



SAFETY DATA SHEET

HiMax Carbon Fibre Fabrics

As this product is an Article according to Regulation (EC) No. 1907/2006 (REACH), there is no legal obligation to issue a Safety Data Sheet. This document is supplied for information purposes only and it is not subject to the formal requirements of safety data sheets under the REACH Regulations.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	HiMax Carbon Fibre Fabrics
Product number	21158EU-1
Applicable to	Multiaxial reinforcements, or non-crimp fabrics (NCF)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Textile surface for industrial applications
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1.3. Details of the supplier of the safety data sheet

Supplier	Hexcel Reinforcements UK Limited Cutters Close Narborough, Leicester, United Kingdom, LE19 2FZ Tel: ++44 (0) 1162 752200
Contact person	SDSEUOffice@hexcel.com Duxford, Cambridge, CB22 4QB, UK ++ 44 (0)1223 833141 Cutters Close, Narborough, Leicester, LE19 2FZ, UK ++44 (0)1162 752200 Industriegelaende 2, A-4720 Neumarkt i.H., Austria. ++ 43 (0)7229 7720 Parc Industriel, Rue 3 Bourdons, 54, B-4840, Welkenraedt, Belgium ++32 87 307411 Sophie-Scholl-Weg 22, 21684 Stade, Germany. ++49 4141 78 79 00 Via S, Cristoforo, 44, 21047 Saronno, Italy. ++39 02 96709082 Polígono Ind., C/Bruselas 10-16, 28980 Parla, Madrid, Spain. ++34 91 664 49 00 45 rue de la Plaine, CS 10027, 01126 Dagneux CEDEX, France, ++33 (0)4 72 25 26 27 Xiqing Economic Development Area, Tianjin, China. ++86 22 2388 9068 5th Floor, Wisma Samudra, Jalan Kontraktor U1/14, Hicom-Glenmarie Industrial Park, 40150 Shah Alam, Selangor, Malaysia. +60 3 5569 3510

1.4. Emergency telephone number

Emergency telephone	To be used only for advice on chemical emergencies, spillages, fires or First Aid: For emergencies in US/Canada: CHEMTREC – 800 424 9300 For emergencies in rest of the world: CARECHEM24 – +44 (0) 1235 239 670
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

2.2. Label elements

Hazard statements	NC Not Classified
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2.3. Other hazards

Carbon fibre with a filament diameter $>4\mu\text{m}$ is not considered respirable. World Health Organisation defines a respirable fibre as a fibre with a diameter (d) $<3\mu\text{m}$, a length (l) $>5\mu\text{m}$ and an l/d-ratio ≥ 3 . Carbon fibre is not considered a dangerous substance according to Regulation (EC) No 1272/2008 (CLP). Carbon fibre is electrically conductive and may cause short-circuits in electrical installations. Processing may create a combustible dust and could result in fire and/or explosion should the necessary dust concentration in air and ignition source be present. Filaments and dust/particulates from machining cured product may cause mechanical irritation to the upper respiratory tract. Pre-existing respiratory disorders may be aggravated.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Composition comments Graphite (carbon) synthetic fibres. Filament diameter $>4\mu\text{m}$. $>98\%$ w/w Carbon fibre can be with or without a size.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation With any sign of respiratory distress, affected persons should be taken into fresh air and made to rest while medical attention is sought.

Ingestion If fibre from product is ingested, immediately rinse mouth repeatedly with water. If swallowing has occurred, do not induce vomiting. If requested give affected person sips of water. Seek medical attention.

Skin contact In case of contact with the product or the cured product dust or particulate, immediately wash skin with mild soap and water. Use a washcloth to help remove the fibres. To avoid further irritation, do not rub or scratch irritated areas. Rubbing or scratching may force fibres into the skin. Get medical attention immediately if the irritation persists.

Eye contact Contamination by fibre should be removed by flushing with water for at least 15 minutes. Seek medical attention if irritation persists.

