

# TPU

## SAFETY DATA SHEET



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<b>Product identifier</b>	
<b>Trade name</b>	TPU
<b>Relevant identified uses</b>	30 printing filament
<b>Details of the supplier of the safety data sheet</b>	
<b>Manufacturer/Supplier</b>	VSHAPER Sp. z o.o.
<b>Address</b>	Tajęcina 105, 36-002 Jasionka-Rzeszów
<b>Telephone</b>	+48 801 011 637
<b>Email</b>	contact@vshaper.com
<b>Emergency telephone number</b>	EU-wide emergency number: 112

## 2. HAZARD IDENTIFICATION

<b>Classification of the substance/mixture</b>	
Not classified as hazardous in compliance according to Regulation (EC) No 1272/2008.	
<b>Label elements</b>	
Not classified as hazardous in compliance according to Regulation (EC) No 1272/2008	
<b>Other hazards</b>	Material does not contain vPvB and/or PBT substances.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS number	EC number	Weight%
Thermoplastic Copolyester Elastomer	9078-71-1	-	>96 %
Additives	-	-	≤ 48%

This mixture contains no substances mentioned according to the criteria of section 3.2 of REACH Annex II.

## 4. FIRST AID MEASURES

<b>First-aid measures after inhalation</b>	Exposure to spray, fumes and vapours produced by heated or burned product: move to fresh air. Call a doctor.
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Inhalation	Move exposed person to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. Consult a physician after significant exposure.
Skin contact	Cool skin rapidly with cold water after contact with molten polymer. Do not peel polymer from the skin. Obtain medical attention
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur and show this MSDS and the correspondent TDS.
Information for medical	Treat symptoms.

## 5. FIREFIGHTING MEASURES

Extinguishing media	<p><b>Suitable extinguishing media</b> water spray, foam, dry powder, carbon dioxide (CO<sub>2</sub>).</p> <p><b>Unsuitable extinguishing media</b> water jet.</p>
Hazards arising from the substance or mixture	<b>In case of combustion</b> – dangerous decomposition products can be formed (e.g carbon monoxide, carbon dioxide, nitrogen oxides, Tetrahydrofuran, Acetaldehyde, organic decomposition products).
Advice for firefighters	<p>Provide/wear a protective breathing apparatus. Wear suitable protective clothing. Do not use water, if fire is caused by an electrical short circuit.</p> <p><b>Further information:</b> – The degree of risk is determined by the burning substance and the fire conditions. In the case of combustion evolution of toxic gases/vapors is possible. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.</p>

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Sources of ignition should be kept well clear. Avoid contact with the skin and eyes. Avoid inhalation of dust and vapors. If necessary, wear dust masks and safety glasses.
Environmental precautions	Should not be released into the environment
Methods and material for containment and cleaning up	Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation. Dispose of absorbed material in accordance with regulations
Reference to other sections	For further information refer to section 8 and section 13.

## 7. HANDLING AND STORAGE

<b>Precautions for safe handling</b>	Processing machines must be placed in room' with good ventilation. Avoid the formation and deposition of dust. Handle in accordance with good industrial hygiene and safety practice. Users should be protected from the possibility of contact with molten material.
<b>Conditions for safe storage, including any incompatibilities</b>	<p><b>Information about fire and explosion protection</b> Make use of general rules of fire prevention.</p> <p><b>In case of formation of dust</b> Take measures to prevent electrostatic charging. Avoid all sources of ignition: heat, sparks, open flame</p> <p><b>Storage:</b> Well closed/packed, cool and dry. Optimal storage temperature 15-25°. Protect against moisture and heat. Contamination with other substances must be avoided. Storage together with hazardous substances must be avoided.</p>
<b>Specific end use(s)</b>	For the relevant identified uses listed in section 1 the advice mentioned in this section is to be observed.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

