

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Polyethylene furanoate (PEF)

Revision date: 01.02.2019

Product code:

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Polyethylene furanoate (PEF)

CAS No: 27598-47-6

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Industrial use

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: AVA-Biochem BSL AG
Street: Rothausstr. 61
Place: 4132 Muttenz (Schweiz)
Telephone: +41 41 727 09 70
e-mail: contact@ava-biochem.com
Responsible Department: Dr. Gans-Eichler
Chemieberatung GmbH
Raesfeldstr. 22
D-48149 Münster

e-mail: info@tge-consult.de
Tel.: +49(0)251/394868-69
www.tge-consult.de

1.4. Emergency telephone number: +41 41 727 09 70 (9:00-17:00 Mo-Fr)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

This substance is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements**Additional advice on labelling**

Labelling according to Regulation (EC) No. 1272/2008 [CLP]: none

2.3. Other hazards

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

SECTION 3: Composition/information on ingredients**3.1. Substances****Chemical characterization**

Polyethylene Furanoate

Contains: ethanediol; ethylene glycol < 0,2%

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

Do not breathe dust.

Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Take up mechanically.

Treat the recovered material as prescribed in the section on waste disposal.

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protection equipment (refer to section 8).

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Advice on protection against fire and explosion

Usual measures for fire prevention. Dust clouds may present an explosion hazard.

Further information on handling

Avoid generation of dust.

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: 20°C

Protect against: Light. UV-radiation/sunlight. heat. moisture.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

Dust should be exhausted directly at the point of origin.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

Eye/face protection

Dust protection goggles.

Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time \geq 8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

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Skin protection

Suitable protective clothing: Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

-exceeding exposure limit values

-insufficient ventilation and Generation/formation of dust

Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Type: P1-3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	not determined
Odour:	characteristic

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	210 - 211 °C
Initial boiling point and boiling range:	not determined
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Flash point:	not determined
Sustaining combustion:	Not sustaining combustion

Explosive properties

Dust clouds may present an explosion hazard.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	not determined
Decomposition temperature:	not determined

Oxidizing properties

none

Vapour pressure:	not determined
Density:	not determined
Bulk density:	not determined

Solubility in other solvents

not determined

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Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Flow time:	not determined
Vapour density:	not determined
Solvent separation test:	not determined
Solvent content:	not determined

9.2. Other information

Solid content:	not determined
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Water content (%) < 0,02%
Molecular weight > 30000 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Refer to chapter 10.5.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity

Based on available data, the classification criteria are not met.

No data available.

Irritation and corrosivity

Based on available data, the classification criteria are not met.

No data available.

Sensitising effects

Based on available data, the classification criteria are not met.

No data available.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

No data available.

STOT-single exposure

Based on available data, the classification criteria are not met.

No data available.

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STOT-repeated exposure

Based on available data, the classification criteria are not met.
No data available.

Aspiration hazard

Based on available data, the classification criteria are not met.
No data available.

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information**12.1. Toxicity**

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.
Non-contaminated packages may be recycled.
According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

200139 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Plastics

Waste disposal number of used product

200139 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Plastics

Waste disposal number of contaminated packaging

150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

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Land transport (ADR/RID)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number: No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
- 14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Refer to section 6-8

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

- 2010/75/EU (VOC): No information available.
- 2004/42/EC (VOC): No information available.
- Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII: not relevant

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

Changes

Rev. 1.0; Initial release 01.02.2019

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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.