



EUROPE COMPOSITES OVERVIEW 2024

JEC WORLD
2024 The Leading International
Composites Show
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VILLEPINTE

Europe - COMPOSITES Overview

The European composites market is important for U.S. manufacturers looking to expand globally. In 2022, it represented 22% of the global composites market volume, reaching 2.8 million tons¹ and a composites market value of approximately \$7.2 billion².

In 2022, the shortage of semiconductors, supply chain problems, the Ukraine war and raw materials price increases, contributed to a 6% decrease of the composites industry, compared with 2021. However, development and innovations continued to be dynamic with new industry applications which are driving the composites market.

The European composites market is fragmented and characterized by many small-sized firms, where 80-90% of the volume is produced by just 10-20% of existing companies. Each country has industries with various strengths in different applications. Market growth tends to follow economic development and GDP trends of each country respectively.

In terms of materials, Glass fiber-reinforced (GRP) systems still account for 95% of the total European market.

The most growth is attributed to:

- the carbon fiber-reinforced (GRP) segment which is growing fast despite its 2% market share of the entire composites market with 57 kilotons production in 2022³. There are significant market opportunities for recycled carbon fibers.
- The Natural fibers (flax, hemp, jute, kenaf) whose potential is on the rise due to environmental benefits and a more intense focus on climate issues within the EU. There are nearly twenty European natural fiber and reinforced plastics producers, located mainly in Germany, France, Italy, and the Netherlands. Estimations for this market segment are 90 kilotons⁴.

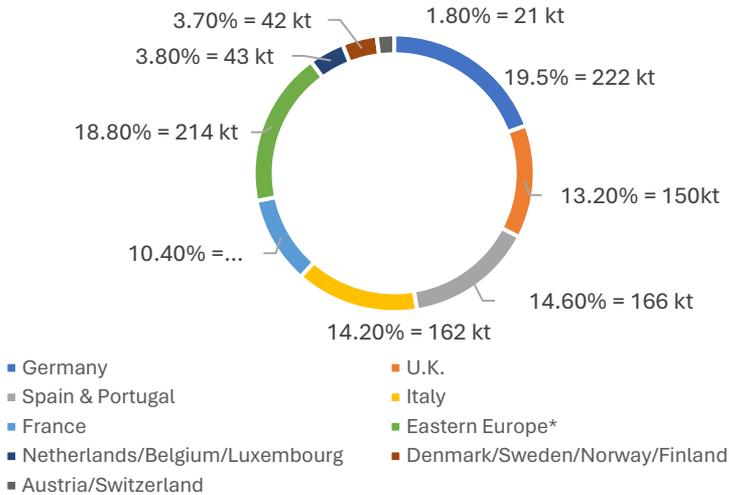
¹ AVK 2023

² JEC Observer Current Trends in the global composites industry 2021-2026

³ AVK 2022

⁴ AVK 2022

Main European thermoset markets (KT)⁵

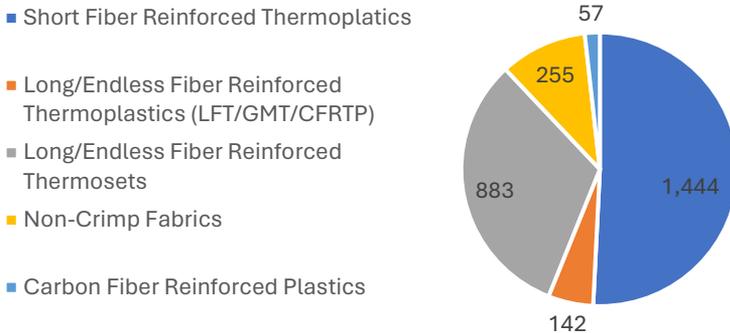


*Czech Republic, Poland, Hungary, Romania, Serbia, Croatia, Macedonia, Latvia, Lithuania, Slovakia, Slovenia

The European Thermosets/Thermoplastics Market

In 2022, the share of the thermoset composites group represented 41.8% (1,138 kilotons) of the entire European market (showing a slight downturn in the market share compared with 2021), as the thermoplastic composites group reached 58.2% (1,586 kilotons)⁶.

