



Yousu TPU 3D FILMAENT
Guangzhou Yousu 3D Technology Co., Ltd

Revision Date: 23/12/2020
Version: 2.0

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name : TPU
Product code YS-TPU

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet

Guangzhou Yousu 3D Technology Co. Ltd.
4th Floor, Building B, Chuangtian Industrial
Park, Lanshan Village, Xiancun Town,
ZengCheng District, Guangzhou,
Guangdong,
China

Emergency telephone number
+86-20-32093406

Website

<http://www.ysfilament.com>

Email

sales@ysfilament.com

Identified use : Thermoplastics which can be used for 3D printing

2. HAZARD IDENTIFICATION

Not Classified as a hazardous product as per Council Directive 67/548/EEC or 1999/45/EC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name and CAS	Content %	OSHA Exposure Limits:	ACGIH Exposure Limits:
Thermoplastic Polyurethane	>98	None	None

4. FIRST AID MEASURES

CONTACT WITH THE HOT MELT:

Cooling immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved.

In order to obtain medical care for possible burns and for a smooth clean-sing of the skin, seek medical advice immediately.

5. FIREFIGHTING MEASURES

Extinguishing media: water, foam, dry power

In case of fire or smouldering fire wear respiratory protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Granules: slip hazard! Take up mechanically; avoid dust formation.
Sweep up and dispose of, if appropriate together with other combustible waste material.
For further disposal measures see chapter 13.

7. HANDLING AND STORAGE

Handling:

Under recommended processing conditions small amounts of emissions may occur. Provided good ventilation and / or local exhaust systems are available, the limit values cited under pt.8 should not be exceeded. Dust must be removed by effective exhaust ventilation.

Storage:

Protect from moisture and do not expose to temperatures above 40°C. Keep container tightly closed.

VCI storage class: 11 (VCI: German Association of Chemical Industry)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The regulations for the substances listed below must be observed when processing this product, Particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

Substance	CAS-NO.	R-phrases 1)	Classification 2)	acct. To
Isocyanates (-NCO)	-----	R42 3)	-----	-----

1) Health R-Phrases (Text in chapter 16)

2) Recommendation

TRGS: German Technical Regulations on Dangerous Substances
Occupational Exposure Limits (mg/m³), Time Weighted Average:

	EU	U.Kingdom	R. of Ireland	ACGIH
Isocyanates (-NCO)	-	0.02	0.02	-
Fine dust 1)				
Respirable	-	5	4	3
Inhalable	-	10	10	10

1) In consequence with mechanical treatment, e.g. grinding, occurring.
ACGIH: American Conference of Governmental Industrial Hygienists

Respiratory Protection: In case of dust formation use respiratory equipment with filter type particle filter P1 according to DIN EN 143.

Hand protection: Protective gloves of leather, contaminated or damaged gloves should be replaced.

Eye protection: Protective goggles with side shield or tightly fitting protecting quantities of dust are generated.

Body protection: Skin covering working clothes; wear dust-proof overalls if larger quantities of dust are generated.

Protection and hygienic measures:
Avoid inhaling vapours. Avoid inhaling dust.

Grease skin. At the end of work, wash hands and face.
When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Solid
Odour	: Nearly odourless
Softening point	: Approx. 180°C-220°C
Processing temperature	: Approx. 190°C-210°C
Diameter	: Approx. 1.75/3.0mm
Vapour pressure	: Not available
Viscosity	: Not available
Solubility in water	: insoluble
Ph value	: Not applicable
Flash-ignition	: Not available
Temperature	: >200°C
Self-ignition	: Not applicable
Explosive limits	: Not applicable
Density	: Approx. 1.1-1.2g/cm ³

10. STABILITY AND REACTIVITY

Thermal decomposition:

Decomposition begins at 230°C.

Fumes evolved by overheating during improperly processing or by burning may be injurious to health.

Hazardous decomposition products:

Smouldering or incomplete combustion leads to the formation of toxic gas mixtures consisting mainly of CO, CO₂ and nitrogen oxides; amines, nitriles, aliphatic and aromatic hydrocarbons, aldehydes, ketones, acids, hydrogen cyanide and isocyanates are also formed.

Hazardous reactions:

NO hazardous reactions observed.

11. TOXICOLOGICAL INFORMATION

Under recommended processing conditions small amounts of isocyanates may be emitted.

Exceeding the recommended processing temperatures leads to a significant increase in the amount of isocyanate vapour generated.

Over-exposure entails a risk of concentration-dependent inhalatory irritation and / or sensitization by isocyanates (delayed appearance of difficult breathing, coughing, asthma is possible). Hypersensitive persons may suffer from these effects even at low isocyanate concentrations.

According to our experience and information the product has no harmful effects on health if properly handled.

12. ECOLOGICAL INFORMATION

The product is practically insoluble in water. In view of its consistency and insolubility in water, no ecological problems are to be expected if the product is properly handled. This product is not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded article.

Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

May only be transported to suitable incinerator with reduced non-air emissions observing local official regulations.

May be disposed of together with household refuse if local official regulations are observed.

14. TRANSPORT INFORMATION

GGVSE: -- UN: NODG PG: --
RID/ADR: -- UN: NODG PG: --

ADNR: -- UN: NODG PG: --
GGVSee/IMDG Code: -- UN: NODG PG: -- MPO: NO
ICAO-IT/IATA-DGR: -- UN: NRES PG: --
Declaration for land shipment: --
Declaration for sea shipment: --
Declaration for shipment by air: --
Other information:
Not dangerous cargo . Slightly smelling. Keep dry. Keep separated from food-stuffs.

15. REGULATORY INFORMATION

No labeling necessary according to EC Directives 67/548/EEC or 1999/45/EC and their valid adaptations and derived national regulations.

Water pollution class (WGK: Not hazardous to water (VwVwS appendix 1)
(VwVwS = German Regulation on Substances Hazardous to Water)

Swiss law of poison: class of poison -- ; BAG-T-No. --.

16. OTHER INFORMATION

The following R-Phrases refer to substances that are either contained in this product or may be generated release during processing, and do not necessarily correspond to the product labeling. Information on labeling the product put into circulation in accordance with EC Directives is given in Chapter 15.

Text of all R phrase referred to in sections 2, 3, 8 or 15:
R 42: May cause sensitization by inhalation.



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