<b>Control parameters</b>	The product doesn't contain any relevant quantities of materials with occupational exposure limits.
<b>Exposure controls</b>	
<b>Respiratory protection</b>	Breathing protection if dusts are formed. Particle filter (Type P1).
<b>Hand protection</b>	Use additional heat protection gloves when handling hot molten masses (EN 407)
<b>Eye protection</b>	Safety glasses with side-shields (frame goggles) (p. g. EN 166).
<b>Body protection</b>	Body protection must be chosen depending on activity and possible exposure, e.g. apron.
<b>General safety and hygiene measures</b>	Avoid contact of molten material with skin. Avoid inhalation of dusts/mists/vapors. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice. Hands and/or face should be washed before breaks and at the end of the shift. Do not eat, drink or smoke at work. Consult the company Industrial Hygienist for recommendations on exposure testing and personal protective equipment.
<b>Other information</b>	Do not eat, drink or smoke during use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
State of aggregation:	solid
Shape:	round filament
Odor:	odorless
pH:	no data available
Apparent density:	1.16 g/cm <sup>3</sup>
Melting/freezing point:	ea. 160°C
Boiling point:	no data available
Flammability:	no data available
Explosiveness:	no data available
Vapour pressure	no data available
Vapour density	no data available
Solubility in water(20°C):	insoluble
Autoignition temperature:	no data available
Decomposition temperature:	no data available
Other information	No data available

## 10. STABILITY AND REACTIVITY

Reactivity	The product is stable if stored and handled as prescribed/indicated.
Chemical stability	The product is stable if stored and handled as prescribed/indicated.
Possibility of hazardous reactions	The product is stable if stored and handled as prescribed/indicated.
Conditions to avoid	Avoid all sources of ignition: heat, sparks, open flame. Protect from moisture, direct sunlight and/or heat. Avoid dust formation.
Incompatible materials	Strong oxidizing and reducing agents, strong acids and bases
Hazardous decomposition products	At prolonged and/or strong thermal stressing above the decomposition temperature dangerous decomposition products can be formed (e.g carbon monoxide, carbon dioxide, nitrogen oxides, organic decomposition products).

## 11. TOXICOLOGICAL INFORMATION

<b>There are known neither short- nor long-term toxicological effects</b>	
<b>Acute toxicity</b>	(not to be expected)
<b>Irritation</b>	Not tested (not to be expected)
<b>Sensitization:</b>	Not tested (not to be expected)
<b>Repeated dose toxicity</b>	Based on available data, the classification criteria are not met
<b>Carcinogenic effect</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA or IARC
<b>Mutagenicity</b>	Based on available data, the classification criteria are not met
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met

## 12. ECOLOGICAL INFORMATION

<b>Toxicity</b>	No data available
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Results of PBT and vPvB assessment</b>	No data available
<b>Other adverse effects</b>	There are known no harmful effects

## 13. DISPOSAL CONSIDERATIONS

<b>Waste treatment methods</b>	
Preferred way of disposal is recycling. If compliant with local regulation, product can be landfilled or incinerated	

## 14. TRANSPORT INFORMATION

Not classified as a dangerous good under transport regulations (ADR, RID, AON, IMDG, ICAO/IATA).

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## 15. REGULATORY INFORMATION

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### Safety, health and environmental regulation/legislation specific for the substance or mixture

Regulation of the European Parliament and Council Regulation (EC) No 1907 /2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Regulation of the European Parliament and Council Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures (CLP).

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## 15. OTHER INFORMATION

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### Safety, health and environmental regulation/legislation specific for the substance or mixture

The information is provided as a way of a guide to the use of our product and is correct to the best of our knowledge. However, neither VSHAPER SP. z o.o. nor its subsidiaries can offer any guarantee as to its accuracy or exhaustiveness. All chemicals may present unforeseen risks and should be used with caution. We cannot guarantee that the risks referred to above are the only risks present. The final choice of the application of a product is thus the sole responsibility of the user.