Revision date: 12/18/2019

MATERIAL SAFETY DATA SHEET

PETG by GreenGate3D

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product name: PETG, all colors
Chemical name: Copolyester
Chemical family: Thermoplastic
Application: Filament for 3D Printing

Manufacturer/Supplier:
GreenGate3D
700 Lakeland Avenue
Bohemia New York 11716
+1 631-969-1051
customerservice@greengate3d.com

2. HAZARD IDENTIFICATION

2.1 CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification: Not a hazardous substance or mixture.

2.2 LABEL ELEMENTS

Symbols/Pictograms: None
Signal Words: None
Hazard statement: None
Precautionary statement: None
PBT and vPvB substances: No data available

2.3 OTHER HAZARDS

None known.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical name: Copolyester
Product based on copolyester with additives.
Copolyester concentration >97%

Classification:

Chemical name	Classification	
copolyester	DSD:	This substance is not classified according to Directive 67/548/EEC
copolyester	CLP:	NOT CLASS

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Inhalation: After inhaling decomposed products of the polymer, take affected persons to fresh air. Call a doctor if necessary.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin contact: After contact with hot polymer cool skin rapidly with cold water. Call a doctor if necessary.

Ingestion: Call doctor or consider inducing vomiting. Rinse mouth with water. Call a doctor if necessary.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Hazards: Contact with molten substance/product may cause severe burns to skin and eyes.
Treatment: Treat symptomatically.

5. FIREFIGHTING MEASURES

General fire hazards: Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media: Water, Carbon dioxide (CO_2), Dry chemical.
Unsuitable extinguishing media: High pressure water jet can spread the fire

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Burning produces obnoxious and toxic fumes, carbon monoxide, carbon dioxide.
Powdered material may form explosive dust-air mixtures

5.3 ADVICE FOR FIREFIGHTERS

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus.

Under fire conditions: Cool containers/tanks with water spray. Water mist may be used to cool closed containers. Fine dust dispersed in air may ignite. Risks of ignition followed by flame

propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS

Use personal protective equipment as required
Avoid contact with skin and eyes
Remove all sources of ignition
Sweep up to prevent slipping hazard
Use with recommended personal protective equipment (see Section 8).

6.2 ENVIRONMENTAL PRECAUTIONS

Do not allow material to contaminate groundwater system Do not flush into surface water or sanitary sewer system Should not be released into environment

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid dust formation. Sweep up into suitable container for disposal. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin and eyes. Low hazard for usual industrial or commercial handling. Users should be protected from the possibility of contact with molten material Recommended for sufficient ventilation at the workplace. Flammable product Minimize dust generation and accumulation.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in original container protected from excessive heat, direct sunlight, dust and condensed water. Protect from moisture, product can be hygroscopic, Store in a cool dry place 5-35 °C. If you do not need filament for longer period of time, insert it back into container with attached silica gel. Use within 1 year from manufacture. Avoid contact with food. Remove all possible sources of ignition.

7.3 SPECIFIC END USES

Thermoplastic material for FDM/FFF 3D-printing

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 APPROPRIATE ENGINEERING CONTROLS

Avoid contact with skin, eyes and mucous membranes. Avoid prolonged or repeated contact with skin. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

8.2 PERSONAL PROTECTION

Eye protection: not required for FDM 3D printing
Skin protection: not required for FDM 3D printing
Respiratory protection: not required for FDM 3D printing
Hand protection: Avoid contact with molten material
Engineering measures: Use recommended printing temperatures to avoid accumulating of decomposition products in workspace and allow air ventilation. Allow air ventilation to avoid accumulating of dust in the workspace. Environmental exposure controls: Do not allow product to enter water sources or soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid
Appearance: Colored plastic wire
Odor: Odorless
pH: No data available
Melting point: > 210 °C
Boiling point/boiling range: No data available
Vapor pressure: No data available
Vapor density: No data available
Evaporation rate: No data available
Specific gravity: > 1.2 g/cm3
Decomposition temperature: Thermal stability not tested. Low stability hazard expected at normal operating temperatures.
Autoignition temperature: No data available
Flammability: Fine dust dispersed in air may ignite
Flammability Limits in Air: No information available
Water solubility: negligible
Solubility in other solvents: Not determined
Partition coefficient(n-ocatnol/water): No data available
Dynamic Viscosity: No data available
Kinematic Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

10. STABILITY AND REACTIVITY

Reactivity: None expected under conditions of normal use.
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: None expected under conditions of normal use.
Conditions to avoid: None at ambient temperatures.
Incompatible materials: Avoid to strong oxidizing agents. Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure can cause polymer degradation.

Hazardous decomposition products: Burning produces obnoxious and toxic fumes, Carbon monoxide (CO), carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON LIKELY ROUTES OF EXPOSURE

Inhalation: None known.
Ingestion: None known.
Skin contact: Molten material will produce thermal burns.
Eye contact: Molten material will produce thermal burns.

11.2 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity Oral: No data available.
Dermal: No data available.
Inhalation: No data available.
Repeated dose toxicity: No data available.
Skin corrosion/irritation: No data available.
Serious eye damage/eye irritation: No data available.
Respiratory or skin sensitization: No data available.
Mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
STOT - single exposure: No data available.
STOT - repeated exposure: No data available.
Aspiration hazards: No data available.
Other adverse effects: No data available.

12. ECOLOGICAL INFORMATION

Acute toxicity Fish: No data available.
Aquatic invertebrates: No data available.
Chronic toxicity Fish: No data available.
Aquatic invertebrates: No data available.
Toxicity to aquatic plants: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.
Results of PBT and vPvB assessment: No data available.
Other adverse effects: No data available.

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13. DISPOSAL CONSIDERATIONS

Waste treatment: Dispose of in accordance with local regulations. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose as a common household waste. Sort out as plastic waste.
Packaging: Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

The substance is not classified as dangerous for transport.

15. OTHER INFORMATION

The information presented in this Material Safety Data Sheet (MSDS) is based on our best knowledge in combination with original MSDS provided by manufacturer. MSDS contains information on safety use, storage and disposal.
Abbreviations: PBT Persistent, Bioaccumulating, Toxic vPvB very Persistent, very Bioaccumulating