was between 13.3 and 15.9 million tons. The reason for the wide variance is a division of expectations between a "lower case" and "upper case" estimate. This is due to a high degree of uncertainty regarding additional production volumes from China. In 2024, the corresponding scenarios were given as 13.2 and 15.7 million tons, respectively. Global market growth of around 1% can therefore be assumed.

In comparison, European composites production volume is expected to decline by 3 %. The total European composites market thus comprises a volume of 2,281 kilotons (kt) after 2,351 kt in 2024 (see Fig. 5). The market therefore continues to decline and falls even further behind the Corona pandemic years.

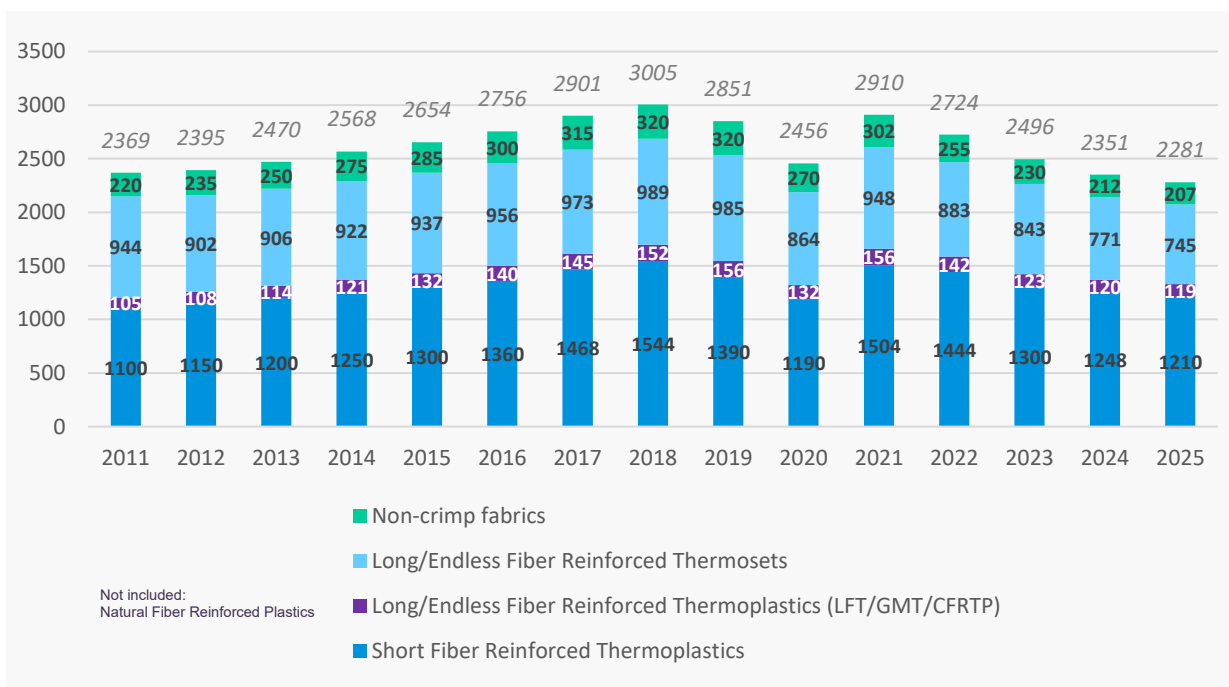


Figure 5: Composites production volume in Europe since 2011 (in kt)

Overall, as already explained, market momentum in Europe was weaker than in the global market.

Europe's share of the global market is 17 % in the lower case scenario and 14 % in the upper case scenario. Market shares continue to shift in favor of America and Asia accordingly.

As in previous years, developments within Europe are not uniform. The differences can be attributed to regionally very different core markets, the high variability of the materials processed, a wide range of different manufacturing processes, and areas of application that vary greatly. Accordingly, there are regional differences in developments. The UK/Ireland/Spain/Portugal and the Eastern European countries were able to gain market share, while Germany, Italy, and the Benelux countries suffered slight declines.

In terms of applications/materials, all areas are affected by absolute declines in production volume. The shifts in market share are rather marginal. A detailed analysis of both regional developments and the development of different processes/systems will follow in the next chapters.

In terms of volume, the largest share of total composites production goes to the transport sector, which accounts for almost 50 % of the market volume (see Fig. 6). Overall, the transport sector is losing a small share of the market, while the other segments are gaining slightly.

The transportation sector includes passenger car production, but also commercial vehicles, aviation, public transportation, and much more. The construction/infrastructure sector includes pipelines, containers, tanks, profiles, and more. The electrical/electronics sector includes, for example, switches, housings, telecommunications equipment, and control cabinets.

Not included here are CRP (Carbon fiber reinforced Plastics) volumes, which, with a share of around 2 to 3 % of the total market, have only a minor influence on this distribution. In the following, the term "composites" refers to all long and continuous glass fiber-reinforced, thermosetting, and thermoplastic composites.

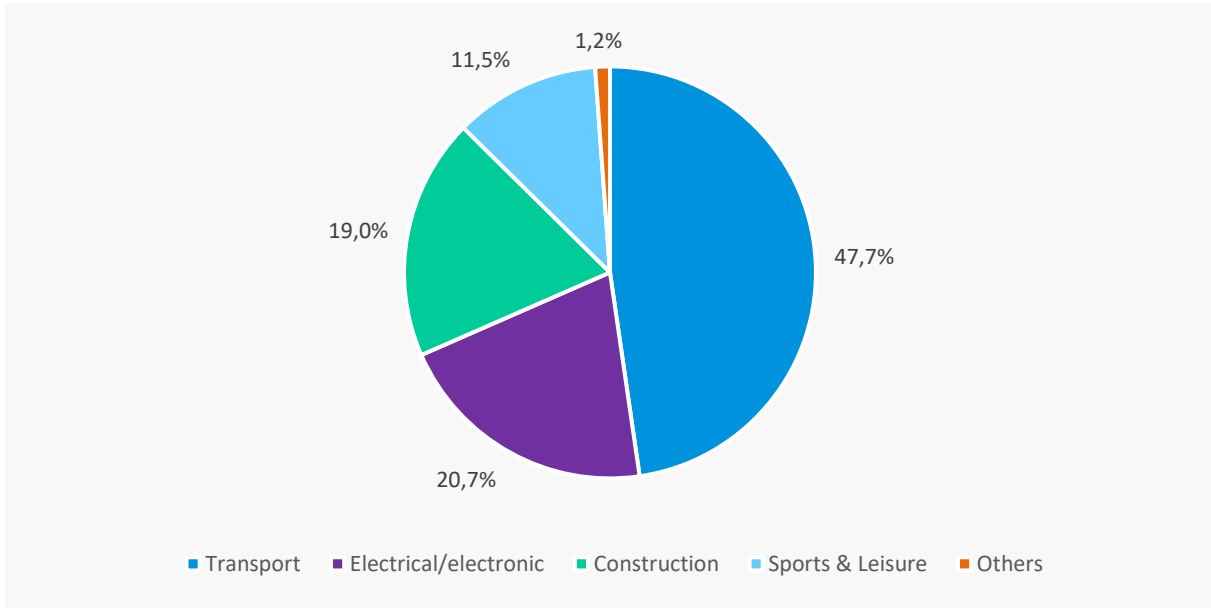


Figure 6: Total composites market by application area in 2025 (in %)

4.1 DEVELOPMENT OF THE MARKET FOR THERMOSETTING COMPOSITES

The total production volume of thermosetting composites in 2025 was 952 kt, down from 983 kt in the previous year. This means that this material group accounted for 41.7 % (2023: 41.8 %) of the total market in Europe. Compared to the long-term trend, there has been a slowdown in the shift from thermosetting to thermoplastic materials (see Fig. 7). This can be explained by the high dependence of thermoplastics on the automotive industry, which is currently particularly affected by declines.

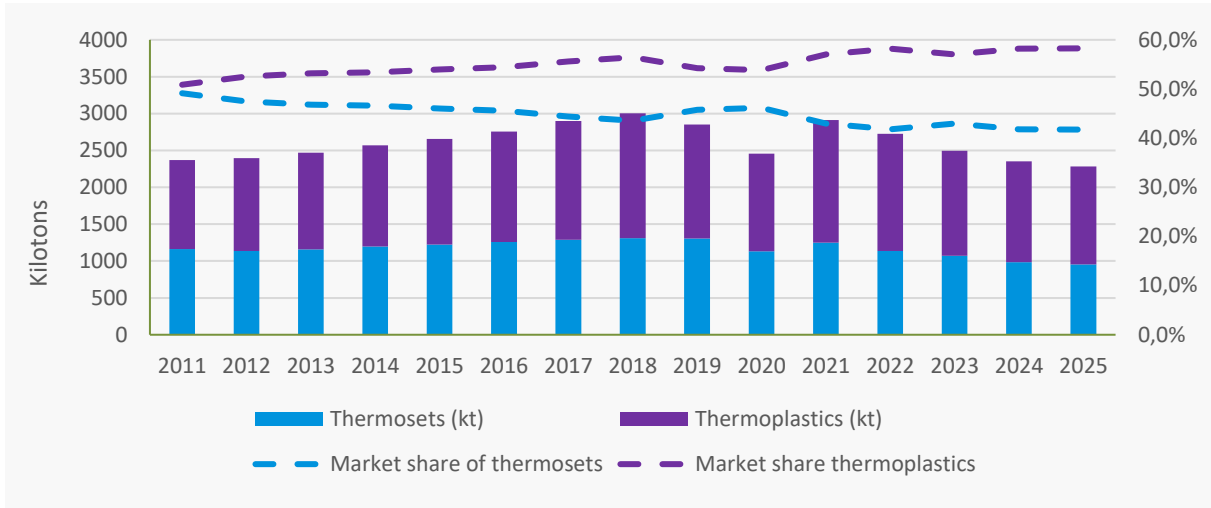


Figure 7: The European composites market by material systems (in % and kilotons)

The two main areas of application for thermoset composites remain construction/infrastructure and transportation (see Fig. 8).

