

## Data Sheet | Material Safety Data Sheet

### 1. Product identification

|                          |                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | Poly Urethane                                                                                                                |
| <b>Material numbers:</b> | PU-UF03, PU-UF05, PU-UF07, PU-UF09, PU-UF1, PU-UF3, PU-UF15, PU-UF20, PU-UF30, PKPU, PUW1, PUTEXW1, PUMAG08, PUAS10 & PUAS20 |
| <b>Chemical family:</b>  | Thermoplastic/thermoset Poly Urethane                                                                                        |
| <b>Chemical name:</b>    | Poly Urethane elastomer                                                                                                      |
| <b>Supplier:</b>         | Filcoflex B.V.<br>Luxemburgstraat 3<br>5171PK Kaatsheuvel<br>The Netherlands                                                 |

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

Filcoflex has determined that this material does not require classification under Regulation (EC) No. 1272/2008 and does not contain hazardous substances according to the Globally Harmonized System (GHS) classification.

#### 2.2 Label elements

According to Regulation (EC) No. 1272/2008, labeling is not required. The material is classified as non-hazardous under the Globally Harmonized System (GHS).

#### 2.3 Other hazards

Contact with molten material may cause thermal burns to the skin.

### 3. Composition/ information on ingredients

#### 3.1 Type of product

Mixture

#### 3.1 Mixtures

Ether-based thermoplastic Poly Urethane

No hazardous ingredients are present according to Regulation (EC) No. 1907/2006 (REACH).

#### 3.3 Candidate list of substances of very high concern for Authorisation

This product does not contain substances of very high concern (SVHC) as defined in Article 57 of Regulation (EC) No. 1907/2006 (REACH).

### 4. First aid measures

#### 4.1. Description of first aid measures

**In case of skin contact:** In case molten polymer comes into contact with the skin, cool immediately with plenty of cold water. Do not attempt to remove any product that has solidified on the skin, either forcibly or by using solvents. Seek medical attention for possible burns and appropriate further treatment.

**In case of eye contact:** In case of eye contact, immediately flush the eyes with plenty of water for at least 15 minutes. Seek medical advice if symptoms persist.

**In case of inhalation:** If exposed to fumes from overheating the material, move to fresh air. Seek medical attention if symptoms persist.

#### **4.2. Most important symptoms, Acute or immediate effects**

Contact with molten material may cause thermal burns to the skin.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

Currently, no information is available from Filcoflex.

## **5. Fire-fighting measures**

### **5.1. Extinguishing media**

In case of fire involving the material, use suitable extinguishing media, such as water, foam, or dry chemical agents.

### **5.2. Spacial hazards arising from the substance or mixture**

Burning the product releases carbon oxides, water vapor, smoke, hydrogen cyanide, and aliphatic and aromatic hydrocarbons. In the event of fire, do not breathe the fumes.

### **5.3. Advice for fire-fighters**

Firefighters must wear self-contained breathing apparatus. Do not allow contaminated extinguishing water to enter soil, groundwater, or surface water.

## **6. Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

- Wear protective equipment (see Section 8).
- Ensure adequate ventilation or exhaust extraction.
- Keep unauthorized personnel away.

### **6.2. Environment related measures**

Do not discharge into surface water or the sanitary sewer system.

### **6.3. Methods and material for containment and cleaning up**

Use mechanical handling equipment. Avoid the formation of dust. Sweep up and shovel into suitable containers for disposal.

### **6.4. Reference for safe handling**

For further disposal measures, see Section 13.

## **7. Handling and storage**

### **7.1. Precautions for safe handling**

Ensure adequate ventilation and/or local exhaust systems are used, and that the workplace exposure limits stated in Section 8 are not exceeded. In case of mechanical processing, dust must be removed by effective exhaust ventilation.

Wash hands and face before breaks and at the end of the workday. Keep workwear separate from personal clothing. Change contaminated clothing.

### **7.2. Conditions for safe storage, including incompatibilities**

Keep the material in a dry place, protected from UV light and heat sources.

Storage class (TRGS 510): 11 – Combustible solids

Storage temperature: < 40°C / < 104°F

### 7.3. Specific end uses

No information available.

## 8. Exposure controls / Personal protection

### 8.1. Control parameters

The regulations for the substances listed below must be observed during processing of this product, particularly when processing is carried out at elevated temperatures. In our experience, providing effective fresh air and exhaust ventilation at points where vapors may be generated will ensure compliance with the exposure limits listed below.

| Substance                      | Basis    | Type    | Value               | Ceiling limit value | Remarks                                          |
|--------------------------------|----------|---------|---------------------|---------------------|--------------------------------------------------|
| General limiting value of dust | TRGS 900 |         | 10mg/m <sup>3</sup> | 2                   | Inhalable fraction                               |
|                                |          |         | 3mg/m <sup>3</sup>  | 2                   | Alveolar fraction                                |
|                                |          | STEL CL |                     |                     | Category II: Substances with a resorptive effect |

### 8.2. Exposure controls

#### Respiratory protection

Under normal processing conditions with adequate ventilation, the use of a respirator is not required.

