

Material Safety Data Sheet

ZYLtech PETG 3D Printer Filament



1. Chemical Product/Company Name

Substance or Preparation PET (Polyethylene Terephthalate)

Substance Chemical Name

Product Description Engineered Plastics

Product Use 3D Printing

Supplier ZYLtech Engineering, LLC
283 Lockhaven Dr Ste 122
Houston TX 77073
csr@zyltech.com

2. Composition/Ingredient Information

Materials >80% PET (Polyethylene Terephthalate) – CAS 25038-59-9
<12% Toughener/Impact Modifiers (Rubber) – CAS 25053-09-2
<5% Compatibilizer, Lubricators, Colorants, and Stabilizers – Non-regulated
<4% Titanium Dioxide (TiO₂) – CAS 13463-67-7
<2% Carbon Black – CAS 1333-86-4

3. Hazards Identification

Emergency Overview PETG filament with slight or no odor. Spilled filaments create slipping hazard. Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns. Fume produced during melt processing may cause eye, skin and respiratory tract irritation. Secondary operations, such as grinding, sanding or sawing, can produce dust which may present a respiratory hazard. Product in filament form is unlikely to cause irritation.

Melt Processing Health Effects Molten plastic can cause severe burns. Processing fumes may cause irritation to the eyes, skin and respiratory tract, and in cases of severe overexposure, nausea and headache.

Medical Restrictions There are no known human health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing fumes.

4. First Aid Measures

Eyes Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin The compound is not likely to be hazardous by skin contact, but cleaning the skin after use is advisable. If molten polymer gets on skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical treatment for thermal burn.

Ingestion No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary. No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.

Inhalation For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop at a later time. For skin contact with fume condensate, immediately wash thoroughly with soap and water. If irritation develops, seek medical attention.

5. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures No measures required.

Methods and Materials for Containment and Cleaning Up

Collect spilled material in appropriate container for disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions

Avoid release to the environment. Comply with all applicable regulations on spill and release reporting. Prevent entry into waterways, sewers, basements, or confined areas.

6. Handling and Storage

Handling

See FIRST AID and PERSONAL PROTECTION EQUIPMENT

Storage

Store in a cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

7. Exposure Controls/Personal Protection

Engineering Controls

Use local ventilation to control fumes from hot processing.

Personal Precautions:

Eye/face protection

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material. A full face mask respirator provides protection from eye irritation.

Skin Protection

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Respiratory Protection

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge with a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

8. Physical and Chemical Properties

Physical State

solid

Odor

Possibly a slight organic odor.

<i>Melting Point</i>	230°C - 255°C
<i>Water Solubility</i>	>1.1 Insoluble
<i>% Volatiles</i>	Not Determined

9. Stability and Reactivity

<i>Stability</i>	Stable
<i>Polymerization</i>	Polymerization will not occur
<i>Conditions to Avoid</i>	Exposure to open flame or temperatures >570°F for prolonged time.
<i>Other Materials</i>	Cyclopentanone, Carbon Monoxide, Aldehydes, Ammonia

10. Ecological Information

<i>Aquatic Toxicity</i>	No Information is available. Toxicity is expected to be low based on insolubility in water.
-------------------------	---

11. Disposal Information

<i>Incompatibilities</i>	N/A
<i>Hazardous Decomposition</i>	Hazardous gasses or vapors can be released
<i>Waste Disposal:</i>	Preferred options for disposal are (1) Recycling, (2) Incineration with energy recovery, and (3) Landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/ provincial, and local regulations.

12. Transportation Information

<i>UN/NA #</i>	Not regulated
----------------	---------------

13. Regulatory Information

TSCA Status In compliance with TSCA Inventory requirements for commercial purposes.

WHMIS Classification Not a controlled product.

This product does not contain reportable quantities of substances subject to supplier notification.

14. Other Information

Medical Use CAUTION - Do not use in medical applications involving permanent implantation in the human body.

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.