HEXCEL®

SAFETY DATA SHEET
HexForce CS-112, CS-112NPH, CS-210, CS-504, F12, HT and Greige Finish

1. Identification

Product identifier

Product name HexForce CS-112, CS-112NPH, CS-210, CS-504, F12, HT and Greige Finish

Product number 20873US-2

Synonyms; trade names Applicable to: E Glass or S Glass fibers with a silane or chrome finish

Recommended use of the chemical and restrictions on use

Application Formulated product for Aerospace, Industrial and Wind Energy applications

Details of the supplier of the safety data sheet

Supplier
Hexcel Reinforcements
1913 N. King Street
Seguin
TX 78155
USA
Tel: ++ 830 379 1580
Fax: ++ 830 379 9544

Contact Person 11711 Dublin Blvd, Dublin, California, USA. ++925 551 4900

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

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This Product is Not Hazardous under the OSHA Hazard Communication Standard.

Physical hazards Combustible Dust - USH01

Health hazards Not Classified

Environmental hazards Not Classified

Label elements

Signal word Warning

Hazard statements USH01 May form combustible dust concentrations in air

Other hazards

Warning! May cause temporary mechanical irritation of the eyes, skin or upper respiratory tract. The American Conference of Governmental Industrial Hygienists (ACGIH) lists under synthetic vitreous fiber; continous filament glass fibers: 1 f/cc (respirable) and 5 mg/m3 (inhalable). Warning! Dust generated from machining, grinding or sanding the product may be combustible and could result in fire and/or explosion should the necessary dust concentration in air and ignition source be present.

Hazards not otherwise classified (HNOC) Fine dust clouds may form explosive mixtures with air.

3. Composition/information on ingredients

Mixtures

Fiberglass fiber, synthetic, vitreous, continuous filament CAS number: 65997-17-3	**60-100%**
Classification Not Classified	

Aluminum (for the coating on the fiberglass fiber based on the total fabric weight) CAS number: 7429-90-5	**5-10%**
Classification Not Classified	

The full text for all hazard statements is displayed in Section 16.

Composition comments Continuous filament glass fiber (type E, R, D, S2) of silicon, aluminum, calcium, boron and magnesium oxides in a vitreous amorphous state. Filament diameter r>3um CAS 65997-17-3: >99% w/w

4. First-aid measures

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 fiber from the 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 particulates, immediately wash skin with mild soap and water. Use a washcloth to help remove fibers. To avoid further irritation, do not scratch irritated areas. Rubbing or scratching may force the fibers into the skin. Get medical attention immediately if the irritation persists.

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

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.

Indication of immediate medical attention and special treatment needed

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

5.Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	If aluminum coated fiberglass (thorstrand) is used as the substrate, must be in accordance with NFPA 651. Dust or particles from machining, grinding or sawing the product should no be exposed to moisture as it may liberate hydrogen gas and form explosive air mixures.
Hazardous combustion products	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.

Advice for firefighters

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing.

Environmental precautions

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

Methods and material for containment and cleaning up

Methods for cleaning up	Clean up material and put into a suitable container and dispose of properly (See Section 13).
Reference to other sections	For personal protection, see Section 8. Collect and dispose of spillage as indicated in Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions	Storage: Keep container tightly closed and dry.

Conditions for safe storage, including any incompatibilities

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

Specific end uses(s)

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

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): 1 f/cc 5 mg/m3 continuous filament glass fibers

Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate ventilation.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Hand protection	It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Rubber (natural, latex).
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash hands at the end of each work shift and before eating, smoking and using the toilet.
Respiratory protection	Wear a suitable dust mask.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	White or aluminum coated fibers woven into fabric of varying weight and thickness, depending on the style, with no distinctive odor.
Color	White.
Odor	No characteristic odor.
Odor threshold	Not relevant due to the physical form of this product.
pH	Not relevant due to the physical form of this product.
Melting point	700C / 1292F°C 1220F / 660C Aluminum
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.
Evaporation factor	Not relevant due to the physical form of this product.
Upper/lower flammability or explosive limits	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.
Viscosity	Not relevant due to the physical form of this product.
Explosive properties	The mixture does not meet the criteria for explosive in accordance with GHS.
Explosive under the influence of a flame	The mixture does not meet the criteria for explosive in accordance with GHS.
Oxidising properties	Does not meet the criteria for classification as oxidizing.
Comments	The indicated values do not necessarily correspond to the product specification. Please refer to the technical data sheet for specification data.

10. Stability and reactivity

Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Not relevant.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	For Thorstrand: Dilute hydrochloric acid, sulfuric acid, potassium hydroxide and sodium hydroxide.
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 vapors. The products of combustion and decompostion will depend on other materials present in the fire and the actual conditions of the fire.