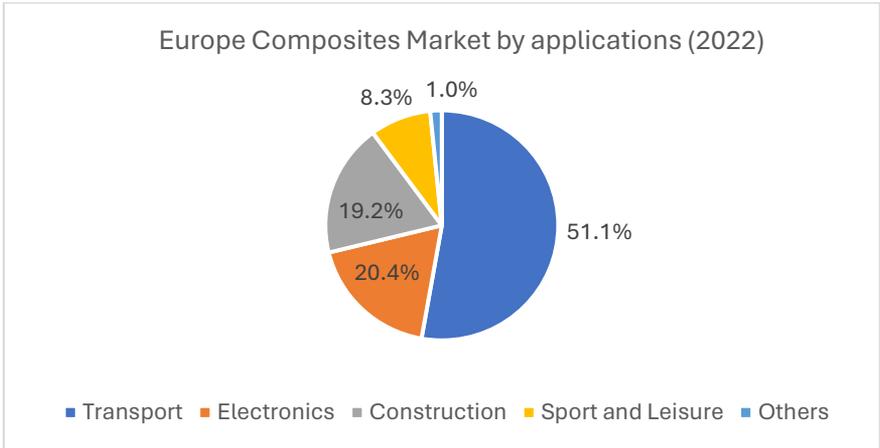
The European Composites Market in Kilotons (2022)



⁵ AVK report 2022

⁶ AVK report 2022

Main End-Use Industries in Europe



The transportation sector accounts for more than 50% of the European market volume thanks to applications for commercial vehicles, aviation, and public transportation vehicles components. The construction and infrastructure (pipelines, containers, tanks, structural sections), electrical and electronics market segments account for 39.6% of the European market volume⁷.

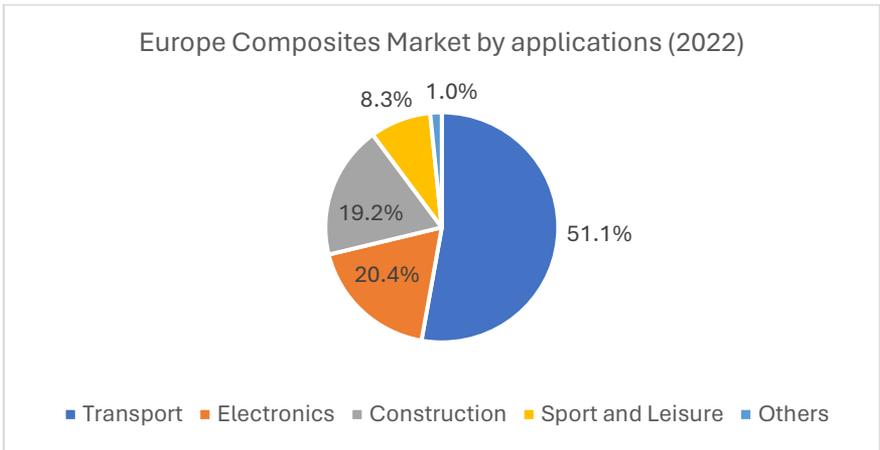
Leading Composites Manufacturing Processes⁸

Total Thermoplastics market (kt)	1,586
Short fiber	1,444
LFT	105
Others	37
Total Thermoset market (kt)	1,138
SMC & BMC	268
Non-crimp fabrics	255
Open mould	205
Continuous processing	136
RTM	130
Pipes & tanks	130
Others	14
CFRP – carbon fiber-reinforced plastics	57

⁷ AVK report 2022

⁸ AVK report 2022

Main End-Use Industries in Europe



The transportation sector accounts for more than 50% of the European market volume. The construction and infrastructure, electrical and electronics market segments account for 39.6% of the European market volume⁹.

Recycling, Reusing, Repurposing, and Repairing methods, the 4 Rs:

The European composites industry is committed to making sustainability an integral part of its business strategy. The industry provides solutions for reducing carbon emissions in mobility, renewable energy, eco-friendly constructions, and sound waste management practices.

