



SAFETY DATA SHEET

according to WHMIS 2015 and ANSI Z400.1-2010

616x - Carbon Fiberglass Textile Material

Material number 616x

Revision date: 23/5/2025
Version: 9.3
Replaces version: 9.2
Language: en-CA,US
Date of print: 2/9/2025

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1. Product and company identification

Product identifier

Trade name: 616x - Carbon Fiberglass Textile Material

This safety data sheet pertains to the following products:

616H11 - Carbon Fiberglass Webbing

616G14 - Woven Carbon Fiberglass Stockinette

Recommended use and restrictions on use

General use: Article: carbon/glass-textile material 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

WWW: www.ottobock.ca

E-mail: info.canada@ottobock.com

Telephone: (800) 665-3327

Telefax: (800) 463-3659

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 phone number

COLLECT, Telephone: (613) 996-6666

Transport:

CONSULTANK Lutz Harder GmbH (Contract QUALI003)

Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazards identification

Emergency overview

Appearance: Form: solid
Color: black and whitish

Odor: odorless

Classification: Article not subject to hazard labeling or classification.

Precautionary statements:

Avoid breathing dust.

Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS in Canada.

Hazards not otherwise classified

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.
 see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterisation: Carbon/glass-fibers: > 95% (Carbonfibers on the basis of polyacrylonitrile)

CAS-Number: -

Relevant ingredients:

CAS No.	Designation	Concentration	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.

4. First aid measures

General information: For mechanical processing: dust formation.

In case of inhalation: Provide fresh air. Rinse mouth thoroughly with water.
 Seek medical treatment in case of troubles.

Following skin contact: Remove residues with soap and water.
 Avoid rubbing. Fibers may penetrate deeper into the skin by rubbing.
 In the event of persistent symptoms seek medical treatment.

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: Rinse mouth thoroughly with water. Give affected person large quantities of water, better milk.
 Seek medical attention. Subsequent observance for Obstructing of the bowel/intestines.

Most important symptoms and effects, both acute and delayed

Fibers and dust: Skin irritation, mucous membrane irritation, eye irritations.
 May produce an allergic reaction.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature: No data available

Suitable extinguishing media:

Water spray jet, foam, extinguishing 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: carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters:

Wear self-contained breathing apparatus.

Additional information:

You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

6. Accidental release measures

Personal precautions:

Provide adequate ventilation.

Avoid generation of dust. Wear suitable protective clothing.

Environmental precautions:

Discharge into the environment must be avoided.

Methods for clean-up:

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

7. Handling and storage

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.

Precautions against fire and explosion:

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

Specific use(s)

Article: carbon/glass-textile material for orthopedic procedures.

Storage

Requirements for storerooms and containers:

Store at room temperature. (< 50 °C)

Protect from moisture contamination. (< 85 %)

Hints on joint storage:

Do not store together with oxidizing agents.

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8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
-	616x - Carbon Fiberglass Textile Material	Canada: OEL 8 hour	10 mg/m ³ (Dust limit value, inhalable fraction)
		Canada: OEL 8 hour	3 mg/m ³ (Dust limit value, respirable fraction)
		Canada: OEL TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
		Canada: OEL TWA	3 mg/m ³ (Dust limit value, respirable fraction)
		Canada: VEMP	10 mg/m ³ (total dust)
		Canada: VEMP	3 mg/m ³ (total dust, respirable fraction)
		USA: ACGIH: TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
		USA: ACGIH: TWA	3 mg/m ³ (Dust limit value, respirable fraction)
		USA: OSHA: TWA	15 mg/m ³ (Dust limit value, total dust)
		USA: OSHA: TWA	5 mg/m ³ (Dust limit value, respirable fraction)
65997-17-3	Glass fibers	Canada: OEL 8 hour	1 fibers/cm ³ (Glass Fibres, Continuous filament)
		Canada: OEL 8 hour	5 mg/m ³ (Glass Fibres, continuous filament, total particulate, inhalable fraction)
		Canada: OEL TWA	1 fibers/cm ³ (Synthetic vitreous fibres, Continuous filament glass fibres)
		Canada: OEL TWA	5 mg/m ³ (Synthetic Vitreous Fibres (Man Made Mineral Fibres), Continuous filament glass fibres)
		Canada: OEL TWA	5 mg/m ³ (Synthetic vitreous fibres, Continuous filament glass fibres, inhalable fraction)
		Canada: VEMP	1 fibers/cm ³ (continuous filament)
		USA: ACGIH: TWA	1 fibers/cm ³ (Synthetic vitreous fibres, Continuous filament glass fibres)
		USA: ACGIH: TWA	5 mg/m ³ (Synthetic vitreous fibres, Continuous filament glass fibres, inhalable fraction)
		USA: NIOSH: TWA	3 fibers/cm ³
		USA: NIOSH: TWA	5 mg/m ³ (glass wool, fibreglass, glass fibers)

Additional information: This limit values shall be applied in the case of formation of critical WHO-fibres by mechanical processing.

Engineering controls

For mechanical processing: Provide adequate ventilation.
The use of local exhaust ventilation is recommended.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: For mechanical processing:
Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: For mechanical processing: Wear suitable protective clothing.
For machine processing:
Protective gloves against mechanical risks according to OSHA Standard - 29 CFR: 1910.138
In case of manual processing:
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: butyl caoutchouc (butyl rubber)-Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: For mechanical processing:
Half mask with particle filter 1 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:
Avoid generation of dust. Do not breathe dust.
Wash hands before breaks and after work.
Avoid rubbing. Fibers may penetrate deeper into the skin by rubbing.
Remove fibers and/or dust from working clothes using a vacuum cleaner
Glass fibers-dust:
Avoid contact with skin and eyes.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: solid Color: black and whitish
Odor:	odorless
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	Carbon: approx. 3500 °C
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available

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Density:	at 20 °C: 1.7 - 2.6 g/cm ³
Water solubility:	at 20 °C: glass/carbon fibers: insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	Carbon fibers: > 650 °C Coating agent: > 290 °C
Ignition temperature:	Carbon: 350 °C

10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions. Glass fibers: not combustible
Possibility of hazardous reactions:	Carbon Fiber is electrically conductive. It can cause short circuits within electrical equipment, if material dusts penetrate into the ambient air.
Conditions to avoid:	Keep away from heat.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	In case of fire may be liberated: carbon monoxide and carbon dioxide.
Thermal decomposition:	Carbon fibers: > 650 °C Coating agent: > 290 °C

11. Toxicological information

Toxicological tests

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.

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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

Fibers and dust: Skin irritation, mucous membrane irritation, eye irritations.
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

Mobility in soil

No data available

Persistence and degradability

Further details: Glass fibers: Product is not biodegradable.

Additional ecological information

General information: Discharge into the environment must be avoided.

13. Disposal considerations

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

ADR/RID, IMDG, IATA-DGR:
not applicable

UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
Not restricted

Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:

not applicable

Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

Environmental hazards

Marine pollutant:

no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

USA: Department of Transportation (DOT)

Proper shipping name:

Not restricted

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

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

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

16. Other information

Text for labeling:

See information supplied by the manufacturer.

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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:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
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
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
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
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
WHMIS: Workplace Hazardous Materials Information System
WHO: World Health Organization

Literature:

IARC Vol 81, 23.08.2002 Man-made Vitreous Fibres
TRGS 905, 05/2008 Verzeichnis krebserzeugender, erbgutverändernder oder fortpflanzungsgefährdender Stoffe

Reason of change:

Changes in section 8: Occupational exposure limit values

Date of first version:

3/1/2008

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.