

# SAFETY DATA SHEET

According to EU Directive 1907/2006, as amended

## SECTION 1: Identification of the substance/preparation and of the company

1.1. Trade name	PETG
1.2. Use of the product:	3D printer filament
1.3. Supplier	
Company name	Fill 3D
Address Division	Berkenblad 15, 3233SR Oostvoorne, The Netherlands
Telephone	06 - 25 14 59 95
E-mail	info@fill3d.com
Contact person	Ferry de Jong

## SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
1,4-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol and 1,2-ethanediol (CAS No. 1038843-64-9) is not classified according to Regulation (EC) 1272/2008 and Directive 67/548/EEC.
- 2.2. Label elements                      None.
- 2.3. Other hazards                         Danger of burns in contact with hot polymer and hazardous vapors in case of burning.

## SECTION 3: Composition/information on ingredients

- 3.1. Chemical characteristics:        1,4-Benzenedicarboxylic acid, polymer
- 3.2 CAS no:                                25038-91-9
- 3.3 Additional information:         No harmful ingredients.

## SECTION 4: First aid measures

- 4.1. 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.
- 4.2. After inhalation:                    After inhalation of decomposition gases or dust remove patient to fresh air. Contact a doctor in case of discomfort.
- 4.3. On ingestion:                        No effects known. Rinse mouth with water and drink more water. Contact a doctor in case of discomfort.
- 4.4. On eyes contact:                    Rinse open eyes thoroughly with water.

## SECTION 5: Fire fighting measures

- 5.1. Extinguishing media                Suitable extinguishing media: Water spray, Sand, Carbon dioxide (CO<sub>2</sub>). Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.
- 5.2. Special hazards arising from the substance or mixture  
During incomplete combustion release of carbon monoxide, carbon dioxide.
- 5.3. Advice for firefighters  
Fire fighting measures  
Evacuate non-essential personnel Move containers from fire area if you can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Special protective equipment for fire-fighters  
Wear self-contained breathing apparatus and protective suit.
- 5.4 Remark:                                 Accumulations of dust can be inflammable.

## SECTION 6: Accidental release measures

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

Evacuate personnel to safe areas. Do not touch or walk through spilled material. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe dust. Use personal protective equipment. Ensure adequate ventilation. Risk of slipping

### 6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

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

Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water.

### 6.4. Reference to other sections

Refer to section (8)

## SECTION 7: Handling and storage

### 7.1. Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Ensure adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

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

Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture / Water.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Components with occupational exposure limits

Contains no substances with occupational exposure limit values.

#### Biological Limit Values

Not established.

#### PNEC

The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

#### DNEL

The obligatio

### 8.2. Exposure controls

#### Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Keep at temperatures below 230 °C / 446 °F.

Individual protection measures, such as personal protective equipment

#### Eye Protection

Tightly fitting safety goggles (EN166).

#### Hand Protection

Protective gloves (EN374): Butyl rubber. Glove thickness: 0.5 mm. Break through time: >8 hours.

#### Skin and body protection

It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burns..

#### Respiratory Protection

Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations.

#### Environmental exposure controls

The product should not be allowed to enter drains, water courses or the soil

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	Solid Filament
Odour	Odourless
Colour	depending on product grade
Odour threshold	Slight odor
pH	Not applicable
Melting point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Negligible (20°C)
Vapour density	Not applicable
Relative density	Ca. 1.27 g/cm <sup>3</sup>
Solubility(ies)	Negligible
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	454°C
Decomposition temperature	>250°C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

## SECTION 10: Stability and reactivity

10.1. Reactivity	No information available
10.2. Chemical stability	Stable under recommended storage conditions
10.3. Possibility of hazardous reactions	No hazardous reactions observed under normal handling and storage conditions
10.4. Conditions to avoid	Temperatures above 230 °C / 446 °F.
10.5. Incompatible materials	Oxidizing agents, Strong bases
10.6. Hazardous decomposition products	Burning produces obnoxious and toxic fumes Aldehydes, Carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> )

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Inhalation	Based on available data, the classification criteria are not met.
Skin contact	Based on available data, the classification criteria are not met.
Eye contact	Based on available data, the classification criteria are not met.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** Exposure may cause temporary irritation, redness, or discomfort.

### 11.1. Information on toxicological effects

Acute toxicity:	
Ingestion:	No known effect.
Skin Contact :	No known effect.
Inhalation :	No known effect.
	Product dust may be irritating to eyes, skin and respiratory system. Resin particles, like other inert materials, are mechanically irritating to eyes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Molten material will produce thermal burns
Germ Cell Mutagenicity	Not known to cause heritable genetic damage.
Carcinogenicity	Contains no ingredient listed as a carcinogen.

Reproductive Toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.
STOT-single exposure	No known effect.
STOT-repeated exposure	No known effect.
Aspiration Hazard	No known effect.

## SECTION 12: Ecological information

12.1. Toxicity	Contains no substances known to be hazardous for the environment.
12.2 Persistence and degradability	Inherently biodegradable under industrial composting conditions
12.3. Bio accumulative potential	No information available.
12.4. Mobility in soil	No information available.
12.5. Results of PBT and vPvB assessment	This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).
12.6. Other adverse effects	No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste from residues / unused products

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

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14: Transport information

Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/ICAO

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing Group	Not applicable
14.5 Environmental hazards	No additional data is available
14.6 Special precautions for user	No data available
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not evaluated

## SECTION 15: Regulatory information

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

Dangerous as defined by the EU CLP 2008:

This product is not classified and labelled as dangerous according to EC directives.

### 15.2 Chemical Safety Assessment

No information available.

## SECTION 16: Other information

*Information is referenced from other manufacturers.*

*For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).*

*This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.*

*The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.*