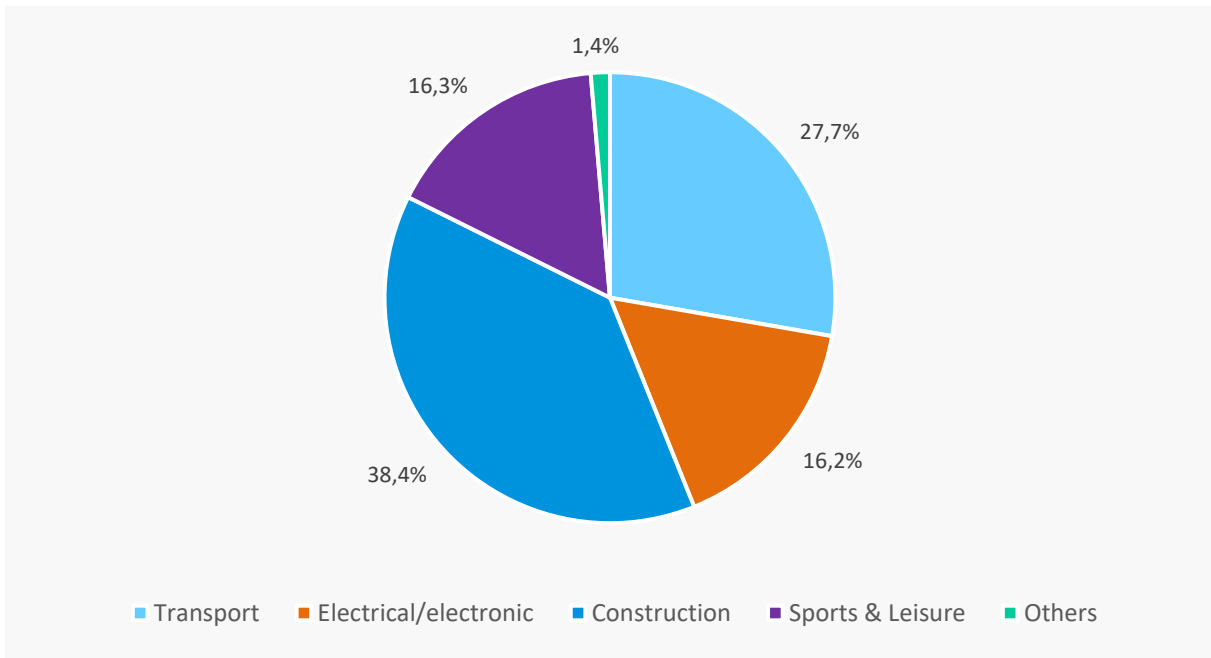


Figure 8: Thermoset composites by application area in 2025 (in %)

While the transportation sector was the largest application segment for thermoset materials until 2019, recent years have seen a general shift toward the construction and infrastructure sector. Compared to the previous year, 2025 will see declines in the transportation and electrical/electronic sectors.

4.2 DEVELOPMENT OF THE MARKET FOR THERMOPLASTIC COMPOSITES

The market for thermoplastic composites in Europe will have a total volume of 1,329 kt in 2025, down from 1,368 kt in the previous year (source: AMAC). The market share of these systems in the overall European market will rise to 58.3 %, up from 58.2 % in 2024. Compared to the previous year, the market volume will decline by 2.9 %, which is roughly the same rate as the overall market.

The largest material group within thermoplastic composites, but also in the overall market, is short glass fiber reinforced plastics. Here, the reinforcing fiber has a length of only a few millimeters. The reinforcing effect differs greatly from that of long or continuous fiber systems. For this reason, among others, these materials are often not considered in the composites sector. In terms of materials, this group is dominated by polyamide (PA). The picture is different in the area of LFT, where significantly longer fibers are used. Here, polypropylene (PP) is used for the most part.

Overall, short glass fiber-reinforced thermoplastics account for a volume of 1,210 kt after 1,248 kt in 2024. The decline is therefore 3 %. The market share in the thermoplastic composites segment remains above 90 %. This individual material group accounts for 53 % of the total European composites market (see Fig. 9).

In accordance with the above explanation, short fiber-reinforced thermoplastics are not included in the market figures below.

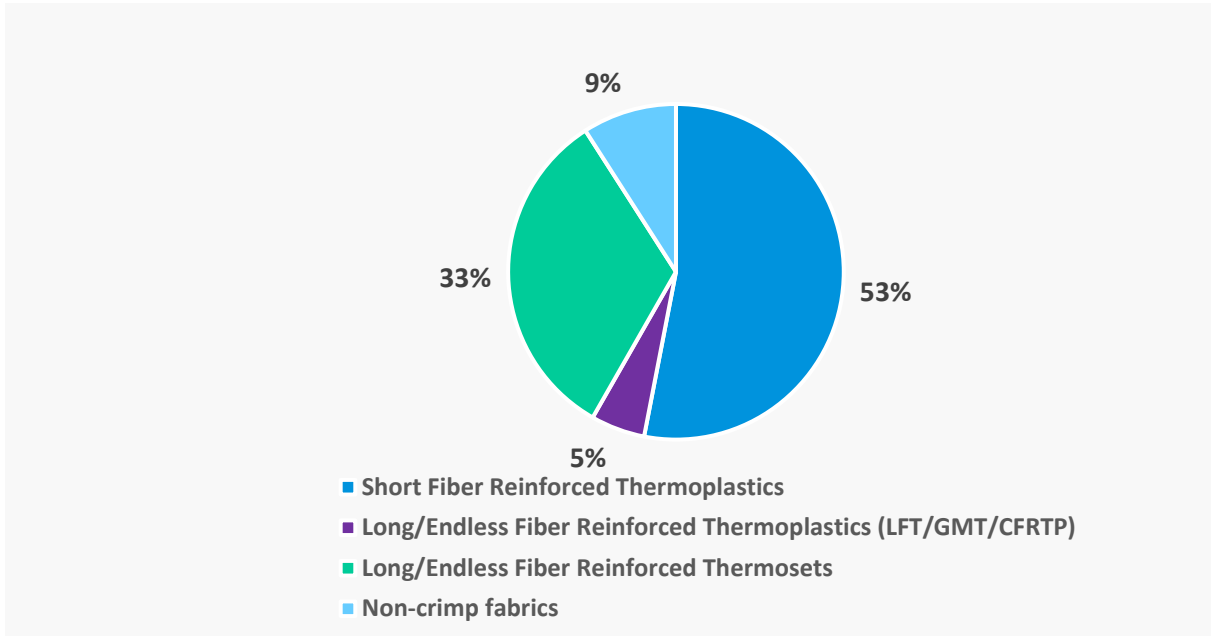


Figure 9: The European composites market in 2025, broken down by material systems

The group of thermoplastic, glass fiber-reinforced materials considered here is divided into three groups. The largest group within thermoplastics is long fiber-reinforced plastics (LFT). In 2025, LFT accounted for a market volume of 87 kt. The decline in this segment was slightly more than 1 %. The market for glass mat reinforced thermoplastics (GMT) is significantly smaller, with a total volume of 22 kt, as is the market for continuous fiber reinforced thermoplastics, with a volume remaining unchanged at 10 kt.

The main area of application for thermoplastic composites is the transportation sector, which accounts for almost two-thirds of the market (see Fig. 10). Within this segment, the passenger car and commercial vehicle sectors dominate. Together with electrical/electronic applications, this results in a market share of 86 % for 2025.

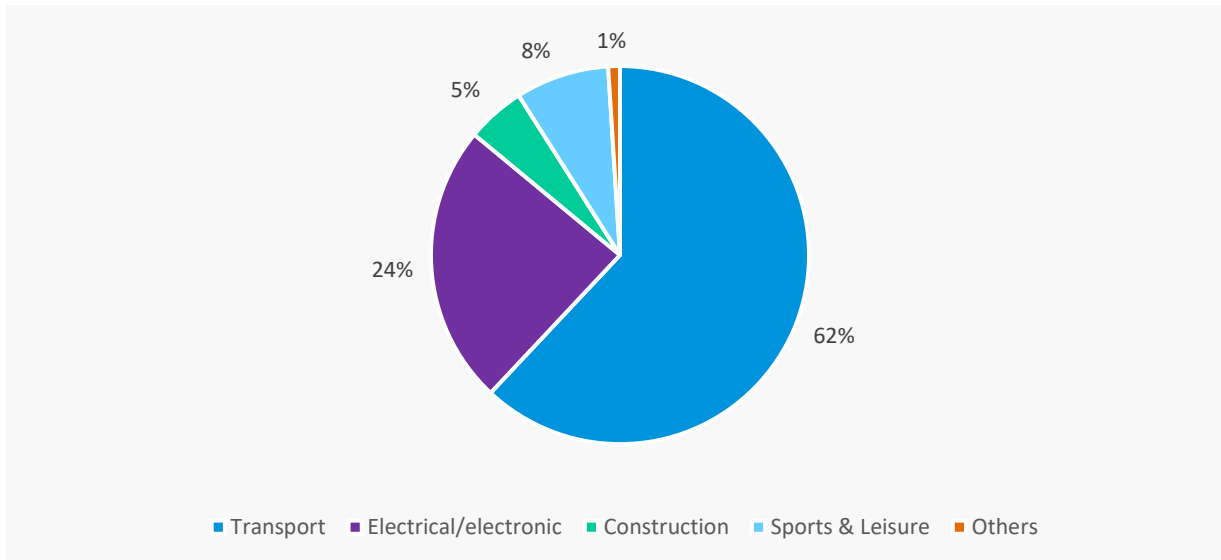


Figure10 : Thermoplastic composites by application area in 2025 (in %)

The passenger car market is of central importance for thermoplastic composites. While the automotive industry often spoke of economic weakness in the first two years after the coronavirus pandemic, 2025 will reveal the full extent of the structural problems facing the European and, above all, German automotive industry. The first sales problems were already apparent in 2018. Although new car registrations in the EU will rise slightly again in 2025 after an almost 30-year record low (9.3 million units registered in 2022), they will remain well below the peak levels of 2018/2019 (see Fig. 11⁸).

