

# MATERIAL SAFETY DATA SHEET

## rPETG



### SECTION 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

#### 1.1 Product Identifier

<b>Product name:</b>	Recycled PETG filament (rPETG)
<b>Other means of identification:</b>	not available
<b>Registration number:</b>	not required

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

<b>Identified uses:</b>	material for 3D printing
<b>Recommended restrictions on use:</b>	none set

#### 1.3 Details of the supplier of the safety data sheet

<b>Company:</b>	Reflow BV Johan van Hasseltweg, 6 1022 WV Amsterdam The Netherlands
<b>Telephone:</b>	+31654395898

**Website:** [www.reflowfilament.com](http://www.reflowfilament.com)  
**Email of person responsible for data sheet:** [claudia@reflowfilament.com](mailto:claudia@reflowfilament.com)

#### 1.4 Emergency telephone number

**National Poisons Information Center (NVIC) / University Medical Center Utrecht**

**Telephone (office hours):** +31 88 75 585 61

**24/7 hotline service:** 030-2748888

## SECTION 2. HAZARDS IDENTIFICATION

Compilation of the Safety Data Sheet is not required for this mixture. However, this Safety Data Sheet provides important information on safety at work, storage, transport and other manipulation.

#### **Important health effects:**

No adverse effects for human health are expected for the mixture under normal conditions of usage, the mixture is biologically inert. Ingestion of a small amount should not cause any troubles. When melted, it can cause burns if contacted with skin and eyes. Inhaling of melted/overheated mixture in high concentration can irritate moderately respiratory system and mucous membranes.

#### **Important environmental effects:**

No adverse effects in the environment are expected for the mixture. The material is not biodegradable in the environment.

#### **2.1 Classification of the substance or mixture**

Not classified as dangerous in accordance with Regulation (EC) 1272/2008.

#### **2.2 Label elements**

Not required

## SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Product based on glycol modified polyethylene terephthalate (PETG) with additives.

### 3.1 Substances

Does not apply

### 3.2 Mixtures

This product does not meet the criteria for classification in any hazard class.

Substance	Content (% w/w)	EC Number CAS Number Index Number	Classification (EC) 1272/2008	Exposure limits
Recycled Glycol Polyethylene terephthalate (rPETG)	96-98%	Polymer	Not classified	-

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### Inhalation:

Dust or potential decomposition products of melted mixture in high concentration can cause airway irritation. In this case remove the affected persons to a fresh air. If symptoms persist, seek medical assistance.

#### Skin contact:

In case of skin contact with melted material, do not peel solidified product off the skin. Cool down the burnt area with a stream of cold water. Burns must be treated by a physician. If symptoms persist, seek medical advice.

#### Eye contact

Dust or potential decomposition products can cause eye irritation. If so, rinse immediately with water and seek medical advice if symptoms persist. Direct contact of eye with melted product can cause serious eye damage. Seek professional medical help immediately.

**Ingestion:**

Seek medical advice if swallowed.

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

No adverse effects for human health are expected under normal conditions of use.

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

Use symptomatic treatment.

## 5. FIREFIGHTING MEASURES

**5.1 Extinguishing media**

**Suitable extinguishing media:**

Carbon dioxide, water, alcohol resistant foam

**5.2 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:**

In the event of fire, the following toxic vapours can be released: carbon dioxide, carbon monoxide, sooth, aldehydes and other products of organic compounds decomposition.

**5.3 Advice for fire-fighters:**

Fire-fighters must use self-contained breathing apparatus and protective firefighting clothing. Avoid contact with material during firefighting operations.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions**

No special requirements needed. Observe all user considerations and safety measures listed in sections 7 and 8.

**6.2 Environmental precautions**

Dispose in accordance with local and national regulations. Do not dispose into the drains, small particles may present a physical ingestion hazard to wildlife.

**6.3 Methods and materials for containment and cleaning up**

Dispose according to legislation. Send in suitable containers for recycling or disposal. Collect using a suitable vacuum system.

## 7. HANDLING AND STORAGE

**7.1 Handling**

No special precautions are necessary beyond normal good industrial hygiene and safety practices. Observe all user considerations, safety measures and exposure limits. Handle heavier parts either with lifting equipment or sufficient manpower.

**7.2 Storage**

Store in a dry place away from water, direct sunlight and high relative humidity.

