

# HBOT 3D

## Safety Data Sheet

According to EU Directive 1907/2006

**Product name: PET-G**

Date of issue: 31-05-2018

Version: 1.2

### 1. Identification of the substance/preparation and of the company

**1.1 Trade name:**

PET-G

**1.2 Use of the product:**

HBOT3D Filament

**1.3 Supplier:**

3D Printers sp. z o.o.  
Aleja Ludomira Różyckiego 1C/4  
51-608 Wrocław, POLAND  
+48 71 727 62 03  
info@hbot3d.com

### 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.

### 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.

### 4. First aid measures

**4.1 Description of 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 eye contact:

Rinse open eyes thoroughly with water.

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### 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 fire fighters

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.

### 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 materials 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).

### 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

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

#### 8.2 Exposure controls

Appropriate Engineering Controls:

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

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's 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 regulations.

Environmental exposure controls:

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

### 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:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	No information available
Upper flammability or explosive limit:	No data available
Lower flammability or explosive limit:	No data available
Vapour pressure:	Negligible (20°C)
Vapour density:	Not applicable

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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

### 10. Stability

#### 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>).

### 11. Toxicological information

#### 11.1 Information on toxicological effects

Acute toxicity (oral): No known effect.

Acute toxicity (dermal): No known effect.

Acute toxicity (inhalative): 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/Genotoxicity: 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.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single): No known effect.

Specific target organ toxicity (repeated): No known effect.

Aspiration hazard: No known effect.

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### 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 compositing conditions.

#### 12.3 Bioaccumulative 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 other information available.

### 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.

### 14. Transport information

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

#### 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.

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### 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.

### 16. Other information

*Information is referenced from other manufactureres.*

*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 specific material designated and may not be valid for such material used in a combination with any other materials or in any process, unless specified in the text.*