⁸ Data source: ACEA - European Automobile Manufacturers' Association

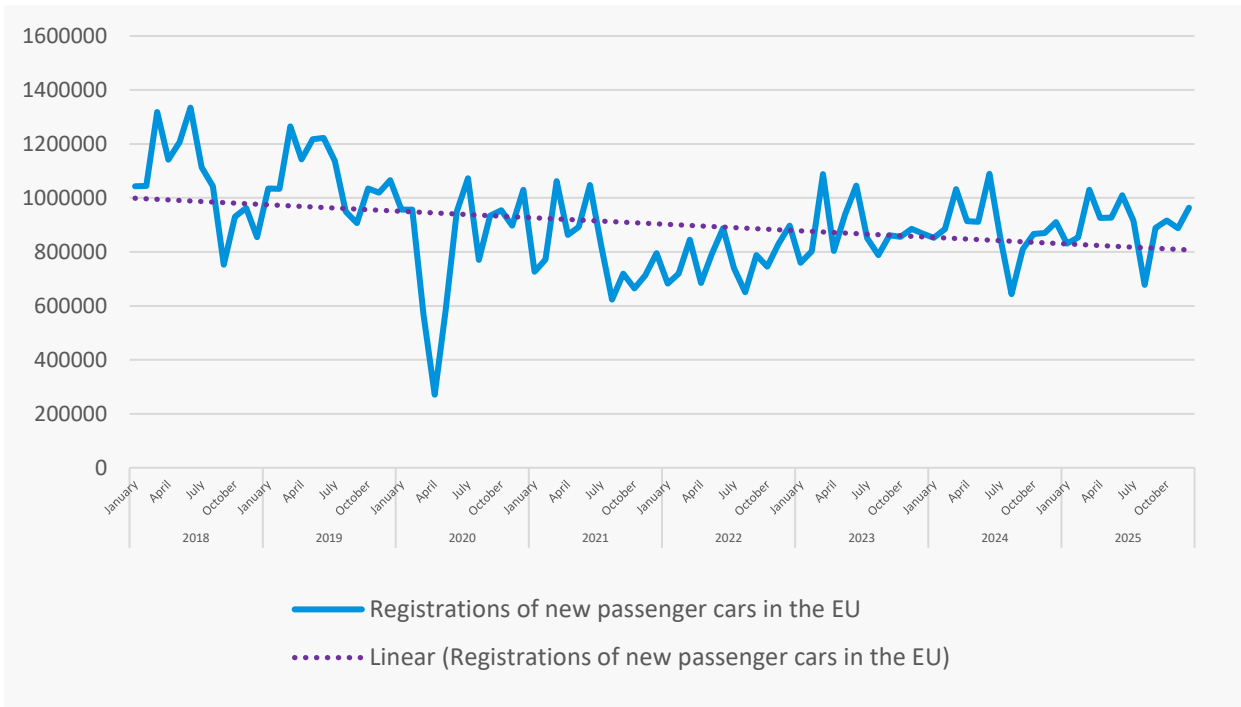


Figure 11: New passenger car registrations in the EU (monthly)

The cumulative volume for 2025 is around 10.8 million units, compared to 10.6 million units in the previous year (see Fig. 12).

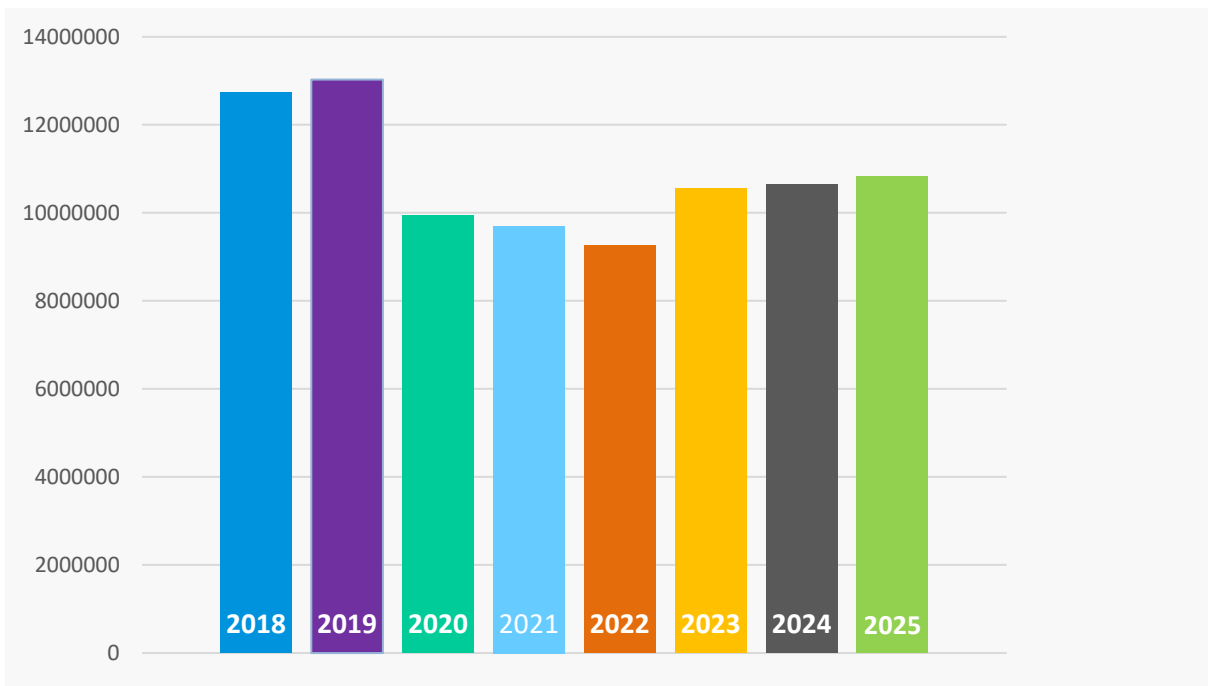


Figure 12: New passenger car registrations in the EU (units/year)

It should not be overlooked that the number of registrations does not provide any direct indication of the origin of the passenger cars. In addition, European and especially German OEMs (original equipment manufacturers) are often dependent on exports to non-European sales markets.

A survey conducted by the Handelsblatt newspaper in September 2025 analyzed the current situation and concluded: "German car manufacturers Volkswagen, BMW, and Mercedes are in a deep crisis. Their market shares in China, the world's most important car market, have fallen significantly this year. And the Germans are also losing ground in the US. In addition, their dependence on the European market is growing – although this market is largely stagnating. (...) Looking at the production figures for Volkswagen, BMW, and Mercedes, it is clear that fewer German cars are being manufactured in all three regions. The decline is strongest in the US, at 12.6 percent, while total production is falling by only four percent. In China, German production is down 8.5 percent – but overall, production by all manufacturers in China is up 13.4 percent. So here, the performance of German companies is decoupled from the overall market."⁹ Figure 13 shows the development of car production from January to September 2025, compared with the same period last year in percent.

This development is becoming an increasing problem for European manufacturers of composite components and the supplier industry. A car that is not manufactured in Europe does not require European components. To make matters worse, the manufacture of such components is increasingly taking place in the respective sales regions.

⁹ Handelsblatt: https://www.handelsblatt.com/unternehmen/industrie/autoindustrie-diese-grafiken-zeigen-die-krise-der-deutschen-autobauer/100172440.html?mls-to-ken=6c8ba8686fec9ee9a81bc9f2637f62f17d57584dadf5efd9f3cb62b445bcc983c9bea936e7b9f404ee884f34bb8636920100172440&utm_medium=sm&utm_source=xing&utm_campaign=newsletter; download January 19, 2026

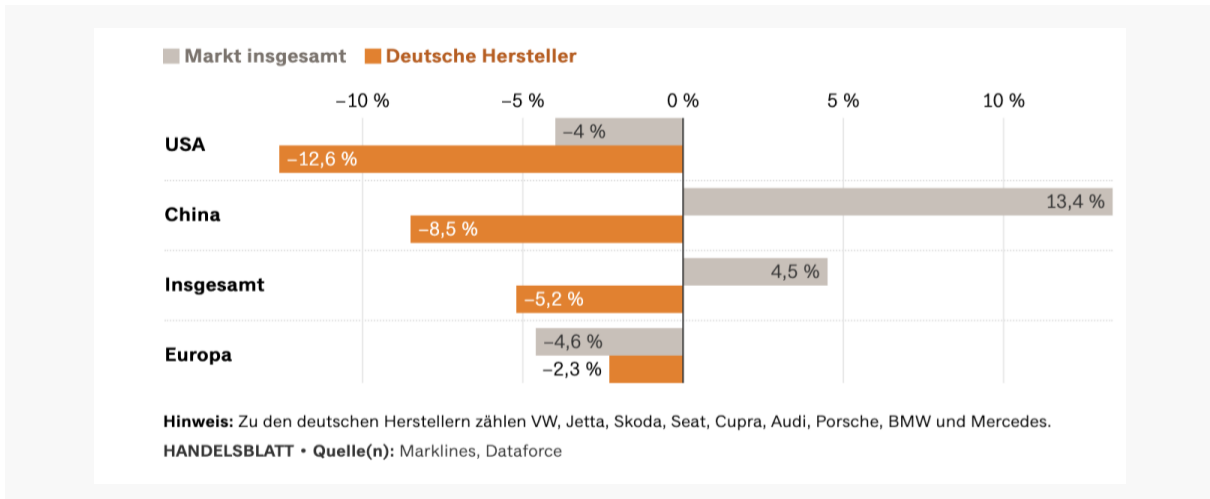


Figure 13: Production development of German OEMs from January to September 2025 (by region)

After commercial vehicle registrations grew by 5.5 % in 2024 compared to 2023, 2025 was also marked by declines in this area. According to ACEA (European Automobile Manufacturers' Association), new registrations of vans in the EU fell by 8.8 %, with the three largest markets contributing to this decline. France recorded the sharpest decline with a drop of 5.6 %, followed by Germany (-5.4 %) and Italy (-5 %). In contrast, the number of registrations in Spain rose by 11.7 %.

