

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), Annex II, amended according to Regulation (EU) 2020/878

**Product name:** Bio-Flex® F 9533

Date of issue: 30 July 2024

Version: 2.0

### 1. Designation of product, preparation and manufacturer

Trade name: Bio-Flex® F 9533  
 Description: Biodegradable polymer compound based on PLA, contains copolyester and additives.  
 Use of product: For industrial processing only.  
 Manufacturer: FKUR Kunststoff GmbH  
 Siemensring 79  
 D - 47 877 Willich  
 Phone: + 49 2154 / 92 51-0  
 Fax: + 49 2154 / 92 51-51  
 Emergency phone number: +49 2154 / 9251-0

### 2. Hazard identification

Classification: No need for classification according to GHS criteria for this product (according to Regulation (EC) No. 1272/2008 [CLP]).  
 Label elements: According to Regulation (EC) No. 1272/2008 (CLP) this product does not require a hazard warning label in accordance with GHS criteria.  
 Special advice on hazards: Danger of burns in contact with hot polymer. Hazardous vapours in case of burning.

### 3. Composition / information on ingredients

Chemical characteristics: Mixture  
 Additional information: There are no ingredients present which, according to the manufacturer's current knowledge, are classified as harmful to health or the environment in the applicable concentrations, are PBT or vPvB substances or substances of equal concern, or which have an occupational exposure limit and therefore need to be specified in this section.

### 4. First-aid measures

On skin contact: In case of contact with molten polymer immediately cool the skin with cold water. Medical aid may be required to remove adhering material and for treatment of burns.  
 After inhalation: After inhalation of decomposition gases or dust remove patient to fresh air. Contact a doctor in case of discomfort.  
 On ingestion: No effects known. Rinse mouth with water and drink more water. Contact a doctor in case of discomfort.  
 On eyes contact: Rinse open eyes thoroughly with water.  
 Most important symptoms and effects, both acute and delayed: No data available  
 Information on immediate medical help or special treatment: Symptomatic treatment

### 5. Fire-fighting measures

Suitable fire extinguishing media: Water, dry chemical extinguisher, foam, carbon dioxide.  
 Special exposure hazards: During incomplete combustion release of carbon monoxide, tetrahydrofurane and decomposition products possible.  
 Special protective equipment: Self-contained breathing apparatus.  
 Remark: Accumulations of dust can be inflammable.

### 6. Accidental release measures

Personal precautions: Use suitable protective clothing. Avoid eye contact and inhalation of dusts. Keep ignition sources away.  
 Control of dust: Apply ventilation or exhaust system to eliminate mist and vapour.  
 Removal of ignition sources: Product isn't flammable. Eliminate all potential ignitable sources around the area. Do not smoke in the area.  
 Environmental precautions: Avoid ingress of material into environment (soil, waterways and groundwater).  
 Methods for cleaning up: Risk of slipping. Sweep up material and place in a container. Dispose according to local regulation about residues.

### 7. Handling and storage

Handling: Avoid contact with molten polymer. Avoid generation of dust and electrostatic charge.  
 Storage: Protect against moisture and UV radiation. Store cool and keep packaging closed when not in use. Avoid sources of ignition.

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### 8. Exposure controls / personal protection

Exposure limit values / occupational exposure limit values:	Not applicable
Technical safety measures:	With suitable ventilation the threshold limits assumably will not be reached. Avoid electrostatic charge by use of grounding cables.
Personal safety equipment:	Use adequate safety equipment, e.g. protective clothing, eye protection glasses, heat protection gloves. In case of dust formation wear mask with particle filter.
Work hygiene:	No eating or drinking during working. Avoid contact of hot material with the skin. Avoid breathing dust and vapours.

### 9. Physical and chemical properties

Form:	Granules
Colour:	natural
Odour:	almost odourless
Odor threshold:	No data available
PH value:	No data available
Melting range:	145 - 165 °C
Initial boiling point and boiling range:	No data available
Flash point:	>280°C
Evaporation rate:	No data available
Fire behaviour characteristics:	non-oxidising
Lower / upper flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	1.45 g/cm <sup>3</sup>
Solubility:	insoluble in water
Partition coefficient: n-octanol / water	No data available
Auto-ignition temperature:	>400°C
Decomposition temperature:	>240 °C
Viscosity:	No data available
Explosiveness:	No data available
Oxidizing properties:	No data available

### 10. Stability and reactivity

Stability:	The product is stable at recommended storage conditions.
Conditions to be avoided:	Avoid exposure to extreme heat and all sources of ignition.
Substances to be avoided:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, aldehydes, tetrahydrofurane, low molecular weight oligomers.

### 11. Toxicological information

Information on toxicological effects:	Non-toxic product
Acute toxicity:	Dust can cause irritation of eyes, respiratory organs and skin. After ingestion stomach pain or nausea are possible.
Skin corrosion / irritation:	Not irritating.
Serious eye damage / irritation:	Not irritating.
Other remarks:	Based on our state of knowledge and experience no injurious health effects are expected if product is properly handled for the designated use.

### 12. Ecological information

Toxicity:	No negative ecological effects known at the present state of knowledge, test results are not available. Due to insolubility in water most probably not hazardous to aquatic organisms.
Persistence and degradability:	Product is biodegradable.
Bioaccumulation:	Due to its consistency and insolubility in water biological accumulation is not expected.
Mobility in soil:	Not available
Results of the PBT and vPvB assessment:	Not available
Endocrine disrupting properties:	Not available

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### 13. Disposal considerations

Product: Generation of waste should be minimised, check possibility for recycling. Waste product can be incinerated or dumped together with domestic waste in compliance with local authority requirements.

Uncleaned packaging: Packaging material has to be emptied completely and disposed in accordance with the regulations. Packaging can be recycled if not contaminated.

### 14. Transport information

Transport regulations: Not classified as hazardous under transport regulations ADR, ADN, RID, ICAO/IATA, IMDG/GGVSee.

### 15. Regulatory information

EU regulations: This product does not require a hazard warning label in accordance with EC Directives.

Water exposure class (Germany): 'nwg', no risk of water pollution (classification acc. AwSV)

### 16. Other information

This data is based on the current state of our information and experience. This safety data sheet describes our product in terms of safety requirements. Preceding data is not applicable as a warranty of product properties. It is the responsibility of the recipient to observe the existing legal regulations for the use of this product.