**7.3 Specific use(s)**

Material for 3D printing

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 Exposure limit values**

No exposure limits set.

**8.2 Exposure controls**

**Engineering controls**

Ensure the workplace has either a local exhaust or general room ventilation. Avoid contact with skin, eyes and mucous membranes. Always observe hygiene measures and use personal protective equipment.

### Personal protective equipment

Respiratory protection:  
No special requirements are needed under normal use. Ensure proper ventilation of the workplace. Use suitable respiratory protection equipment (e.g. NIOSH approved mask) when airborne exposure limits are reached or exceeded.

Skin protection:  
No special requirements are needed under normal use. Use heat isolating gloves when manipulating heated material. Make sure to replace any damaged gloves immediately.

Eye protection:  
No special requirements are needed under normal use. Avoid contact with eyes. If the risk of eye contact arises, make sure to use safety protection glasses.

Thermal hazards:  
There is no such risk when normally used.

### Environmental exposure controls

Comply with local community environmental legislation.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 General information

<b>Appearance:</b>	Solid monofilament
<b>Colour:</b>	Black, white, transparent, blue, green, yellow, red
<b>Odour:</b>	odourless

### 9.2 Important health, safety and environment information

<b>pH:</b>	Information not available
<b>Melting point point:</b>	245° C
<b>Initial boiling point and boiling range:</b>	Information not available
<b>Flash point:</b>	Information not available
<b>Flammability (solid / gas):</b>	Information not available

<b>Explosive properties:</b>	No explosive properties
<b>Oxidising properties:</b>	No oxidative properties
<b>Vapour pressure:</b>	Information not available
<b>Relative density:</b>	Information not available
<b>Solubility:</b>	Information not available
<b>Water solubility:</b>	Insoluble in water
<b>Partition coefficient; n-octanol/water:</b>	Information not available
<b>Viscosity:</b>	Information not available
<b>Vapor density:</b>	Information not available
<b>Evaporation rate:</b>	Information not available

## 10. STABILITY AND REACTIVITY

### 10.1 Conditions to avoid

Avoid temperatures above recommended settings as they may cause deformations of the product.

### 10.2 Materials to avoid

Strong acids, strong oxidizing agents and certain salts may have detrimental effect on product.

### 10.3 Hazardous decomposition products

Material does not decompose at ambient temperatures.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Based on our experience and the data available, no adverse effects on human health are expected under normal conditions of usage.

<b>a. Acute toxicity</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>b. Skin corrosion / irritation</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>c. Serious eye damage / irritation</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>d. Respiratory or skin sensitisation</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>e. Germ cell mutagenicity</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>f. Carcinogenicity</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>g. Reproductive toxicity</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>h. STOT-single exposure</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>i. STOT-repeated exposure</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
<b>a. Aspiration hazard</b>	Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

## 12. ECOLOGICAL INFORMATION

No adverse effects in the environment are expected for the mixture.

### 12.1 Toxicity

No data is available. No adverse effects on the environment are expected.



#### **12.2 Persistence and degradability**

This product is biologically inert and non-biodegradable.

#### **12.3 Bioaccumulative potential**

The product will not be readily bioavailable due to its consistency and insolubility in water.

#### **12.4 Mobility in soil**

No data is available.

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

The substances in the mixture do not meet the PBT/vPvB criteria and no substances are included in the Candidate List of Substances of Very High Concerns (SVHC).

### **13. DISPOSAL CONSIDERATIONS**

Comply with applicable regulations for waste disposal. The material (polymer) is not classified as biodegradable. If recycling is not possible, eliminate in accordance with valid waste disposal regulations.

### **14. TRANSPORT INFORMATION**

The substance is not classified as dangerous for transport according to ADR/RID/IMDG/ICAO/IATA.

### **15. REGULATORY INFORMATION**

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

Relevant legislation of the EU:

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

#### **15.2 Chemical safety assessment**

No data available.

## 16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) contains information on safety use, occupational health protection, and environmental protection. The information provided is based on our current knowledge and experience and represents the best information currently available to us. No liability can be assumed for the completeness and accuracy of the information.

This data sheet is not a Certificate of Analysis (CoA) nor a technical data sheet. The recipient of the product bears sole liability for the precautions required when using the product and must determine the suitability and completeness of information from all available sources to ensure proper use and disposal of the product. This MSDS applies to this material only and therefore does not apply if used in combination with other materials or ways of processing.