11. Toxicological information

Information on toxicological effects

Toxicological effects	Continuous filament fiber is listed by the International Agency for Research on Cancer (IARC) as a group 3 (not classifiable as a human carcinogen).

Carcinogenicity

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
Inhalation	May cause respiratory system irritation.
Ingestion	None expected under normal conditions of use. Ingestion is not an expected route of industrial exposure.
Skin Contact	Contact may cause mechanical irritation, skin redness, itching and drying of the skin. Prolonged or repeated contact may cause allergic skin reaction, dermatitis and possible sensitization.
Eye contact	May cause mechanical irritation.
Medical considerations	Preexisting eye, skin or respiratory disorders may be aggravated by exposure to this product.

12. Ecological Information

Ecotoxicity No ecological data has been determined on the total product.

Toxicity

Toxicity Not regarded as dangerous for the environment.

Persistance and degradability

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

Bioaccumulative potential

Bio-Accumulative Potential Not relevant due to the physical form of this product.

Mobility in soil

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

13. Disposal considerations

Waste treatment methods

General information Materials for disposal should be placed in appropriate sealed containers to avoid potential human and environmental exposure. It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the U.S., Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

General Not regulated.

UN Number

This product is not dangerous to transport.

UN proper shipping name

This product is not dangerous to transport.

Transport hazard class(es)

This product is not dangerous to transport.

Packing group

This product is not dangerous to transport.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

This product is not dangerous to transport.

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15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Not listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
Not listed.

SARA 313 Emission Reporting
Not listed

RCRA

RCRA Information: Currently, the product is not listed in the federal hazardous waste regulation 40 CFR, Part 261.33, paragraphs (E) or (F), ie. chemical products that are considered hazardous if they become waste. State or local hazardous waste regulations may also apply if they are different from the federal regulation. It is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

SARA (311/312) Hazard Categories
None.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Inventories

US - TSCA
This product is an article as defined by TSCA and is not required to be listed in the TSCA inventory.

US - TSCA 12(b) Export Notification
Not listed.

16. Other information

Abbreviations and acronyms used in the safety data sheet

ACGIH American Conference of Industrial Hygienists ATE Acute Toxicity Estimate CAS# Chemical Abstracts Service Number CERCLA Comprehensive Environmental Response, Compensation, and Liability Act DOT Department of Transportation EmS Emergency Response Procedures for Ships Carrying Dangerous Goods EPA Environmental Protection Agency GHS Global Harmonized System HMIS Hazardous Materials Identification System, IATA International Air Transport Association ICAO International Civil Aviation Organization IMDG International Maritime Dangerous Goods Kow Octanol-water partition coefficient LC50 Lethal concentration to 50% of a test population LD50 Lethal dose to 50% of a test population n.o.s. Not otherwise specified OSHA Occupational Safety and Health Administration PBT Persistent, Bioaccumulative and Toxic substance PNEC Predicted No Effect Concentration PPE Personal Protection Equipment RCRA Resource Conservation and Recovery Act SADT Self-accelerating decomposition temperature SARA Superfund Admendments and Reauthorization Act STOT Specific Target Organ Toxicity (STOT) RE Repeated Exposure (STOT) SE Single Exposure TSCA Toxic Substance Control Act UN United Nations VOC Volatile Organic Compound WHMIS Workplace Hazardous Materials Information System

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General information	Handling practices for aluminum materials must be in accordance with NFPA 651, Chapters 1-5. Dust or particulate from machining the product should not be exposed to moisture as it may liberate hydrogen gas and form explosive mixtures.
Issued by	U.S.A. Product Stewardship department
Revision date	5/1/2015
Revision	0
Hazard statements in full	USH01 May form combustible dust concentrations in air
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	F
ACA HMIS Flammability rating.	Will not burn. (0)

Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. appear herein, they are used as a defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these lawssuch as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. Any exposure can only be understood within the entire context of its occurrence, which includes such factors as the substance's characteristics as defined in the SDS, amount and duration of exposures, other chemicals present and preexistingindividual differences in response to the exposure. The data provided in this SDS is based on the information received from our raw material suppliers and other sources believed to be reliable. We are supplying you this data solely in compliance with the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200 and the Federal and State laws as described in Section 15: Regulatory Information. The information contained in this SDS is proprietary and confidential to HexcelCorporation. This SDS and the information in it are not to be used for purposes other than compliance with the Federal OSHA Hazard Communication Standard. If you have received this SDS from any other source than Hexcel Corporation or its authorized agent, the information contained in it may have been modified from the original document and it may not be the most current revision. Liability, if any, for use of this product is limited to the terms contained in our sale terms and conditions. We do not in any way warrant (expressed or implied, including any implied warranty for merchantability or fitness for a particular purpose) the data contained or the product described in this SDS. Additionally, we do not warrant that the product will not infringe any patent or other proprietary or property rights of others.