#### Hand protection

Wear protective gloves. According to EN 374, suitable glove material is polyvinyl chloride (PVC) with a thickness of at least 0.5 mm / 0.0197 inch. Contaminated and/or damaged gloves must be replaced.

#### Eye protection

The use of safety goggles is recommended to prevent particles from entering the eyes during grinding or machining.

#### Skin and body protection

When handling molten material, wear a long-sleeved cotton shirt and long trousers.

#### Further protective measures

Do not breathe dust or vapors. Avoid skin contact.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                              |                           |
|----------------------------------------------|---------------------------|
| Appearance                                   | Molded parts or sheets    |
| Color                                        | Transparant               |
| Odor                                         | Slight odor               |
| pH                                           | Not applicable            |
| Percent volatiles                            | None                      |
| Softening point                              | > 120°C / > 248°F         |
| Solubility in water                          | Insoluble                 |
| Specific gravity                             | 1.1 - 1.2                 |
| Upper/lower flammability or explosive limits | Not applicable            |
| Vapor pressure                               | Not applicable            |
| Density                                      | Ca. 1,2g/cm <sup>3</sup>  |
| Bulk density                                 | 500-700 kg/m <sup>3</sup> |
| Auto-ignition temperature                    | Not applicable            |
| Ignition temperature                         | > 210°C / > 410°F         |
| Visosity, dynamic                            | Not applicable            |

### 9.2 Other information

The indicated values do not necessarily correspond to the product specifications. Please refer to the product information sheet or technical data sheet for specification details.

## 10. Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable at ambient temperatures and pressures

### 10.3. Possibility of hazardous reactions

No hazardous reactions observed

### 10.4. Conditions to avoid

No information available.

### 10.5. Incompatible materials

No information available.

### **10.6. Hazardous decomposition products**

Smoldering or incomplete combustion leads to the formation of toxic gas mixtures consisting mainly of carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and nitrogen oxides.

Under recommended processing conditions, small amounts of isocyanates may be emitted. Exceeding the recommended processing temperatures leads to a significant increase in isocyanate vapors.

Overexposure entails a risk of concentration-dependent inhalation irritation and/or sensitization by isocyanates, including delayed onset of breathing difficulties, coughing, and possible asthma.

The regulations for the substances listed below must be observed during processing of this product, particularly when processing is carried out at elevated temperatures. Isocyanates (all, as –NCO).

Toxicological studies on the product are not yet available. Available data are provided below:

### **11.1 Information on toxicological effects**

#### **Acute toxicity, oral**

Thermoplastic Poly Urethane  
LD50 rat: > 5.000 mg/kg  
Method: OECD Test Guideline 423  
Studies on a comparable product.

#### **Acute toxicity, dermal**

Thermoplastic Poly Urethane  
LD50 rat: > 2.000 mg/kg  
Studies on a comparable product.

#### **Acute toxicity, inhalation**

Thermoplastic Poly Urethane  
Assessment: The substance or mixture has no acute inhalation toxicity  
Studies of a comparable product.  
Primary skin irritation  
Thermoplastic Poly Urethane  
Species: rabbit  
Result: non-irritant  
Classification: No skin irritation  
Method: OECD Test Guideline 404  
Studies on a comparable product.

#### **Primary mucosae irritation**

Thermoplastic Poly Urethane  
Species: rabbit  
Result: non-irritant  
Classification: No eye irritation  
Studies on a comparable product.

## **11. Toxicological information**

**Sensitisation**

Thermoplastic Poly Urethane

Skin sensitisation according to Magnusson/Kligmann (maximizing test):

Species: Guinea pig

Result: negative

Classification: Does not cause skin sensitization.

Method: OECD Test Guideline 406

Studies on a comparable product.

**Subacute, sub chronic and prolonged toxicity**

Thermoplastic Poly Urethane

No data available.

**Carcinogenicity**

Thermoplastic Poly Urethane

No data available.

**Reproductive toxicity/Fertility**

Thermoplastic Poly Urethane

No data available.

**Reproductive toxicity/Teratogenicity**

Thermoplastic Poly Urethane

No data available.

**Genotoxicity in vitro**

Thermoplastic Poly Urethane

Test type: Salmonella/microsome test (Ames test)

Result: No indication of mutagenic effects.

Method: OECD Test Guideline 471

Studies on a comparable product.

**Genotoxicity in vivo**

Thermoplastic Poly Urethane

No data available.

**STOT evaluation – one-time exposure**

Thermoplastic Poly Urethane

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

**STOT evaluation – repeated exposure**

Thermoplastic Poly Urethane

No data available

**Aspiration toxicity**

Thermoplastic Poly Urethane

No data available.

**CMR Assessment**

Thermoplastic Poly Urethane

Carcinogenicity: No data available.