Challenges related to raw materials, rising energy prices, supply chain disruption and EU regulations, can be turned into opportunities. Increasing the circularity of fiber-reinforced composite materials plays an important role for wind energy, aerospace, automotive, construction and the marine sectors to reduce environmental impacts and increase sustainability of composites. New sustainable technologies will emerge to answer low-carbon, waste prevention, re-use of raw materials, and recyclability. [EuCIA is the Brussels - based leading Association of the European Composites Industry](#) EuCIA has taken the lead in supporting the sustainable growth of the composites industry.

⁹ AVK Report 2022

Short list of companies involved in composites R&D and components production¹⁰

Aerospace

- Airbus (<https://www.airbus.com/en/our-worldwide-presence/airbus-in-europe/airbus-in-france>)
- Boeing (https://www.boeing.com/commercial/aeromagazine/articles/qtr_4_06/article_04_2.html)
- SAAB (<https://www.saab.com/products/composite-superstructure>)
- Bombardier (<https://bombardier.com/en/media/news/new-advanced-composites-components-enter-service-bombardier-crj900-nextgen-regional-jets>)
- Spirit Aerosystems (<https://www.spiritaero.com/pages/release/spirit-aerosystems-belfast-advances-ground-breaking-project-for-uk-ministry-of-defence/>)
- Fokker Aerospace – now part of GKN Aerospace (<https://www.gknaerospace.com/en/our-technology/advanced-technology/>)
- Sikorsky (<https://www.aerospace-technology.com/uncategorised/newssikorsky-selects-itt-exelis-provide-composite-assemblies-s76d-helicopter/>)
- Toray Carbon Magic (<https://www.carbonmagic.com/en/products.html>)
- Collins Aerospace (<https://www.collinsaerospace.com/what-we-do/industries/business-aviation/power-controls-actuation/actuation/composites>)
- Gulfstream (https://gulfstreamnews.com/en/news/?id=eb0d6f7f-b1f8-4887-99f2-dd6efc1a34c3&utm_campaign=dotcom-homepage&utm_medium=brand-site&utm_source=display&utm_content=news-feed)
- Skywork Aeronautics (<https://www.skyworks-aero.com/#section-about-skyworks>)
- Leonardo (<https://www.leonardo.com/en/innovation-technology/technological-areas/materials>)
- Aero vodovody (<https://www.aero.cz/>)
- Ge Aviation Czech, S.r.o. (<https://www.geaerospace.com/>)

¹⁰ JEC Composites Inside 2023

Building & Infrastructure

- Kalwall Company (<https://www.kalwall.com/about/>)
- Real Madrid's retractable roof (<https://www.jec-world.events/innovation-awards-winners-2023/a-composite-roof-for-the-stadium-of-real-madrid>)
- IsoTruss (<https://isotruss.com/technology/>)
- This can also be found at the Museum of the Future in Dubai. (<https://www.compositesworld.com/articles/building-the-museum-of-the-future#:~:text=The%2078%2Dmeter%20high%20building,integrates%20molded%2Din%20Arabic%20calligraphy.>)
- POHL cz, a.s. (<https://www.pohl.cz/>)

Marine

- Owens Corning (<https://www.owenscorning.com/en-us/composites>)
- American Cyanamid (<https://www.sciencedirect.com/topics/engineering/american-cyanamid>)
- Ocean Gate (<https://www.jeccomposites.com/news/oceangate-selects-toray-as-provider-of-prepreg-carbon-fiber-for-deep-sea-submersible-hull/>)
- Wallenius Marine (<https://www.walleniusmarine.com/our-services/ship-design-newbuilding/>)
- Chantiers de l'Atlantique (<https://chantiers-atlantique.com/demarche-innovation/>)
- Beneteau Group (<https://www.jec-world.events/jec-world-2023/composites-exchange-chomarat>)
- Chomarat (<https://composites.chomarat.com/en/>)
- Saildrone Voyager (<https://www.saildrone.com/news/saildrone-announces-mid-size-voyager-usv>)

