

1. Identification
Product name: TPU Filament
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2. Composition / Information on ingredients
Thermoplastic Polyurethane Elastomer. This product does not contain any hazardous ingredients. All additives are physically bound (encapsulated) in the compound. This product is not expected to create any hazard when it is used, handled, and processed.

3. Hazard summarizing
<p>This product is not considered hazardous at ambient conditions and there are no known or expected health effects. Processing temperatures (150° C – 250° C) may generate fumes and vapors sufficient to cause eye, skin and upper respiratory tract irritation if ventilation is inadequate.</p> <p>Molten polymer may cause thermal burns to skin and serious burns to eyes. Chronic Health Effects: None known.</p> <p>Routes of Exposure/Entry: Inhalation of process vapors; Eye and/or skin contact of molten polymer. Carcinogenic Status: Not listed or regulated by IARC.</p>

4. First aid measures	
Inhalation	If processing vapors or decomposition products are inhaled, remove person to fresh air. If irritation develops or persists, obtain medical attention.
Eye contact	Flush eyes with water, mechanical effects only.
Skin contact	Wash the affected area thoroughly with plenty of water and soap. If molten polymer contacts the skin, cool the skin rapidly with water or ice. See a physician for removal of any adhering material and for treatment of the burn.
Ingestion	No ingestion effects known.

5. Fire fighting measures

Combustion products	Under fire conditions, polymer decomposes generating smoke and unidentified toxic and irritating compounds (see section 10).
Extinguish media	<i>Small fire.</i> Use dry chemical, CO ₂ , water spray or regular foam.
<i>Large fire</i>	Use water spray, water fog or regular foam. Do not use straight streams.
Fire fighting instructions	Fire fighters should wear positive pressure self-contained breathing apparatus and should be equipped with protective clothing. Keep people away and isolate fire area.

6. Accidental release measures

In case of spill sweep up material and place in containers for re-use or disposal.

7. Handling and storage

Avoid processing material above recommended thermal processing temperatures.
 Good general ventilation should be sufficient for most conditions. Consider the use of local exhaust ventilation at processing emission points.
 Avoid breathing thermal processing fumes and vapors.
 Mechanical handling equipment can cause formation of dust. Avoid breathing dust.
 Use proper grounding techniques when handling this product to avoid electrostatic charges. Pellets on the floor may be slippery and cause falls.

Storage recommendations	To maintain product quality, store product in a cool, dry area. Keep in a tightly sealed container.
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8. Exposure controls / Personal protection

Respiratory protection	For most conditions, no respiratory protection should be needed. When processing at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.
Eye protection	Use safety glasses if there is a potential risk for exposure to particles. Use safety glasses if vapor exposure causes eye discomfort.
Skin protection	Wear gloves for handling hot material during processing.

9. Physical and chemical properties

Appearance	1.75mm dimension filament.
Odor:	Not noticeable.
Boiling point/range	Not applicable.
Melting point/ range	At temperatures between 200° C and 210° C.

Flashpoint	Not applicable.
Autoignition	No data.
Vapor pressure	Not applicable.
Density at 23°C	1.21 g/cm ³ .
Solubility (in water)	Insoluble.

10. Stability and reactivity

Product is stable at room

temperature. Hazardous

polymerization will not occur

Volatiles from melt processing are expected to be water vapor, carbon dioxide and other decomposition products.

Hazardous decomposition products: These potential decomposition gases have not been fully determined but may include CO, CO₂, and small amounts of hydrogen, cyanide, oxides of nitrogen, hydrocarbons, isocyanate, water vapor and/or combinations of the previous, and smoke.

Substances listed under thermal processing emissions may also be present.

The specific materials generated will vary depending on temperature, time and other immediate environmental factors. Conditions to avoid: Temperature above 260°C.

11. Toxicological information

Inhalation

At room temperature, exposure to dust and vapors is unlikely. High processing temperatures may generate vapors, which may cause irritation and sensitization.

Eyes: Solid or dust may cause irritation due to mechanical action.

Elevated temperatures may generate vapors sufficient to cause eye irritation.

Skin contact

At room temperature essentially non-irritating to skin. At high temperature vapors may cause sensitization. No toxicity studies have been conducted.

12. Ecological information

Not expected adverse effects from this product as furnished. This product has not been tested.

Material is expected to have low aquatic toxicity because of its insolubility in water.

13. Disposal considerations

The unused product is not considered a hazardous waste.

Do not dump into any sewers, on the ground or into any body of water.
Incinerate or landfill waste in a properly permitted facility in accordance with federal, state and local regulations.

14. Transport information

This product is NOT REGULATED for domestic and international transportation.

15. REGULATORY INFORMATION

Product name	CO2 PLA filament
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15. Regulatory information

This product does not need to be labeled according to Chinese regulations.

EINECS status	All starting raw materials of this product are listed on EINECS.
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TSCA status	All ingredients are on the TSCA inventory.
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16. Other information

Disclaimer of responsibility	the information provided in this document is generated for the purpose of distributing health, safety and environmental data. Information contained herein is given in good faith and believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied.
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The conditions or methods of handling, storage, use and disposal of the product are beyond our control and we do not assume responsibility and expressly disclaim liability for loss, damage or expense connected with them.
Compliance with all applicable state and local laws and local regulations remains the responsibility of the user.