

## 1. Identification

### Product identifier

Trade name: 616H10 - Carbon Fiber Webbing

### Relevant identified uses of the substance or mixture and uses advised against

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

### Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care

Street/POB-No.: 3820 W. Great Lakes Drive

Zip code, city: Salt Lake City, UT 84120  
USA

WWW: [www.ottobockus.com](http://www.ottobockus.com)

Telephone: +1 (801) 956-2400

Telefax: +1 (801) 956-2401

Department responsible for information:

Quality Department,  
Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),  
Email: [USRegulatory@ottobock.com](mailto:USRegulatory@ottobock.com)

Additional information:

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

### Emergency telephone number

CHEMTREC, Telephone: +1 (800) 424-9300

## 2. Hazard identification

### Classification of the substance or mixture

Article not subject to hazard labelling or classification.

### Label elements

not applicable

### Other hazards

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

#### Mixtures

Chemical characterization: Carbon fibers >95%

Relevant ingredients:

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

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

### 4. 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.
Following skin contact:	Remove residues with soap and water. In case of skin irritation, consult a physician.
After 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.
After swallowing:	Never give anything by mouth to an unconscious person. Repeatedly drink water. Seek medical aid in case of troubles.

#### Most important symptoms/effects, acute and delayed

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

#### Information to physician

Treat symptomatically.

### 5. Fire-fighting measures

#### Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Water spray jet, foam, dry chemical powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet.

#### Specific hazards arising from the chemical

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

#### Protective equipment and precautions for firefighters

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

Methods for clean-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
USA: ACGIH: TWA	10 mg/m <sup>3</sup> (Dust limit value, inhalable fraction)
USA: ACGIH: TWA	3 mg/m <sup>3</sup> (Dust limit value, respirable fraction)
USA: OSHA: TWA	15 mg/m <sup>3</sup> (Dust limit value, total dust)
USA: OSHA: TWA	5 mg/m <sup>3</sup> (Dust limit value, respirable fraction)

### Appropriate engineering controls

For mechanical processing:

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

### Personal protection equipment (PPE)

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 68 °F and 101.3 kPa	Form: solid
Color:	black
Odor:	odorless
Odor threshold:	No data available
Melting point/freezing point:	approx. 6332 °F
Initial boiling point and boiling range:	No data available
Flammability:	No data available
Explosion limits:	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
Viscosity:	No data available
Water solubility:	at 68 °F: carbon fibers: insoluble
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	No data available
Density:	at 68 °F: 1.7 - 2 g/cm³
Vapor density:	No data available
Particle characteristics:	Not applicable

### Additional information

Ignition temperature: 662 °F

## 10. Stability and reactivity

Reactivity: No data available.

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 toxicological effects

Toxicological effects: 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

DOT, IMDG, IATA-DGR: not applicable

### UN proper shipping name

DOT, IMDG, IATA-DGR: Not restricted

### Transport hazard class(es)

DOT, IMDG, IATA-DGR: not applicable

### Packing group

DOT, IMDG, IATA-DGR: not applicable

### Environmental hazards

Marine pollutant: no

## Transport in bulk according to IMO instruments

No data available

## Special precautions for user

### USA: Department of Transportation (DOT)

Proper 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 - U.S. Federal Regulations

This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.

### National regulations - U.S. State Regulations

No data available

### Further regulations, limitations and legal requirements

No data available

## 16. Other information

Text for labeling: See information supplied by the manufacturer.

Revision date: 12/17/2025

Date of first version: 8/31/2007

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)

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

### Abbreviations and acronyms:

Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic  
 AS/NZS: Australian Standards/New Zealand Standards  
 CAS: Chemical Abstracts Service  
 CFR: Code of Federal Regulations  
 CLP: Classification, Labelling and Packaging  
 DMEL: Derived minimal effect level  
 DNEL: Derived no-effect level  
 DOT: Department of Transportation's Safety Regulations (USA)  
 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  
 Sensitization - skin: Skin sensitisation  
 Skin Irritation: Skin irritation  
 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.