Mobility

- Owens Corning (<https://www.owenscorning.com/en-us/composites>)
- William Stout (<https://www.williamstout.com/news/journal/page/14/>)
- Chevrolet (<https://acscomposite.com/pages/configurators>)
- McLaren (<https://cars.mclaren.com/us-en/careers/Departments/Sheffield>)
- Citroen (https://plastics-rubber.basf.com/global/en/performance_polymers/industries/pp_automotive/citroen_concept_car.html)
- Ford (<https://media.ford.com/content/fordmedia/fna/us/en/news/2022/11/15/ford-announces-strategic-partnership-with-manufacture-2030-to-en.html>)
- Lamborghini (<https://www.lamborghini.com/en-en/innovation-excellence/forged-composites>)
- BMW (<https://www.press.bmwgroup.com/global/article/detail/T0377293EN/bmw-ventures-invests-in-high-performance-composites-made-from-natural-fibres?language=en>)
- Mercedes (<https://www.mercedes-amg.com/en/vehicles/amg-one/hypercar.html>)

- Audi (<https://www.audi-mediacenter.com/en/press-releases/audi-relying-on-ultra-lightweight-technology-for-le-mans-723>)
- Cadillac (<https://acscocomposite.com/collections/cadillac-ats>)
- Lexus (<https://newsroom.lexus.eu/lexus-at-milan-design-week-2023/>)
- L&L Products CCS (<https://ccs.llproducts.com/#>)
- Talgo (<https://www.talgo.com/-/le-train-signs-an-agreement-with-talgo-for-the-development-of-a-fleet-of-high-speed-trains>)
- Coradia iLint (<https://www.alstom.com/press-releases-news/2021/9/alstoms-coradia-ilint-hydrogen-train-runs-first-time-france>)
- Ferrari (<https://www.ferrari.com/en-EN/corporate>)
- Ducati (<https://www.ducati.com/it/it/editorial/accessori/accessori-in-carbonio>)
- Dallara (<https://www.dallara.it/en>)
- 5M (<https://www.5m.cz/>)

Sports

- ASICS Corp (https://corp.asics.com/en/csr/creating_products_service)
- Speedo (<https://www.speedo.com/help-centre.list>)
- Callaway (<https://www.callawaygolf.com/golf-clubs/shafts/>)
- Felt IA (<https://www.feltbicycles.com/en-us/bikes/triathlon-time-trialbikes/ia-2-0-triathlonrace.html>)
- Nike (<https://www.nike.com/w/foamposite-shoes-5j7dazy7ok>)
- Schappe Techniques (<https://schappe.com/>)
- Burton (<https://discover.burton.com/discover/s/article/what-are-snowboards-made-of>)
- Fischer (<https://www.facc.com/en/Company/History2>)
- TeXtreme (<https://www.textreme.com/>)
- Toray Carbon Magic (<https://www.carbonmagic.com/en/products.html>)
- Matsunaga Manufactory Co. (<https://www.matsunaga-w.co.jp/global/>)
- Swancor (http://www.swancor.com.cn/en/product_list.aspx?cid=134)
- Amalgam Skis (<https://www.amalgamskis.com/ourvision>)
- Calfee Design (<https://calfeedesign.com/>)
- Grassroots Powdersurfing (<https://www.powsurf.com/powsurf-boards/>)
- Niche Snowboards (<https://nichesnowboards.com/sustainable-technology/>)

Renewable Energy

- Vestas (<https://www.vestas.com/en/media/company-news/2022/vestas-expands-partnership-with-long-time-blades-partne-c3671441>)
- Siemens Gamesa (<https://www.siemensgamesa.com/en-int/-/media/siemensgamesa/downloads/en/sustainability/environment/siemens-gamesa-20210901-recycableblade-infographic-finalen.pdf>)
- General Electric (<https://www.ge.com/research/technology-domains/materials/polymer-composite-materials>)
- Solarge (<https://solarge.com/en/>)
- SIEMEC Atlantis Energy (<https://www.acmarineandcomposites.com/simec-atlantis-energy>)
- CorPower Ocean (<https://corpowersocean.com/>)
- Aditya Birla Advanced Materials (<https://www.abg-am.com/>)
- Sicomin and Bcomp (<http://sicomin.com/documents/presspdf37.pdf>)
- Judel/Vrolijk & Co (<https://www.judel-vrolijk.com/>)
- LM Wind Power (<https://www.lmwindpower.com/en/stories-and-press/stories/innovation/award-winning-composites-research>)
- Acciona <https://solutions.acciona-energia.com/why-acciona/>

