



## Material Safety Data Sheet

**BPET (i3D-FFF)**

**Revision date: 29/06/2016**

### **PRODUCT IDENTIFICATION**

Generic Product Name: B-PET

Chemical Name: POLYETHYLENE TEREPHTHALATE

Product Description: 3D Printing Engineered Recycled Plastic Filament

Product grades: BPET-Y-XXX (XXX for color description, Y for other blends and compositions)

### **RECOMMENDED USE**

General Purpose Extrusion Monofilament for 3D Printing

### **PRODUCT CLASS**

B-PET, Post Consumer Recycled Polyethylene Terephthalate from beverage bottles

### **COMPOSITION / INGREDIENT INFORMATION**

<u>Materials:</u>	<u>CAS number</u>	<u>%</u>
PET (polyethylene Terephthalate)	25038-59-9	> 90
Colorants, Stabilizers	Non-regulated	< 5
Titanium Dioxide (TiO <sub>2</sub> )	13463-67-7	< 5

Remarks: Ingredients not precisely identified are proprietary or non-hazardous.

### **PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Solid

Odor: Odorless

Melting Point: 245-255°C

Boiling Point: N/A

Appearance: Clear Translucent, Translucent Colored (Red, Yellow) and Opaque (Black, White)

Softening Point: 75-90°C

Specific Gravity: 1.2 – 1.4 g/cm<sup>3</sup>

Water Solubility: Insoluble

% Volatiles: Not determined

## **FIRE FIGHTING MEASURES**

Flash Point: Unavailable

Flammable Limits: Unavailable

Extinguishing Media: Sand, Water Fog, Foam, Carbon Dioxide and Dry Chemical.

Unusual Fire and Explosion Hazards: There are no explosion hazards.

Can burn in a fire creating dense toxic smoke. Fumes produced during melt processing may cause eye, skin and respiratory tract irritation.

Physical operations, such as grinding, can create dust which may present a respiratory hazard and combustible dust. Under these conditions, follow Standards for handling combustible dusts.

## **HEALTH HAZARD DATA**

Threshold Limit Value (TLV): Not established

Emergency and First Aid:

If burned by contact with molten material, cool quickly as possible with water, and then go to see a physician for treatment of burn.

Exposure effects:

Inhalation: No data available

Eyes: Can cause mechanical irritation

May be harmful by ingestion, causes eye and skin irritation

Carcinogenicity Information:

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

## **HANDLING AND STORAGE**

Do not breathe vapors or fumes that may be evolved during processing. Contact with hot/molten material can cause burns. Avoid contact with molten material.

Storage:

Store the container in a well dry/cool place. Keep away from ignition sources.

Handling: Protect after decomposition by keeping the floor clear of material scraps and snippets

Protective Measures:

Hands: To protect against thermal burns, gloves should be worn.

Eyes: In any type of industrial operation, safety glasses should be worn.

Industrial Hygiene:

Prevent contact with eyes, minimize contact with skin and inhaling of dust.

Dangerous Product After Decomposition:

Combustion will create carbon dioxide and most likely carbon monoxide.

Dangerous Reaction: Not known.

## **DISPOSAL AND TRANSPORTATION**

Disposal: Recycle, landfill, or incineration. Observe regulations of local authority.

Transportation: This material is NOT classified as dangerous for transport.

## **STABILITY AND REACTIVITY / INCOMPATIBILITY**

Stable at normal conditions.

Incompatible or can react with strong oxidizers.

Polymerization will not occur under normal processing conditions.

## **Other Information**

General: The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Medical Use: Do not use in medical applications involving permanent implantation in human body.