

1 Identification

Product identifier

Trade name: 616H10 - Carbon Fiber Webbing

Recommended use and restrictions on use

General use: Article: carbon-fibers for orthopedic procedures.
Reserved for industrial and professional use.

Initial supplier identifier

Company name: Otto Bock HealthCare Canada Ltd.

Street/POB-No.: 5470 Harvester Road

Postal code, city: Burlington, ON L7L 5N5, CA
Canada

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Department responsible for information:

Mark Agro, Telephone: (800) 665-3327 (9 am - 5 pm)

Additional information:

Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency telephone number

COLLECT, Telephone: (613) 996-6666

2 Hazard identification

Classification

Article not subject to hazard labelling or classification.

Information elements

not applicable

Other hazards known to the supplier with respect to the product

Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. For risks which have to be observed thereby, see section 7: Handling, section 8: Exposure controls / personal protection and section 11: Toxicology.

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

3 Composition/Information on ingredients

Mixture

Chemical name: Carbon fibers >95%

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 25068-38-6	Bisphenol A epoxy resin (molecular-weight < 700)	< 1 %	Skin Irritation 2. Eye Irritation 2A. Sensitization - skin 1. Aquatic toxicity - chronic 2.

The actual concentration or concentration range is withheld as a trade secret.

4 First-aid measures

Description of necessary first-aid measures

General information: For mechanical processing: dust formation.

In case of inhalation: In case of troubles after inhalation of dust: Provide fresh air. Seek medical attention.

In case of swallowing: Never give anything by mouth to an unconscious person. Repeatedly drink water. Seek medical aid in case of troubles.

In case of skin contact: Remove residues with soap and water. In case of skin irritation, consult a physician.

In case of eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.

Most important symptoms and effects, whether acute or delayed

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

5 Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water spray jet, foam, extinguishing powder, carbon dioxide.

Unsuitable extinguishing media:

Full water jet.

Specific hazards arising from the product

In case of fire may be liberated: halogen oxides, carbon monoxide and carbon dioxide.
Danger of formation of toxic pyrolysis products.

Special protective equipment and precautions for fire-fighters

Wear self-contained breathing apparatus. Wear appropriate protective equipment.

Additional information:

Cool endangered containers with water spray and, if possible, remove from danger zone.
Do not breathe fumes.
Do not allow fire water to penetrate into surface or ground water.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.
At processing: Do not breathe dust. Ensure adequate ventilation, especially in confined areas.

Environmental precautions:

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

7 Handling and storage

Precautions for safe handling

Advices on safe handling: For mechanical processing:

Provide adequate ventilation. Avoid generation of dust.

Wear suitable protective clothing. The use of local exhaust ventilation is recommended.

When using do not eat, drink or smoke.

Precautions against fire and explosion:

Fine dust: danger of dust explosion.

Carbon Fiber is electrically conductive. It can cause short circuits within electrical equipment, if material dusts penetrate into the ambient air.

Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store at room temperature. (< 50 °C)

Protect from moisture contamination. (< 85 °C)

Hints on joint storage:

Do not store together with oxidizing agents.

Keep away from food, drink and animal feedingstuffs.

8 Exposure controls/Personal protection

Control parameters

Occupational exposure limit values:

Type	Limit value
Canada: Alberta, OEL 8 hour	10 mg/m ³ (Dust limit value, inhalable fraction)
Canada: Alberta, OEL 8 hour	3 mg/m ³ (Dust limit value, respirable fraction)
Canada: BC, OEL TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
Canada: BC, OEL TWA	3 mg/m ³ (Dust limit value, respirable fraction)
Canada: Québec, VEMP	10 mg/m ³ (total dust)
Canada: Québec, VEMP	3 mg/m ³ (total dust, respirable fraction)

Appropriate engineering controls

For mechanical processing:

Provide adequate ventilation. The use of local exhaust ventilation is recommended.