Market Entry:

Prospective international market entrants must keep in mind that sales of input materials like resins, prepregs, pellets, and fabrics are regularly issued directly between suppliers and end-users. Due to the composite raw material nature, it is necessary to have a manufacturing plant located near potential buyers.

Additionally, intermediaries are required for processing needs such as additive manufacturing, software, tooling, and machinery.

While we see many opportunities for U.S. companies in Europe, there are also challenges to entry and expansion. Any market entry strategy should begin with a thorough understanding of the costs and benefits of doing business in a specific country. In most cases, it is essential to visit the market and establish relationships with local partners. Investing in these relationships early and routinely will increase the likelihood of a more successful venture.

Before entering the European market, U.S. companies should consider their own resources, previous export, or business experience abroad as well as long-term business strategy. For many

companies, representation in Europe by agents, distributors, liaison offices or partners will be key to their success. A local partner can provide knowledge of the local regulatory framework, language assistance and valuable business contacts. As business develops, companies may establish subsidiaries and make further local investments to expand their market share.

European countries have their own characteristics. Having a representative covering several countries may work in some geographies and not in others.

Relevant EU Regulations:

Raw Materials:

U.S. suppliers of raw materials need to assess the applicability of the REACH and CLP regulations to their products:

www.echa.europa.eu

Manufacturing Equipment:

CE Mark: The CE Mark certifies that a product meets EU health, safety, and environmental requirements. This involves testing, including risk assessment.

Machinery Directive 2006/42/EC:

https://single-market-economy.ec.europa.eu/sectors/mechanical-engineering/machinery_en

- **The low voltage directive (LVD) (2014/35/EU):**

https://ec.europa.eu/growth/sectors/electrical-engineering/lvd-directive_en

- **The electromagnetic compatibility directive (EMC) (2014/30/EU):**

https://single-market-economy.ec.europa.eu/sectors/electrical-and-electronic-engineering-industries-eei/electromagnetic-compatibility-emc-directive_en

Other relevant legislation for manufacturing equipment includes the ATEX directive (Explosive Atmospheres), Radio Equipment directive, Pressure Equipment Directive, Gas Appliances Directive, Eco-design, construction products, lifts, personal protective equipment,

Restriction of Hazardous substances in Electrical and Electronic Equipment (ROHS), etc.

For more information:

Contact us! The U.S. Foreign Commercial Service can help you through the process of getting the CE mark: [EU Standards \(trade.gov\)](http://EUStandards.trade.gov)

U.S. Commercial Service Composites Team

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www.trade.gov/advanced-manufacturing-industry

The U.S. Commercial Service offers numerous programs and services to assist U.S. businesses in establishing a presence in foreign markets and developing appropriate contacts. Through our network of over 100 U.S. offices and more than 150 offices in over 75 countries, our Trade Specialists help U.S. manufacturers access the best international markets with potential for their products or service.

- Global Advanced Manufacturing Team Leader Houston, Texas
Pam.Plagens@trade.gov

Trade Representatives by country:

- **Czech Republic** Zdenek.Svoboda@trade.gov
U.S. Commercial Service Prague
- **France** Stephanie.Pencole@trade.gov
U.S. Commercial Service Paris
- **Germany** Kirsten.Hentschel@trade.gov
U.S. Consulate General Dusseldorf
- **Italy** Kira.Migliorini@trade.gov
U.S. Commercial Service Rome
- **Spain** Carmen.Ribera@trade.gov
U.S. Commercial Service Madrid
- **Turkey** Naz.Demirdoven@trade.gov
U.S. Commercial Service Izmir

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