4.2. Most important symptoms and effects, both acute and delayed

General information Filaments are mechanical irritants and may induce temporary mouth, nose and throat irritation. Skin or eye contact may cause itching and temporary irritation. Ingestion may cause temporary mechanical irritation of the digestive tract. Pre-existing conditions such as respiratory or skin disorders may be aggravated by exposure to the product or dust/particulate generated from machining/grinding of the cured product.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Carbon fibres are electrically conductive and if released during combustion may present a hazard to unprotected electrical apparatus. Processing may create a combustible dust and could result in fire and/or explosion should the necessary dust concentration in air and ignition source be present.

Hazardous combustion products Above 650°C , if incomplete combustion occurs and depending on air supply and temperature, there may be release of carbon monoxide and dioxide and products of low molecular weight.

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5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Due to the physical nature of the product, there is no requirement for special protective clothing in the event of an accidental release.

6.2. Environmental precautions

Environmental precautions Due to the physical nature of this product, environmental release to drains and water courses is not possible.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Clean affected area, and dispose of product and cleaning materials in accordance with local regulations. Carbon Fibre is electrically conductive and may cause short-circuits in electrical installations

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid direct contact with product. Avoid inhalation of filaments or dust/particulates generated during processing operations. Where possible, provide dust extraction and collection from handling zones. Carbon fibres are electrically conductive and if released during combustion may present a hazard to unprotected electrical apparatus. Processing may create a combustible dust and could result in fire and/or explosion should the necessary dust concentration in air and ignition source be present. Wash skin thoroughly after handling. Use appropriate skin cream to prevent drying of skin. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container. Keep container dry.

7.3. Specific end use(s)

Specific end use(s) As this product is an article, this section is not applicable.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

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Eye/face protection	Wear approved safety spectacles, goggles or facemask when working product by hand or machining with power tools.
Hand protection	It is recommended that protective gloves are worn when handling the product.
Other skin and body protection	Recommendation: Ensure forearms are protected by use of gloves with long gauntlet, disposable sleeves or long sleeve overalls. Irritation often appears at pressure points such as wrists, waist, neck and between fingers.
Respiratory protection	For comfort, an approved dust mask can be worn where fibre or particulates are present.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Multiaxial textile surface
Colour	Black.
Odour	Odourless.
Odour threshold	It is not relevant as there is no toxic effect.
pH	Not relevant due to the physical form of this product.
Melting point	~ 3500°C
Initial boiling point and range	Not relevant due to the physical form of this product.
Flash point	Not relevant due to the physical form of this product.
Evaporation rate	Not relevant due to the physical form of this product.
Vapour pressure	Not relevant due to the physical form of this product.
Vapour density	Not relevant due to the physical form of this product.
Relative density	Not relevant due to the physical form of this product.
Solubility(ies)	Not relevant due to the physical form of this product.
Auto-ignition temperature	Not relevant due to the physical form of this product.
Decomposition Temperature	650 (air)°C
Viscosity	Not relevant due to the physical form of this product.
Explosive properties	Not classified as explosive but dust or airborne filaments could induce explosion in high voltage equipments by short circuit.
Oxidising properties	Does not meet the criteria for classification as oxidising.
Comments	The indicated values do not necessarily correspond to the product specification. Please refer to the technical data sheet for specification data.

9.2. Other information

Other information	No information required.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. In an emergency situation leading to elevated temperature, there may be release of toxic gases and vapours. The products of combustion and decomposition will depend on other materials present in the fire and the actual conditions of the fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Not regarded as a health hazard under current legislation. Carbon fibre with a filament diameter $>4\mu\text{m}$ is not considered respirable. World Health Organisation defines a respirable fibre as a fibre with a diameter (d) $<3\mu\text{m}$, a length (l) $>5\mu\text{m}$ and an l/d-ratio ≥ 3 . Carbon fibre is not considered a dangerous substance according to Regulation (EC) No 1272/2008 (CLP). There is no evidence that carbon fibres are mutagenic, genotoxic or carcinogenic.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Not regarded as dangerous for the environment.