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

Teratogenicity: No data available.

Reproductive toxicity/Fertility: No data available.

## 12. Ecological information

Ecotoxicological studies on the product are not available. Do not allow the product to enter waterways, wastewater, or soil. Available data are provided below:

### 12.1. Toxicity

**Acute Fish toxicity**

Thermoplastic Poly Urethane

EC50 > 100 mg/l

Species: Danio rerio (zebra fish)

Exposure duration: 96 h

Method: Tested according to Directive 92/69/EEC

Studies on a comparable product.

**Chronic Fish toxicity**

Thermoplastic Poly Urethane

No data available.

**Acute toxicity for daphnia**

Thermoplastic Poly Urethane

EC50 > 100 mg/l

Species: Daphnia magna (Water flea)

Exposure duration: 48 h

Method: Tested according to Directive 92/69/EEC.

Studies on a comparable product.

**Chronic toxicity to daphnia**

Thermoplastic Poly Urethane

No data available.

**Acute toxicity for algae**

Thermoplastic Poly Urethane

Endpoint: Growth inhibition

Species: scenedesmus subspicatus

Exposure duration: 72 h

Method: OECD Test Guideline 201

No toxic effects with saturated solution.

Studies on a comparable product.

**Acute bacterial toxicity**

Thermoplastic Poly Urethane

EC50 > 10.000 mg/l

Test type: Respiration inhibition

Species: activated sludge

Exposure duration: 3 h

Method: OECD Test Guideline 209

Studies on a comparable product.

## **12.2. Persistence and degradability**

### **Biodegradability**

Thermoplastic Poly Urethane

Biodegradation: 1 %, 28 d, i.e. not readily degradable

Method: Tested according to Directive 92/69/EEC.

Studies on a comparable product.

## **12.3 Bio accumulative potential**

No data available.

## **12.4 Mobility in soil**

No data available.

## **12.5 Results of PBT and vPvB assessment**

No data available.

## **12.6 Other adverse effects**

The product does not contribute to the AOX value of effluent water (DIN 38409).

## **13. Disposal considerations**

Dispose of in accordance with applicable international, national, and local laws, regulations, and statutes. For disposal within the EU, the appropriate code from the European Waste Catalogue (EWC) should be used.

### **13.1 Waste treatment methods**

After containers have been emptied as thoroughly as possible (e.g., by pouring, scraping, or draining until drip-dry), they may be sent to an appropriate collection point within an existing chemical industry take-back scheme. Containers must be recycled in compliance with national legislation and environmental regulations. The product is suitable for mechanical recycling. After appropriate treatment, it can be remelted and reprocessed into new molded articles. Mechanical recycling is only possible if the material has been selectively collected and carefully segregated by type.

## **14. Transport information**

### **ADR/RID**

|                                  |                     |
|----------------------------------|---------------------|
| 14.1 UN number or ID number:     | Not dangerous goods |
| 14.2 UN proper shipping name:    | Not dangerous goods |
| 14.3 Transport hazard class(es): | Not dangerous goods |
| 14.4 Packing group:              | Not dangerous goods |
| 14.5 Environmental hazards:      | Not dangerous goods |

### **ADN**

|                                  |                     |
|----------------------------------|---------------------|
| 14.1 UN number or ID number:     | Not dangerous goods |
| 14.2 UN proper shipping name:    | Not dangerous goods |
| 14.3 Transport hazard class(es): | Not dangerous goods |
| 14.4 Packing group:              | Not dangerous goods |
| 14.5 Environmental hazards:      | Not dangerous goods |



## IATA

|                                  |                     |
|----------------------------------|---------------------|
| 14.1 UN number or ID number:     | Not dangerous goods |
| 14.2 UN proper shipping name:    | Not dangerous goods |
| 14.3 Transport hazard class(es): | Not dangerous goods |
| 14.4 Packing group:              | Not dangerous goods |
| 14.5 Environmental hazards:      | Not dangerous goods |

## IMDG

|                                  |                     |
|----------------------------------|---------------------|
| 14.1 UN number or ID number:     | Not dangerous goods |
| 14.2 UN proper shipping name:    | Not dangerous goods |
| 14.3 Transport hazard class(es): | Not dangerous goods |
| 14.4 Packing group:              | Not dangerous goods |
| 14.5 Environmental hazards:      | Not dangerous goods |

## 14.5. Special precautions for users

See Sections 6–8.

Additional information: Not classified as dangerous goods.  
Slight odor.  
Keep dry.

## 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable.

## 15. Regulatory information

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

#### **Water contaminating class (Germany)**

Not classified as water-hazardous (in accordance with Annex I to the Directive on water-hazardous substances).

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has not been conducted for this substance or mixture, or its components.

## 16. Other information

### 16.1 Disclaimer of expressed and implied warranties

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Name: Werner van Loon  
Function: Managing Director  
Date: 02/07/2026



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