3D Printing Filament PETG
MATERIAL SAFETY DATA SHEET

Machines-3D encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

Section 1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Identifiers

Product Name: PETG filament

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

Identified uses

3D printing filament. Material for 3D printing FDM applications.

1.3 Details of the supplier of the Safety Data Sheet

Company identification

Machines-3D
2 rue Peclet
59300 Valenciennes
Mail address: info@machines-3d.com

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3. Composition/information on ingredients

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
copolyester PETG	proprietary		> 90
additive(s)/colorant(s)	proprietary		< 10

For explanation of abbreviations see section 16.

Section 4. First-aid measures

4.1 Description of first aid measures

If inhaled:

- Move to fresh air.
- Treat symptomatically.
- If symptoms persist, call a physician.

In case of skin contact:

- Wash off with soap and water.
- If symptoms persist, call a physician.
- Cool skin rapidly with cold water after contact with molten material.
- Do not peel solidified product off the skin.
- Burns must be treated by a physician.

In case of eye contact:

- In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed:

- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Risks: The molten product can cause serious burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically

Section 5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

- Water spray
- Dry chemical
- Carbon dioxide (CO2)

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

Specific hazards during fire- fighting:

- Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous combustion prod- ucts

- No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters:

- Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

Further information:

- Minimize dust generation and accumulation

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

- Wear appropriate personal protective equipment.
- Local authorities should be advised if significant spillages cannot be contained.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Advice on safe handling:

- Use only in area provided with appropriate exhaust ventilation.
- Minimize dust generation and accumulation

Advice on protection against fire and explosion:

Minimize dust generation and accumulation

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities storage

Requirements for storage areas and containers:

Keep tightly closed.

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters

None established.

8.2 Exposure Controls

Engineering measures

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Eye protection:

- Safety glasses
- Wear a face shield when working with molten material.

Hand protection Remarks:

Wear suitable gloves. When handling hot material, use heat resistant gloves

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Wear respiratory protection when its use is identified for certain contributing scenario.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	solid
Colour:	various
Odor:	odorless
Odor threshold:	Not determined
pH:	Not determined
Melting point:	Not determined
Boiling point:	Not determined
Flash point:	Not determined
Evaporation rate	Not determined
Upper explosion limit/Lower flammability limit	Not determined
Lower explosion limit/Lower flammability limit	Not determined
Vapour pressure	Not determined
Relative vapour density	Not determined
Relative density	No data available
Solubility(ies) Water solubility	Negligible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity, dynamic	Not determined
Viscosity, kinematic	Not determined
Explosive properties	No data available
Oxidizing properties	No data available

Section 10. Stability and Reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Hazardous reactions: stable

10.4 Conditions to Avoid

Minimize dust generation and accumulation.

10.5 Incompatible Materials

Materials to avoid: Strong oxidizing agents

10.6 Hazardous decomposition products

Carbon monoxide
Carbon dioxide (CO2)

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity

Product:

Acute oral toxicity:
- Remarks: No data available

Acute inhalation toxicity:
- Remarks: No data available

Acute dermal toxicity:
- Remarks: No data available

Skin Corrosion/irritation

Product:

Remarks:
- No data available

Serious eye demage/eye irritation

Product:

Remarks:
- No data available

Respiratory or skin sensitization

Product:

Remarks:
- No data available

Carcinogenicity

Product:

Remarks:
- This information is not available

Reproductive toxicity

Product:

Effects on fertility
- Remarks: No data available

STOT – single exposure

Product:

Remarks:
- No data available

STOT – repeated exposure
Product:
Remarks:
- No data available

Aspiration toxicity
Product:
No data available

Information on likely routes of exposure
Product:
Inhalation:
- Remarks: None Known

Skin contact:
- Remarks: The molten product can cause serious burns

Eye contact:
- Remarks: The molten product can cause serious burns

Ingestion:
- Remarks: None Known

Section 12. Ecological Information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
Product:
Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Section 13. Disposal Considerations

13.1 Waste treatment methods
Product: Dispose of in accordance with local regulations.

Section 14. Transport Information

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the ICB Code
Not applicable for product as supplied.

Section 15. Regulatory Information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that de-plete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pol-lutants: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable

The components of this product are reported in the following inventories:

CH INV	On the inventory, or in compliance with the inventory
DSL	On the inventory, or in compliance with the inventory
AICS	On the inventory, or in compliance with the inventory
NZIoC	On the inventory, or in compliance with the inventory
ENCS	On the inventory, or in compliance with the inventory
ISHL	Not listed
KECI	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
IECSC	Not listed
TCSI	Not in compliance with the inventory
TSCA	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

None

Section 16. Other Information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regula- tion; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN
- Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Cana- da); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - In- ternational Air Transport Association; IBC - International Code for the Construction and Equip- ment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentra- tion; ICAO - International Civil A viation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Mari- time Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisa- tion for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n. o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Develop- ment; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu- lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substanc- es; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, E val ua- tion, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Sub- stances Control Act (United States); UN - United Nations; vP vB - Very Persistent and Very Bioac-cumulative

Further information

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.