New truck registrations in the EU also fell by 6.2 % to a total of 307,460 units. In terms of volume, this decline was due to a 5.4 % drop in registrations of heavy-duty trucks and a 9.9 % decline in demand for medium-duty trucks. All major markets recorded declines, with Germany (-12.2 %) showing a double-digit decline, followed by France (-9 %) and Spain (-3.6 %).

Meanwhile, new bus registrations in the EU rose by 7.5 % in 2025 to a total of 38,238 units. Among the key markets, Germany (+28 %) and Poland (+16.6 %) led the growth, while Italy (-15.9 %) and Spain (-4 %) continued to record declines.¹⁰

The figures presented illustrate the challenging market environment facing the transport sector, and the automotive sector in particular.

¹⁰ <https://www.acea.auto/cv-registrations/new-commercial-vehicle-registrations-vans-8-8-trucks-6-2-buses-7-5-in-2025/>

5

**TRENDS IN
PROCESSES/PARTS**

Table 1 shows the quantitative development of the main processes/parts used in composites manufacturing in recent years. The naming of individual segments is not always entirely consistent or precise. In addition to the processes mentioned, there are numerous other production processes/technologies, but these can essentially be assigned to one of the areas mentioned.

	2020	2021	2022	2023	2024	2025
SMC (kt)	174	197	190	202	187	183
BMC (kt)	70	81	78	79	72	70
SMC/BMC (kt)	244	278	268	281	259	253
Hand lay-up (kt)	121	135	120	107	94	91
Spray-up (kt)	88	97	85	79	71	69
Open mold (kt)	209	232	205	186	165	160
RTM (kt)	131	138	130	123	113	109
Sheets (kt)	85	92	84	76	70	67
Pultrusion (kt)	50	56	52	50	48	46
Continuous processing (kt)	135	148	136	126	118	113
Filament winding (kt)	70	72	68	60	56	53
Centrifugal casting (kt)	60	65	62	54	48	46
Pipes and tanks (kt)	130	137	130	114	104	99
Non-crimp fabrics (kt)	270	302	255	230	212	207
Others (kt)	15	15	14	13	12	11
Total thermoset market (kt)	1,134	1,250	1,138	1,073	983	952
GMT (kt)	29	27	25	23	22	22
LFT (kt)	93	119	105	90	88	87
CFRTP (kt)	10	10	12	10	10	10
Short fiber (kt)	1,190	1,504	1,444	1,300	1,248	1,210
Total market thermoplastics (kt)	1,322	1,660	1,586	1,423	1,368	1,329
Total Composites Market (kt)	2,456	2,910	2,724	2,496	2,351	2,281

Table 1: Composites production volumes in Europe by process/parts (kt = kilotons)

Figure 14 below illustrates the long-term development of the various market segments since 2011. As in the previous year, all segments shown are affected by absolute declines in production volume this year. Short glass fiber-reinforced plastics have been excluded from this analysis. This is to provide a clearer overview and because the differences between this material group and the GRP industry have already been pointed out above: The material properties of short glass fiber-reinforced materials differ significantly in some cases from those of long and continuous fiber-reinforced systems. The glass fibers contained in these materials are generally less than 2 mm in length. Nevertheless, they increase the level of properties compared to non-reinforced materials. In particular, they have a positive influence on the modulus of elasticity and stiffness of the materials. With increasing fiber length, an increase in strength and impact resistance can also be observed.

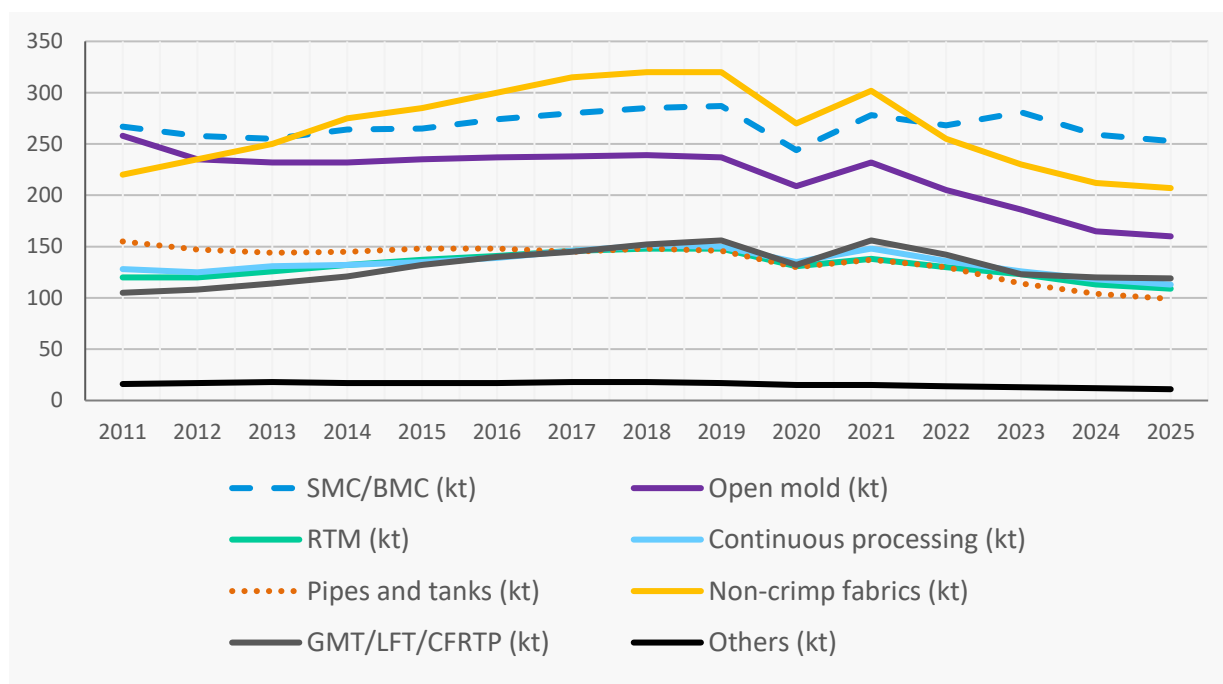


Figure 14: Long-term development of selected composites market segments (in kt)

It is clear that SMC/BMC represent the largest single segment in the European GRP market (all thermosetting materials as well as long and continuous fiber-reinforced thermoplastic materials).

These are often used in large-scale series applications in the electrical/electronic and transportation sectors, but also in construction and infrastructure.

Non-crimp fabrics (fabrics) form the second largest group. While applications were long predominantly found in the wind energy/rotor blade and boat building sectors, in recent years, areas of application in aviation, sports and leisure, automotive, and construction/infrastructure have also been added.

In third place are the so-called open mold processes, which often involve a high degree of manual labor. In this area in particular, increasingly stringent guidelines, for example on the use of styrene, as well as a shortage of personnel and high labor costs, have led to a shift in production away from Europe. In terms of volume, the other processes mentioned here are at a similar level.

Below is an individual assessment of the segments covered here.

5.1 SMC/BMC

The manufacture of SMC (sheet molding compound) and BMC (bulk molding compound) components is the largest market segment in the thermoset GRP industry, with a processing volume of 253,000 tons. Both processes account for more than 26.6 % of the European market volume. The semi-finished products/pressing compounds are processed using pressing or injection molding processes.

SMC/BMC are mainly used in (large-scale) series production. Both materials have been successfully established for many years in the electrical/electronic and transportation sectors.

Typical applications include headlight systems, lamp housings, switch cabinets, enclosures, and exterior components in commercial vehicles, automobiles, and public transportation. In recent years, applications in the e-mobility sector have also been increasingly added, particularly in the area of battery housings and covers as well as charging infrastructure.

SMC is the significantly larger of the two market segments, with a volume of 183 kilotons (kt). The market volume for BMC is 70 kt. The SMC market will decline by 2.1 % in 2025, performing less negatively than the overall market.

The BMC market will decline by 2.8 %, which is roughly in line with the overall market development. The total production volume of this segment will fall by 2.3 %.

After a positive development, especially in 2023 and the first half of 2024, triggered by numerous projects with OEMs in the field of battery technology, the market has now also slipped into negative territory. In many cases, research projects have been discontinued, or other material systems are being used. Positive effects, such as the use of SMC for the production of battery covers, can at best cushion the current overall decline. Overall, the pressure from the poor performance of the automotive business is noticeable, albeit not with the feared effects.

Looking ahead, there is little prospect of growth in the automotive segment. After a weak performance in the electrical/electronic market in 2024, the market recovered in 2025, which helped to smooth out market movements. The construction/infrastructure sector also recovered slightly, with forecasts predicting modest growth in the coming years.

According to the DIW (German Institute for Economic Research), a trend reversal is on the horizon for the German construction sector: "The German construction industry is facing a trend reversal: after years of declining construction output, construction volume is expected to grow again in 2026 for the first time since 2020. According to the new construction volume calculation by the German Institute for Economic Research (DIW Berlin), construction volume is expected to increase by 1.7 percent in the current year and by 3.4 percent in 2027. The main driver of this development is public construction. However, the urgently needed new housing construction is also picking up again."¹¹

¹¹

https://www.diw.de/de/diw_01.c.996818.de/kehrtwende_am_bau_die_zeichen_stehen_wieder_auf_wachstum.html#:~:text=The%20German%20construction%20industry%20is%20facing%20a%20more%20cautious%20approach%E2%80%9C%2C%20expects%20Pagenhardt.

The forecasts for Europe are also optimistic: "European construction is on the upswing. Real growth of 2.4 % is expected for 2026, 2.2 % for next year, and 1.9 % for 2028. This is shown by forecasts from the EUROCONSTRUCT research group."¹²

Despite ongoing weakness in the transport sector, this development points to a sideways movement or even a slight increase in demand in this area, with economic expectations remaining unchanged.

