

1. Product and company identification

Product identifier

Trade name: 87Zx - Fibersil

This safety data sheet pertains to the following products:

Article No. 87Z1: Fibersil = white

Article No. 87Z2: Fibersil = dark red

Article No. 87Z3: Fibersil = yellow

Article No. 87Z4: Fibersil = blue

Article No. 87Z5: Fibersil = red

Article No. 87Z6: Fibersil = black

Article No. 87Z7: Fibersil = brown

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

General use: Coloring agent for Silicone 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
Postal Code, city: Salt Lake City, UT 84120
USA

WWW: 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

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

Emergency phone number

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

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, fibers
Color: refer to section 1

Odor: odorless

Classification: This material is classified as not hazardous.

Regulatory status

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

Hazards not otherwise classified

Fibers/dust: May cause irritations.

In case of eye contact: Mild irritant.

Danger of dust explosion.

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: -Cellulose (viscose)-fibers (diameter: 8 - 50 µm, length: 0,3 - 0,5 mm). With the mentioned dimensions, these cut flock products are above the dimensions of "Respirable Fine Dust Fibres".
-Pigment.
-Coating agent < 0,5 %: Inorganic and organic chemicals which are indispensable for flock quality intended for electrostatic flocking.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 68442-85-3	Cellulose, regenerated	< 60 %	not classified
CAS 61788-77-0	Cellulose fiber	< 60 %	not classified

4. First aid measures

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.

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.
Let water be swallowed in little sips.
Seek medical treatment in case of troubles.

Most important symptoms/effects, acute and delayed

In case of inhalation: May cause irritations.

In case of eye contact: Mild irritant.

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, dry chemical powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Danger of dust explosion.

Emits toxic fumes under fire conditions.

In case of fire may be liberated: hydrogen cyanide, nitrogen oxides (NOx), carbon monoxide and carbon dioxide

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions: Provide adequate ventilation.

Avoid generation of dust. Wear appropriate protective equipment.

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

Avoid generation of dust. Wear appropriate protective equipment.

Precautions against fire and explosion:

Danger of dust explosion. Take precautionary measures against static discharges.

Storage

Requirements for storerooms and containers:

Keep container tightly closed. Protect from moisture contamination.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

Type	Limit value
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)

Engineering controls

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:	Tightly sealed safety glasses according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2003
Skin protection:	Wear suitable protective clothing. If necessary: Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	With the formation of dust, use a dust mask. Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Particle filter device (EN 143) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.
General hygiene considerations:	Avoid generation of dust. Avoid contact with eyes. 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

Appearance:	Form: solid, fibers Color: refer to section 1
Odor:	odorless
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
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
Density:	1.52 g/cm ³
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	> 347 °F
Explosive properties:	Danger of dust explosion.
Ignition temperature:	approx. 788 °F
Bulk density:	50 - 200 kg/m ³

Additional information:

Minimum ignition energy in mJ: approx. 150

Dust explosion category: 1

Cut Flock/air mixtures may be explosive within certain concentration limits and sufficiently high ignition energies.

On DC electrostatic flocking installations, flock samples can only be ignited at discharge energy > 1300 mJ. Such discharges can only be achieved on a breakdown of the electrostatic flocking installations. On AC electrostatic flocking installations, ignitions of flock are more easy.

Effects of solvents from adhesives in the air have to be considered carefully.

For safe operation of electrostatic flocking installations, check NFPA 33.

To follow:

EN 50223: Automatic electrostatic application equipment for flammable flock material.

NFPA 33: Standard for spray application using flammable or combustible materials.

10. Stability and reactivity

Reactivity: No data available

Chemical stability: Combustible.
Product is stable under normal storage conditions.

Possibility of hazardous reactions:
Danger of dust explosion.

Conditions to avoid: Take precautionary measures against static discharges.
Avoid generation of dust.

Incompatible materials: No data available

Hazardous decomposition products:
Emits toxic fumes under fire conditions.
In case of fire may be liberated: hydrogen cyanide, nitrogen oxides (NOx), carbon monoxide and carbon dioxide

Thermal decomposition: > 347 °F

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.

Symptoms

In case of inhalation: May cause irritations.
After eye contact: Mild irritant.

12. Ecological information

Ecotoxicity

Effects in sewage plants: Mechanical separation in a suitable sewage plant is possible.

Further details: No data available

Mobility in soil

No data available

Persistence and degradability

Further details: Product is biodegradable with difficulty.

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

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

Cellulose, regenerated:

TSCA Inventory: listed; UVCB

Cellulose fiber:

TSCA Inventory: listed; UVCB

National regulations - U.S. State Regulations

No data available

National regulations - Canada

Cellulose, regenerated:

NDSL: listed

Cellulose fiber:

NDSL: listed

National regulations - Great Britain

Hazchem-Code: -

16. Other information

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
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DIN: German Institute for Standardization
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
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
NF: French Standard
NFPA: National Fire Protection Agency
OEL: Occupational Exposure Limit Value
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
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: Changes in section 8: Occupational exposure limit values

Date of first version: 8/20/2008

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.