Individual protection measures, such as personal protective equipment

Respiratory protection:	For mechanical processing: Half mask with particle filter 1 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2. according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2
Hand protection:	protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: Butyl caoutchouc (butyl rubber) - Breakthrough time: >120 min. For mechanical processing: Protective gloves according to (OSHA Standard - 29 CFR: 1910.138) Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	For mechanical processing: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010
Body protection:	For mechanical processing: Wear suitable protective clothing.
General hygiene considerations:	Avoid generation of dust. Do not breathe dust. Wash hands before breaks and after work.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9 Physical and chemical properties

Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	Form: solid
Colour:	black
Odour:	odourless
Odour threshold:	No data available
Melting point and freezing point:	approx. 3500 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower and upper explosion limit or lower and upper flammability limit:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	Carbon fibers: > 650 °C Coating agent: > 290 °C
pH:	No data available
Water solubility:	at 20 °C: carbon fibers: insoluble
Partition coefficient — n-octanol/water:	No data available
Vapour pressure:	No data available
Density and/or relative density	at 20 °C: 1.7 - 2 g/cm ³
Vapour density:	No data available
Particle characteristics:	Not applicable

Additional information

Ignition temperature: 350 °C

10 Stability and reactivity

Reactivity: Refer to 10.3.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:

Fine dust: danger of dust explosion.
Carbon Fiber is electrically conductive. It can cause short circuits within electrical equipment, if material dusts penetrate into the ambient air.

Conditions to avoid: Avoid generation of dust.
Keep away from heat.

Incompatible materials: Strong oxidizing agents, strong acids, strong bases

Hazardous decomposition products:

In case of fire may be liberated: halogen oxides, carbon monoxide and carbon dioxide.
Danger of formation of toxic pyrolysis products.

11 Toxicological information

Information on the likely routes of exposure

No data available

Health hazard information

Acute toxicity (oral): Lack of data.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Lack of data.
Serious eye damage/irritation: Lack of data.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Lack of data.
Reproductive toxicity: Lack of data.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): Lack of data.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.

Other information: For mechanical processing:
Possible in traces: formation of WHO-fibers
Definition WHO-fibers: length (L) > 5 µm and diameter (D) < 3 µm and L:D > 3:1
classification WHO-fibers: Causes concern for man owing to possible carcinogenic effects. Should be regarded as if they are carcinogenic to man.

Symptoms

For mechanical processing: mild irritant.
May produce an allergic reaction.

12 Ecological information

Ecotoxicity

Effects in sewage plants: The insoluble part can be precipitated mechanically in suitable sewage treatment plants.

Further details: No data available

Persistence and degradability

Further details: No data available

Bioaccumulative potential

Partition coefficient — n-octanol/water:
No data available

Mobility in soil

No data available

Other adverse effects

General information: Discharge into the environment must be avoided.

13 Disposal considerations

Waste treatment methods

Product

Recommendation: Incinerate according to applicable local, state and federal regulations.

Package

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14 Transport information

UN number

TDG, IMDG, IATA-DGR: not applicable

UN proper shipping name

TDG, IMDG, IATA-DGR: Not restricted

Transport hazard class

TDG, IMDG, IATA-DGR: not applicable

Packing group

TDG, IMDG, IATA-DGR: not applicable

Environmental hazards

Marine pollutant: no

Special precautions in connection with transport or conveyance either within or outside the premises

Canada: Transportation of Dangerous Goods (TDG)

Shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15 Regulatory information

National regulations - Canada

Product: Priority Substances List: listed (PSL 2)
CEPA Schedule 1: listed

Bisphenol A epoxy resin (molecular-weight < 700): DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Text for labelling: See information supplied by the manufacturer.

Revision date: 17/12/2025

Date of first version: 31/8/2007

Reason of change: General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022

General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

Abbreviations and acronyms:

Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
 AS/NZS: Australian Standards/New Zealand Standards
 CAS: Chemical Abstracts Service
 CEPA: Canadian Environmental Protection Act
 CFR: Code of Federal Regulations
 CLP: Classification, Labelling and Packaging
 DMEL: Derived minimal effect level
 DNEL: Derived no-effect level
 DSL: Domestic Substances List
 EC: European Community
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 Eye Irritation: Eye irritation
 IATA: International Air Transport Association
 IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
 IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IMDG Code: International Maritime Dangerous Goods Code
 IMO: International Maritime Organization
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 MFSU: Manufacture, formulation, supply and use
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 PSL: Priority Substances List
 Sensitization - skin: Skin sensitisation
 Skin Irritation: Skin irritation
 TDG: Transportation of Dangerous Goods Regulation in Canada
 TRGS: Technical Rules for Hazardous Substances
 TSCA: Toxic Substance Control Act
 vPvB: Very persistent and very bioaccumulative

Literature: TRGS 905, 05/2008 Verzeichnis krebserzeugender, erbgutverändernder oder fortpflanzungsgefährdender Stoffe

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.