5.2 NCF – NON-CRIMP FABRICS

In the 2000s until the coronavirus pandemic, this sector grew at a well above-average rate. Production peaked in 2018/2019 with a total volume of 320 kt. NCF became the largest market segment within the European composites industry.

Due to a sharp decline, particularly in the manufacture of blades for wind turbines and parts for boat building, the market segment has weakened significantly in recent years. A further decline is also expected for 2025.

Overall, the market segment will lose 2.4 % and still represent a volume of 207 kt. Over the past five to six years, NCF has thus lost around one-third of its market volume in Europe.

The main areas of application were and remain the wind industry and boat and shipbuilding. In addition, there are increasingly applications in the areas of transport/public transport, sports and leisure, as well as construction and infrastructure.

Sustainability, renewable energies, and the wind industry in particular are repeatedly cited as potential growth drivers, including for the composites industry.

According to the latest surveys by WindEurope, wind turbines with a capacity of almost 300 GW are now installed in Europe.

The trend points to further growth (see Fig. 15). It is currently assumed that the EU will build an average of 22 GW of new wind farms per year between 2025 and 2030.

¹² <https://www.ifo.de/pressemitteilung/2026-02-13/europas-bauwirtschaft-kommt-fahrt>

This would give the EU an installed wind power capacity of 344 GW by 2030: 298 GW onshore and 46 GW offshore. The EU's target is 425 GW. It can therefore be assumed that the strong expansion will continue beyond 2030.¹³

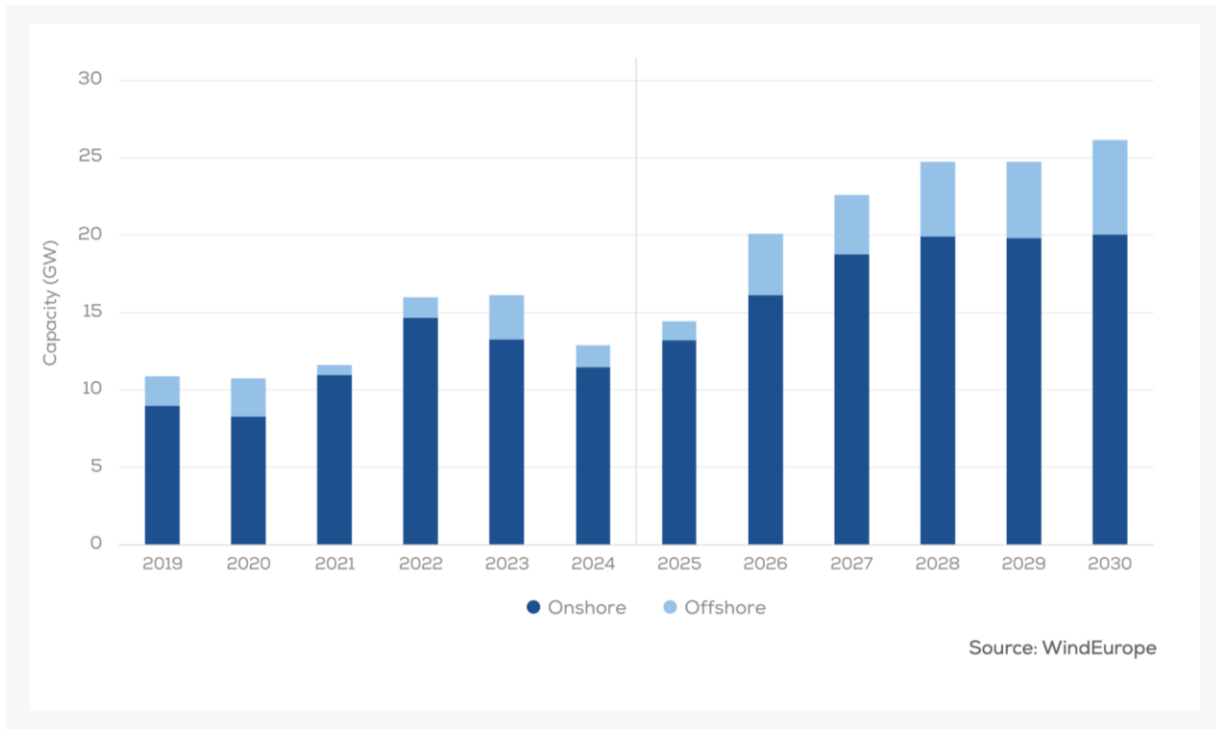


Figure 15: Annual wind turbine installations in the EU in the period 2025–2030 (forecast)

Nevertheless, the composites industry is currently unable to benefit from the opportunities that are readily available. The reasons for this can also be found in the migration of industrial production, especially of rotors. After Europe/Germany was the global leader, especially in the manufacture of plant components and blades, production has now almost completely disappeared from Europe – and with it its numerous players along the entire supply chain.

There are now only a few manufacturers still producing in Europe. Almost all plant components made of composites come from Asia.

¹³ WindEurope: <https://windeurope.org/data/products/latest-wind-energy-data-for-europe-autumn-2025/>

Even though European manufacturers of other plant components are currently still benefiting from new construction, the situation for European composite suppliers has deteriorated dramatically.

China has entered the ranks of the world's largest wind turbine manufacturers with companies such as Goldwind, Envision, Mingyang, and Windey. This strong presence is fueling fears that a development similar to that seen in the solar industry could be repeated. Although European manufacturers such as Vestas and Siemens Gamesa still dominate the market, Chinese companies are gaining market share thanks to massive, alleged subsidies, lower prices, and faster delivery times.

The reasons for the displacement of intra-European manufacturing are often related to price and/or financing models. Chinese manufacturers are often able to offer components or systems at prices significantly below European levels. Last year, this led to entire projects being awarded to contractors from Asia rather than Europe.

The European Commission has also determined that pricing is not always subject to free competition and, on February 10, 2026, launched an in-depth investigation under the EU Foreign Subsidies Regulation (FSR) to assess the activities of Chinese wind turbine manufacturer Goldwind. The Commission had launched its first formal investigation under the FSR against Chinese wind turbine suppliers in 2024 after it had initial suspicions of unfair foreign subsidies. The investigation was to focus on foreign subsidies that distort competition. During the proceedings initiated in 2024, evidence was found that Goldwind may have received foreign subsidies that distort the internal market. This has led to the current further investigation. The Commission now has a period of 18 months to complete this second phase of the investigation.

During this period, the Commission may take provisional measures to prevent irreparable damage and maintain competition in the internal market.¹⁴

Another argument is to reduce dependence on suppliers from one region. A fundamental social issue such as energy supply should be as diverse as possible.

¹⁴ WindEurope: <https://windeurope.org/news/commission-opens-second-stage-of-investigation-under-the-foreign-subsidies-regulation/#:~:text=The%20Commission%20had%20first%20started,second%20stage%20of%20the%20investigation.>

In this case, it would be desirable not to become dependent on non-European suppliers – with all the risks that this entails. Against the backdrop of a difficult overall economic situation, the wind industry could also be a growth engine for the composites industry. At present, this is not the case, and it is unable to halt the negative trend in this sub-segment.

5.3 OPEN MOLD

The segment of so-called open mold—hand lay-up and fiber spraying—remains one of the largest segments in the GRP market in Europe, with a production volume of 160 kt. However, this market segment also declined by 3 % in 2025.

Over many years, the share of open mold in the overall market has steadily declined. The general trend of open mold losing market share continued. The coronavirus pandemic brought an interruption to this trend, with high demand and an unusually high willingness to invest, for example in pool construction. While production volume was still around 285 kt in 2011, it has now fallen by almost 40 % to 160 kt.

Despite a continuing decline in production volumes, mold will nevertheless make an important contribution to GRP production volumes in the coming years. Due to their low investment costs, these processes are often the method of choice, especially in the area of special production, individual production, or small batch sizes.

Fiber spraying and hand lay-up, the most original forms of GRP processing, remain very well suited for the manufacture of large components or highly complex products.

The ongoing and continuing tightening of the legal framework for processing, especially of unsaturated polyesters/styrene, as well as adjustments to the limit values of other raw materials, are making production in Europe increasingly difficult and costly. In addition to the tightening of the legal framework, which in some cases requires costly renovations/conversions of production facilities, the industry reports that it is becoming increasingly difficult to find suitable or well-trained workers.

5.4 RTM

In this report, the RTM (resin transfer molding) segment covers all processes in which resin is infused/injected into a closed cavity. In addition to the various injection processes (HP-RTM, P-RTM, RTM-Light, etc.), this also includes infusion processes. RTM processes in which the above-mentioned NCFs are used are not included.

In recent years, many different variations of the RTM process have been developed. What all processes have in common is that dry fibers/semi-finished fiber products are used. The filled mold (in addition to the corresponding fiber products, core materials can also be used, for example) is then closed. The resin flows through the cavity in the closed mold with the aid of pressure and/or vacuum. In this process, the resin flows around or through the fibers and any additional products/semi-finished products.

After a phase in which RTM processes were able to develop continuously, European production volume is also declining at an above-average rate of 3.5 % to a total of 109 kt.

The production spectrum of this technology is very broad, and the process variations are diverse. In addition to small quantities, larger series can also be produced.

It is possible to produce both small components and larger products. In addition, a wide variety of different fiber and matrix systems can be used. Typically, corresponding pre-forms are used.

The areas of application are correspondingly broad, ranging from vehicle construction, public transport, boat and shipbuilding to sports and leisure, and aviation.

5.5 CONTINUOUS PROCESSES

The production of GRP components using continuous processes (pultrusion and the manufacture of flat panels) will see a decline in production volume of 4.2 % in 2025. Overall, the production level for pultrusion will fall by 4.2 % to 46 kt, while flat panels will see a decline of 4.3 % to a volume of 67 kt.

For years, panels have been manufactured primarily for vehicles, e.g., for side panels on trucks, caravan superstructures, or commercial vehicle conversions. In addition, they are used in facade construction and interior design.

Like the swimming pool construction industry, the caravan industry benefited from an exceptional market environment at the start of the coronavirus pandemic. Currently, the market is showing a contrasting trend.