12.2. Persistence and degradability

Persistence and degradability Not relevant due to the physical form of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential Not relevant due to the physical form of this product.

12.4. Mobility in soil

Mobility Not relevant due to the physical form of this product.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment As this product is an article, this section is not applicable.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. For products containing carbon fibre, it is possible to recycle the carbon component.

SECTION 14: Transport information

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14.1. UN number

This product is not dangerous to transport.

14.2. UN proper shipping name

This product is not dangerous to transport.

14.3. Transport hazard class(es)

This product is not dangerous to transport.

14.4. Packing group

This product is not dangerous to transport.

14.5. Environmental hazards

Environmental hazards This product is not dangerous to transport.

14.6. Special precautions for user

This product is not dangerous to transport.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This product is not dangerous to transport.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

This product and its components are considered an Article with no intentional release in accordance with EC No. 1907/2006, REACH Regulation

Carbon fibre is not considered a dangerous substance according to Regulation (EC) No 1272/2008 (CLP).

This product does not contain Annex XIV substances subject to Authorisation according to Regulation (EC) No. 1907/2006 (REACH) or substances of very high concern published in accordance with Article 59(10) above 0.1 % (w/w).

15.2. Chemical safety assessment

Inventories

US - TSCA

This product is an article as defined by TSCA and is not required to be listed in the US, EPA, TSCA Inventory.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	<p>ATE Acute Toxicity Estimate</p> <p>ADR European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>CAS# Chemical Abstracts Service number</p> <p>CLP Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008</p> <p>DNEL Derived No Effect Level</p> <p>EC# EINECS and ELINCS Number</p> <p>EINECS European Inventory of Existing Commercial Substances</p> <p>ELINCS European List of Notified Chemical Substances</p> <p>EmS Emergency Response Procedures for Ships Carrying Dangerous Goods</p> <p>EPA Environmental Protection Agency</p> <p>EU European Union</p> <p>GHS Globally Harmonised System</p> <p>IATA International Air Transport Association</p> <p>ICAO International Civil Aviation Organization</p> <p>IMDG International Maritime Dangerous Goods</p> <p>Kow Octanol-water partition coefficient</p> <p>LC50 Lethal concentration to 50% of a test population</p> <p>LD50 Lethal dose to 50% of a test population (Median Lethal Dose)</p> <p>n.o.s. Not otherwise specified</p> <p>PBT Persistent, Bioaccumulative and Toxic substance</p> <p>PNEC Predicted No Effect Concentration</p> <p>PPE Personal Protection Equipment</p> <p>® Registered Trademark of Hexcel Corporation</p> <p>REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</p> <p>SADT Self-accelerating decomposition temperature</p> <p>SCBA Self-Contained Breathing Apparatus</p> <p>STOT Specific Target Organ Toxicity</p> <p>(STOT) RE Repeated Exposure</p> <p>(STOT) SE Single Exposure</p> <p>SVHC Substance of Very High Concern</p> <p>TSCA Toxic Substances Control Act</p> <p>UN United Nations</p> <p>VOC Volatile Organic Compound</p> <p>vPvB Very Persistent and very Bioaccumulative</p>
General information	This safety data sheet has been written in accordance with the requirements of the Commission Regulation (EC) No 2015/830 of 28 May 2015.
Issued by	European Product Stewardship Department
Revision date	01/02/2017
Revision	0

The product should be used in accordance with good industrial hygiene practice and compliance with any legal requirements. All information has been compiled with due diligence and is based on the present state of our knowledge. It is intended to describe the product from a point of view of safety and should not therefore be construed as guaranteeing any specific property. All products are supplied subject to our Standard Conditions of Sale which contains limitations on liability.