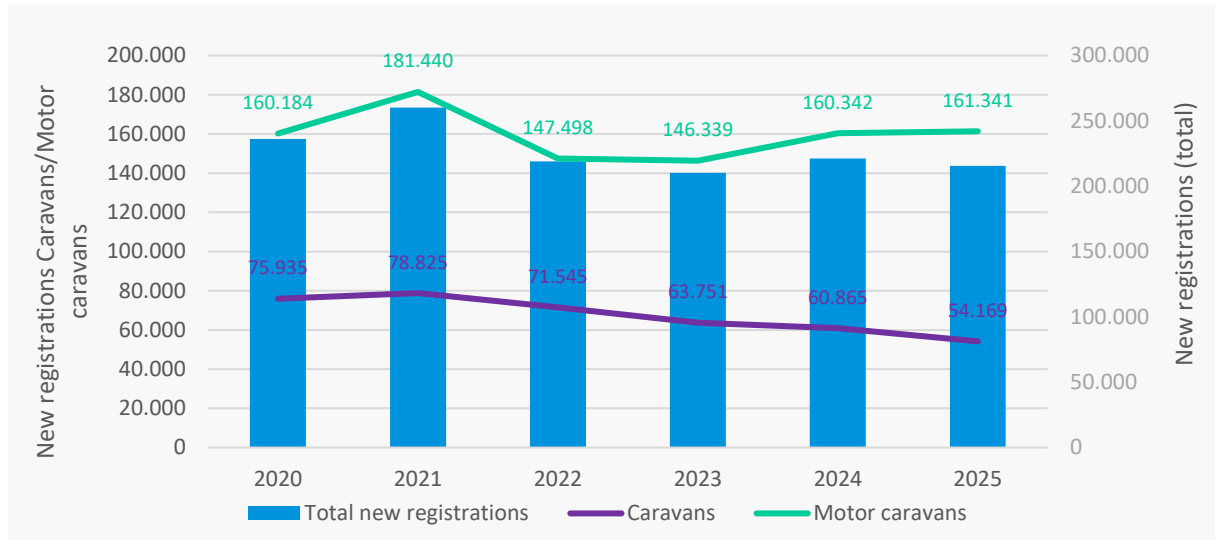


Figure 16: Registrations of new recreational vehicles in Europe

The ECF (European Caravan Federation) reports an 11 % decline in new registrations of caravans in Europe from 2024 to 2025, but an increase of 0.6 % for motorhomes. Overall, the market is declining by 2.6 % to 215,210 units.¹⁵

Negative market impulses such as this are compounded by increasing competitive pressure. For example, corresponding semi-finished products are increasingly being imported from Turkey to core Europe.

Pultrusion is used to manufacture continuous profiles. Like SMC/BMC technology and thermoplastic processes, pultrusion is considered extremely promising for the future due to its specific characteristics.

For several years now, the construction and infrastructure sectors have been considered major potential markets for pultrusion. Examples include reinforcement systems in bridge and building construction, window and stair/ladder profiles, and antenna systems (keyword: 5G network). In addition to lightweight construction, other specific material properties play a central role, especially in the areas mentioned.

¹⁵ Data source: ECF - <https://www.e-c-f.com/>

These include radio wave permeability, corrosion resistance, extensive maintenance-free operation, the possibility of load-bearing construction, and non-conductivity of electricity and temperature.

In many cases, however, there is still a lack of appropriate general approvals and standards that would further promote its use. This lack of "certainty" still leads to great reluctance on the part of many architects and material decision-makers. In addition, many decision-makers are still not sufficiently aware of the positive properties of GRP compared to other building materials.

Against the backdrop of an upturn in the construction industry, the forecasts for this process variant remain positive. However, it must be possible to penetrate broader application segments by obtaining the relevant approvals.

It would also be desirable for public tenders to include the generally long and often maintenance-free application possibilities of composites in investment decisions.

This often reveals advantages over the entire product life cycle that offset the sometimes higher initial investment over a longer period of time.

5.6 PIPES AND TANKS

The market segment for GRP pipes and tanks manufactured using centrifugal or winding processes declined by 4.8 % in the year under review. Total production volume in 2025 was 99 kt, with 53 kt attributable to winding processes and 46 kt to centrifugal processes.

The main areas of application for GRP pipes and tanks are plant engineering, public and private pipeline construction, and the oil/gas and chemical industries.

This segment is currently dominated by a few large producers who have a comparatively large amount of material in their operational throughput for the GRP industry.

GRP pipe/tank and plant construction is a typical area in which GRP materials offer numerous advantages. These include, for example, excellent resistance to aggressive media such as alkalis, acids, temperature, and salt. In addition, the use of GRP significantly extends maintenance intervals and the service life of the plants. Another enormous advantage is the load-bearing design in many areas of application.

There is still high growth potential in the pipe sector, but especially in tank and plant construction, which could be exploited, for example, by further improving the general perception of the materials. In addition, there are numerous research activities, especially in the field of winding technology. For example, hydrogen tanks (using carbon fibers) are currently being wound that can withstand pressures of several hundred bar and are also very light. This opens up very interesting potential areas of application for the future, for example in the automotive sector, which do not yet account for a significant market share.

Despite these generally positive prospects for the future, this sector is also particularly affected by the weaknesses in the construction and infrastructure sectors and a generally difficult economic situation. Above all, there is currently a lack of major new investments in plant construction. Although maintenance and repairs are still being carried out, new orders are largely absent. In addition, there is increasing competition, especially in the area of spun pipes from Turkey, significant quantities of which are now being imported into Europe.

5.7 LFT/GMT/CFRTP

In the following description, short fiber-reinforced plastics are considered separately from long and continuous fiber-reinforced thermoplastics (LFT/GMT/CFRTP). The latter group raises similar questions regarding material properties, areas of application, and, in some cases, processing as long and continuous fiber-reinforced thermosetting materials.

Materials with short fiber reinforcement (fiber length less than 2 mm) differ from LFT/GMT/CFRTP in terms of their influence on material properties and (load-appropriate) design.

Figure 18 below provides an overview of the development of this market segment. The market for GMT remained stable in 2025 with a total volume of 22 kt. LFT (long fiber-reinforced thermoplastics) lost a total of 1.1 % in 2025, reaching a production volume of 87,000 tons. CFRTP (continuous fiber-reinforced thermoplastics) remain a niche product. There are no significant changes here, which is to be seen as a positive sign against the backdrop of a generally declining market in the automotive sector. The market segment will reach a volume of 10 kt.

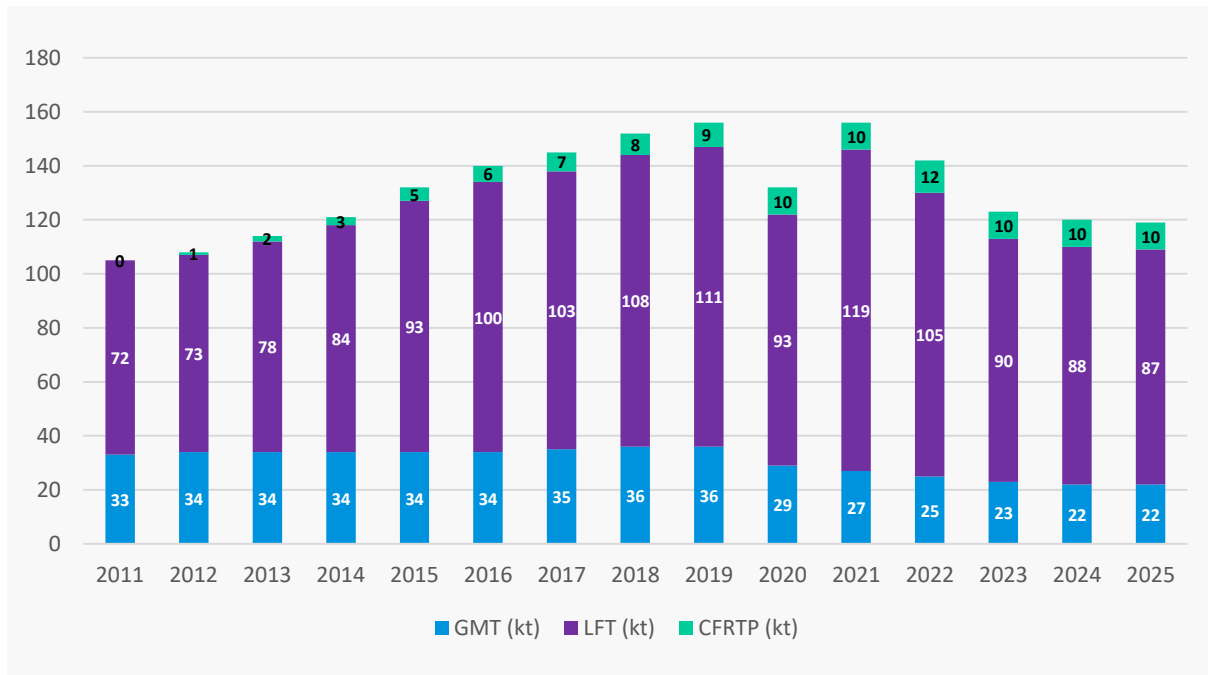


Figure 17: Market development LFT/GMT/CFRTP (in kt)

This market segment in particular is still highly dependent on the transport sector. Almost the entire volume recorded here is likely to flow into the transport sector. The automotive sector is also a key factor here.

In addition to the automotive sector, thermoplastic composites have also begun to establish themselves increasingly in other areas of application in recent years due to their numerous advantageous properties. Some of these areas of application show high growth potential for the future, which could become increasingly important in view of the current challenges and unresolved problems in the automotive sector.

Innovative applications and high potential can be seen, for example, in aviation and the drone segment. Both are areas in which growth in Europe can generally be expected. In addition, there are also initial projects in wind energy and infrastructure/public transport. Furthermore, the specific properties of the material also offer good opportunities for future applications in the sports and leisure sector as well as in electrical/electronics.

5.8 SHORT GLASS FIBER REINFORCED THERMOPLASTICS

Even though the properties of short glass fiber reinforced materials differ significantly in some respects from those of long and continuous fiber reinforced systems, as mentioned above, this important group of materials still belongs to the composites category, not least because it is a fiber-reinforced plastic. The glass fibers contained in these materials are generally less than 2 mm in length. Nevertheless, they significantly increase the properties compared to non-reinforced materials. Above all, they have a positive influence on the modulus of elasticity and stiffness of the materials. With increasing fiber length, an increase in strength and impact resistance can also be observed.

The European market for thermoplastic short glass fiber reinforced materials will decline by 2.9 % in 2025, with production levels falling to 1,210 kt (source: AMAC).

Nevertheless, short glass fiber reinforced thermoplastics remain by far the largest single segment in the composites industry. Production levels will fall significantly below pre-coronavirus levels (see Fig. 19).

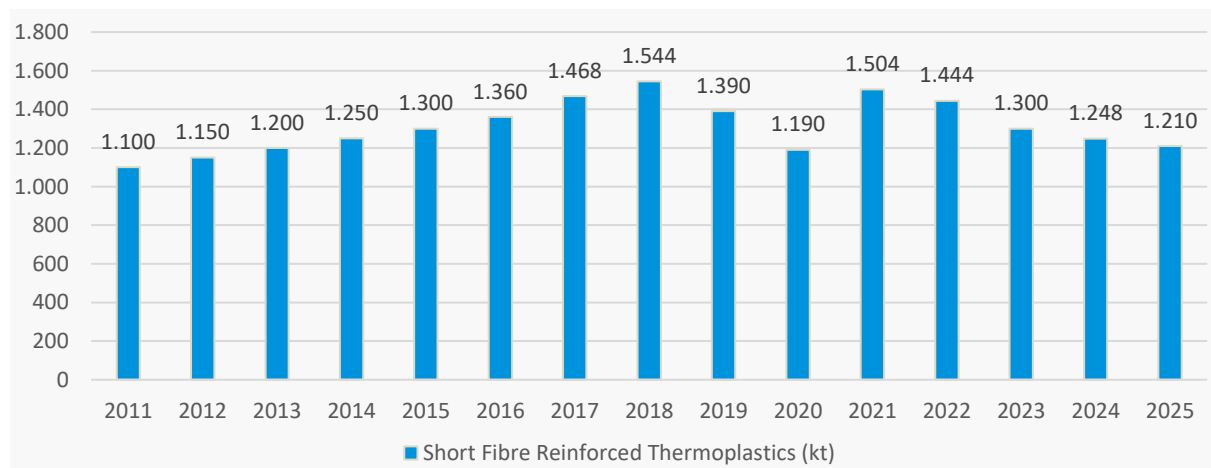


Figure 18: Market development of short glass fiber reinforced thermoplastics (in kt)

In terms of materials, the market described here is dominated by polyamide (PA), with polypropylene (PP) forming the second largest group.

Together, these two material systems account for over 80 % of the resin systems used. The picture is different in the area of LFT mentioned above, where PP is predominantly used.

Overall, the significant decline is likely to be attributable to the structural changes in the automotive sector, as discussed above, due to the high importance of the automotive segment for these materials.



**REGIONAL
MARKET DEVELOPMENT**

The following section analyzes the regional market distribution within Europe. The underlying data includes all long and continuous fiber-reinforced thermoset materials. Thermoplastics are not included in the regional analysis, as a regional breakdown of these material quantities is not currently available.

The percentage shifts according to regional focus areas in 2025 compared to 2024 have again only changed in the decimal range. Overall, all regions covered were affected by absolute declines.

The German thermoset market reached a volume of 180 kt in 2025 (2024 = 187 kt), which corresponds to a share of 18.9 % of the total market (see Fig. 20). This means that Germany is losing a small amount of market share but remains the largest manufacturer of composites in Europe.

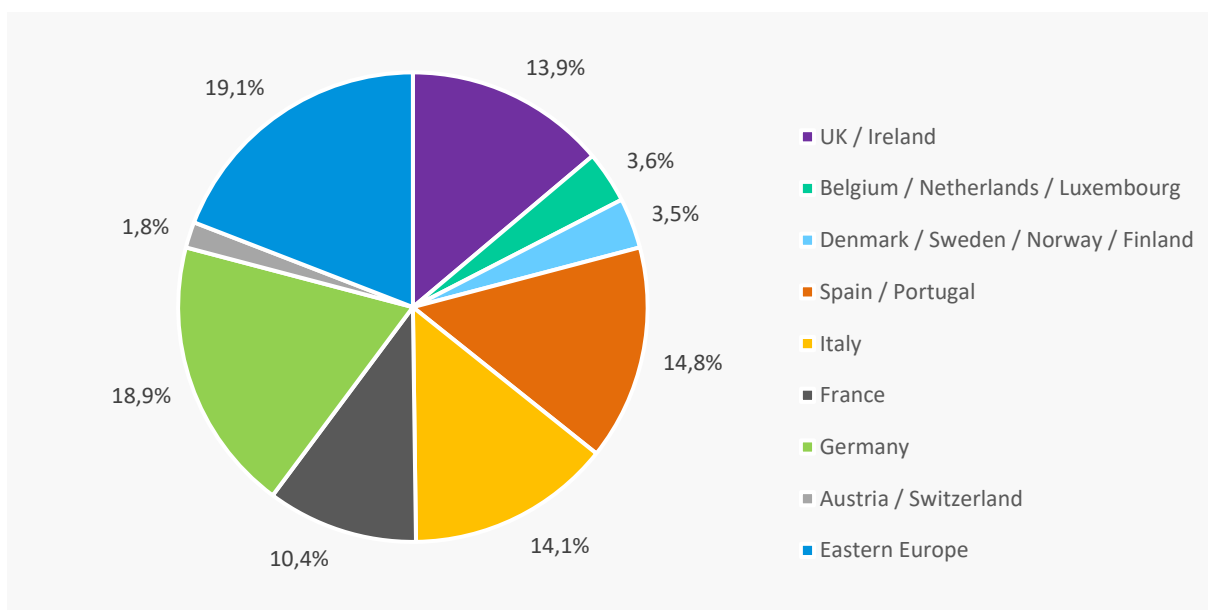


Figure19 : Regional distribution of the European thermoset market

The declines are mainly due to the high dependence on the automotive market.

Although the Eastern European countries are larger than Germany for the first time, with a market share of 19.1 % and an absolute volume of 182 kt (2023= 186 kt), they comprise a region consisting of Poland, Czechia, Hungary, Romania, Serbia, Croatia, Macedonia, Latvia, Lithuania, Slovakia, and Slovenia.

Overall, this region is able to gain slight market share. It is not always possible to clearly distinguish between individual quantities/material flows, which is why these countries are grouped together here. However, the Polish market is particularly relevant.

With a processing volume of 141 kt (2024 = 143 kt), Spain/Portugal form the third-largest group. Despite a slight decline in absolute production volumes, their market share is rising to 14.8 %. The reason for this is likely to be the above-average positive development of the overall economy.

Italy is just behind Spain/Portugal, with a market share of 14.1 % and a composites processing volume of 134 kt (2024 = 140 kt). In contrast to Spain, the Italian economy is currently developing less dynamically than in other European regions, which also has an impact on the composites market.

The four regions mentioned above account for more than two-thirds of the European composites market.

The next largest processing region within the countries covered here is the UK/Ireland with a market share of 13.9 % and a volume of 132 kt. France lags significantly behind with a market share of 10.4 % and an associated production volume of 99 kt. The UK market gained market share in relative terms (+0.1 %). The share of the French market within Europe remained unchanged.

The remaining three, rather smaller, processing regions are led by the Benelux countries. In 2025, these countries produced a volume of 34 kt. This means that this region accounts for a share of 3.6 %. The volume in the northern European countries (Denmark, Sweden, Norway, and Finland) was only slightly lower in 2025. This region accounts for a volume of 33 kt of composites and a 3.5 % share of the total European thermoset market. Austria/Switzerland accounts for the smallest percentage and therefore also the smallest volume share. A total of 17 kt of thermoset composites were produced there in 2025. This results in an unchanged market share of 1.8 %.

In addition to this purely quantitative analysis, it is also important to bear in mind that the composites industry has very different focal points in almost all regions. Accordingly, the various countries/regions are often affected very differently by overall economic developments.

A pan-European view can therefore only ever provide a rough indication of developments or point to fundamental trends. In detail and depending on the specific core markets and primary applications within the countries, developments often vary greatly.

In Turkey, which is not included in this report, pipe and tank systems dominate the market in terms of volume, accounting for almost 30 % of the market. In Germany, on the other hand, they play a rather minor role. Here, automotive applications and the electrical/electronics industry are dominant. In the Scandinavian countries of Norway/Sweden, applications in the oil and gas industry dominate.



**OTHER COMPOSITES
MATERIALS –
CRP AND NFK**

In addition to GRP, which accounts for more than 90 % of European production volume and has been discussed in detail in the previous report, carbon fiber reinforced plastics (CRP) and natural fiber reinforced plastics (NFRP) are the most significant material groups in terms of volume.

The CRP market volume continued to develop very dynamically in 2025. There has been a significant expansion in production capacities for carbon fibers worldwide. According to the latest survey by Composites United, capacities of 52.7 kt were installed worldwide in 2025. This represents a total volume of 305.6 kt. Europe accounts for 37 kt of this, which corresponds to a 12.11 % share of the global market. Despite absolute growth here too, the increase lags behind the global trend. Expansion is currently so strong, particularly in China, that this share is expected to decline further in the coming years.

The theoretical production capacity is always only a calculated figure. Actual production can deviate significantly from this in some cases. This is due, for example, to general plant utilization, set-up times, production changes, fluctuations in demand, etc.

Composites United estimates the global demand for carbon fibers in 2025 at 148.5 kt. The demand for CRP in Europe is approximately 24.29 kt, accounting for a share of 16.36 %.

In order to be able to determine the actual CRP demand to some extent, a fiber volume fraction of 50 % is assumed here. This is based on the assumption that a fiber content of 50-60 % is common for structural components. For many industrial applications, this is likely to be somewhat lower (40-50 %). However, fiber contents of more than 60 % can also be found, especially in high-performance applications in racing or aviation. The 50 % assumed here therefore represents an average value.

Overall, this would result in a global demand for CRP components of approximately 300 kt. For Europe, this corresponds to a volume of around 50 kt.

No new information is currently available for NFK. According to a survey conducted by the AVK in 2020 within this specific composites segment, thermoplastic materials are predominantly used in this market, although thermosets are also used. Unfortunately, there are no current records of the exact processing volume.

The largest area of application is the automotive sector, followed by the consumer goods industry. Flax, hemp, jute, and kenaf are mainly processed. On the processing side, compression molding dominates production. Injection and extrusion processes are also used. Regionally, Germany, France, and some Eastern European countries (Poland, Czechia, and Slovenia) dominate processing.

Natural fiber-reinforced plastics are mostly used because of their special material properties (low weight, low cost, sound insulation, good mechanical properties). However, they can also contribute to positively influencing the ecological balance of a product. There are numerous opportunities here in particular with regard to future market development.



FINAL COMMENT



Enough is not enough, or it will be as it was

Some readers may be familiar with this line. It comes from the song "Bleibt alles anders" (Everything stays different) by Herbert Grönemeyer from 1998. It is not the song or its meaning that is important here, but rather what can be projected from the deeper insight into the current situation in the European composites industry.

In the last market report, an observation often attributed to the Dakota Indians was made at this point: "If you discover that you are riding a dead horse, get off!" The final conclusion on this thesis a year ago was: "The European composites industry is not dead. The horse just needs to recover and get back on its feet, then it can continue to be ridden."

Admittedly, this statement was optimistic and, due to its simplicity, not transferable to a complex structure such as the overall economy, but the core idea remains the same. To change the current situation, active action is required on the part of all parties along the entire value chain and beyond. The sick horse, to stay with the metaphor, will rarely recover completely without active intervention.

Active, targeted intervention is needed in the short term, but above all in the medium and long term, to fundamentally restore stability over as long a period as possible. Doing nothing would mean accepting the situation. Nothing would change, at least not fundamentally – "everything will remain as it was."

The challenges facing the European composites industry are currently manifold. The overall economic weakness in Europe is weighing on the economy, especially the manufacturing sector and industry. Composites are also affected by this, as the above market analysis shows.

Key application markets such as the automotive sector are in a deep structural crisis. Sales figures are stagnating or declining. Market shares are increasingly being lost. Europe is experiencing an enormous exodus of industrial production. In addition, competition with non-European regions is intensifying, both in terms of raw material supply and the production of semi-finished and finished parts.

Economic policies in formerly important export regions that are increasingly focused on isolating domestic markets are further exacerbating the situation. Manufacturers complain about high material, energy, and labor costs, excessive regulations, and an unfriendly investment climate.

Overall, the picture is disastrous, and this is not only noticeable but also backed up by facts. According to current estimates by the consulting firm EY, around 124,000 jobs were lost in industry in Germany alone in 2025. At the end of last year, around 5.38 million people were employed in this sector, 2.3 % fewer than in the previous year.¹⁶

The effects of structural change are being felt here, coupled with a current lack of responses from economic policymakers and companies alike. In many cases, demands for simple and quick solutions are currently being voiced in social, political, and lobbying circles. However, the problems are complex. Too complex to postulate simple solutions.

Instead, it is important to analyze. What has made European industry strong in recent decades? What has led to the perception of "Made in Europe" as a brand that combines exceptional engineering with high-quality and prestigious products? Success required one factor above all else: this was aptly summarized by a major OEM with the slogan "Vorsprung durch Technik" (Advancement through Technology).

The current political and economic debate often focuses on cost optimization, efficiency improvements, and subsidies.

Of course, these factors play an important role in terms of competitiveness, but they do not address the core of the problem.

An artificially supported "business as usual" approach will not work. Market balances have shifted too much in recent decades, and especially since the coronavirus pandemic. Markets function differently today than they did ten years ago. We must respond to this. "Enough is not enough, or things will remain as they were." In this context, this is not a statement of fact, but a warning.

¹⁶ Wirtschaftswoche: https://www.wiwo.de/unternehmen/industrie/konjunktur-industrie-baut-2025-mehr-als-120000-jobs-in-deutschland-ab/100200930.html?utm_source=chatgpt.com

The European (composites) industry must ask itself whether it really wants to engage in a price war with other, favored, rapidly growing regions for standard products/commodities. Is the goal to continue producing an existing product in Europe that can be manufactured in non-European countries at half the price and then shipped cheaply? Given the current backdrop of high unit labor costs, a lack of raw materials, and increasing political/market uncertainty, this cannot be the solution in the medium and long term. Of course, manufacturing and production costs are also key factors in an international competitive environment. However, historically speaking, they are not the reason for the economic and industrial rise of Germany/Europe.

Decades of success were based on factors such as social stability, the implementation of fixed value chains and regional proximity, industry-promoting economic structures, a consistent focus on quality, a healthy SME sector and, above all, a deep-rooted drive for innovation, coupled with a high level of education and an outstanding research landscape.

The current situation is more than a challenge; it is a problem, and this can and should be stated openly. However, we must succeed in breaking out of the current downward spiral. Every development, every structural change, no matter how difficult, also means an opportunity for change, for leaving familiar paths and finding new possibilities.

It is not to be expected that a corresponding reaction in the revolutionary sense will happen in the short term and with enormous reach. It is a process that must be set in motion now. It is not enough to flip a switch and find one measure that restores the old conditions, only in a better light.

There will be not ONE measure, and supposedly simple political recipes, as currently heard in many debates, are bound to lead nowhere. A return to local/national strategies is often cited as a way to get the problems under control. But the past decades have shown exactly the opposite, with enormous growth in prosperity, including in the EU – trade and the economy only work across borders. Industry is subject to a high degree of complexity in terms of processes, dependencies, and mutually influencing conditions. There are a multitude of variables that must be coordinated with each other.

The market report shows that the situation is beginning to stabilize, but at a low level. The composites industry continues to be affected by declines, albeit less severely than in previous years. But that is not enough. The goal must be to strengthen/grow the industry.

European industry must set itself new goals and consistently exploit the opportunities and possibilities that arise. The industrial future rarely emerges on its own. It requires active perception and shaping.

Hans-Jörg Bullinger, former president of the Fraunhofer Society, summed it up as follows: "Research is the transformation of money into new knowledge; innovation is the transformation of new knowledge into money."¹⁷ Another quote that fits here, attributed partly to Graham Horton and partly to other personalities, is: "If you think innovation is expensive, look at the price of standing still."¹⁸

The goal must be to become bolder in pursuing new ideas and new products—simply following innovations is not enough. European industry should start setting the pace again and become the driving force behind trends and developments.

The whole sustainability debate, with all its legal and political consequences, can be a burden on the economy. However, for composites in particular, it also represents an enormous opportunity. New markets are opening up, driven by political forces. Renewable energy, new drive systems, changes in urban areas: composites can bring their advantages to bear and exploit them wherever possible. The example of the wind industry shows that there must also be the political will to support European industry – together, this could create enormous growth markets. Mutual recriminations do not help; only a joint approach to exploiting these opportunities will. The basic prerequisite is the creation of fair international competition with a level playing field. Politicians must take action. There is an urgent need to create a climate that is conducive to economic growth. This must go beyond political concessions and be actually implemented. Party political dogma, supposedly simple solutions, and finger-pointing are not helpful. They merely shift responsibility onto individual pillars of a structure that must be supported by everyone. Concrete measures based on partnership and community must be introduced to relieve or, better still, promote the European economy. This is not a matter for individual stages of the value chain, companies, employees, or politicians, but for everyone involved in the process.

¹⁷ <https://www.zephram.de/blog/allgemeines/zitate-ideen-innovation/>

¹⁸ https://buergerbeteiligung.sachsen.de/portal/download/resources/beteiligung/1014486/information/1020332/datei/1157040_0/Beteiligungsportal_Innovationsstrategie_Anh%C3%B6rung.pdf

Another basic prerequisite is to drive forward product innovation. This is where industry and research institutions come in. Only when the entire value chain, from the idea to the raw materials to the finished product, works together can real innovation emerge.

Europe has the best conditions for this, with an excellent higher education landscape, a healthy SME sector, and industrial companies with excellent local and global networks. This is exactly where we need to start. Innovation must be allowed and enabled. This requires investment, which is an additional hurdle in economically challenging times. Joint research activities, either bilateral or publicly funded, offer an optimal means of achieving this.

In many cases, the opportunities for process innovation and optimization are still being exploited hesitantly. This also includes digitalization and the use of AI and robotics. Innovations are made by people, not (yet) by machines. The possibilities are not limited to the standardization of manufacturing robots. Europe must catch up and not lose touch with the world leaders. This also includes opening up one's own company. Networks and partnerships will become extremely important in the future. Ideas usually inspire new ideas. The more openly you deal with them, the more you can look beyond your own horizons.

This observation is intended to illustrate that there can be no simple solution. The challenges are too great. For too long, however, some industries have been complacent and have failed to develop sustainable concepts or have done so only inadequately. The current crisis was not triggered solely by the coronavirus pandemic. The problems began earlier and have their origins far in the past. Corona has only significantly increased the force of the impact. Resorting to tried and tested measures to improve companies' balance sheets in the short term will not help industry in the medium term, but will instead lead to a sell-off of people, machines, and know-how. It is now important to take decisive and, above all, joint countermeasures, not to achieve small profits in the short term, but to realign European industry in the medium and long term.



Composites are a group of materials with enormous possibilities and potential, today and especially in the future, particularly in view of the challenges currently facing us, but also the opportunities.

We would like to reiterate last year's conclusion: "The European composites industry is not dead. The horse just needs to recover and get back on its feet, then it can continue to be ridden." This time, however, with the following addition: "Enough is not enough, or things will remain as they were." Let us work together to ensure that nothing stays the same.

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