



Thermoplastic Polyurethane (TPU)

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Not applicable
Trade name	Thermoplastic Polyurethane (TPU)
CAS No.	Mixture
EINECS No.	Mixture

Relevant identified uses of the substance or mixture and uses advised against

Identified use(s)	Melt-processing / Injection Molding / Extrusion / Etc.
Uses advised against	None.

Details of the supplier of the safety data sheet

Company Identification	Permawick Company 3110 Permawick Drive Columbus, IN, 47201
Telephone	(812) 376-0703
Fax	(812) 372-1410
E-Mail (competent person)	sales@permawick.com

Emergency telephone number

Emergency Phone No.	Monday - Friday, 8 am – 4:30 p.m. (EST) (812) 376-0703 CHEMTREC 24 hr. (800) 424-9300
---------------------	--

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)	Not classified as dangerous for supply/use.
-----------------------------	---

Label elements

Hazard Symbol	None
Hazard statement(s)	None
Precautionary statement(s)	None

Other hazards

The molten form can cause thermal burns if in contact with skin or eyes.

Additional Information

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredient(s)	%W/W	CAS No.	Hazard statement(s)
Thermoplastic Polyurethane Polymer(s)	100	Trade Secret	Not classified as dangerous for supply/use.

Additional Information - Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below.: **None**

SECTION 4: FIRST AID MEASURES





Thermoplastic Polyurethane (TPU)

Description of first aid measures

Inhalation	Not normally required. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	Wash affected skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye Contact	Eyes should be washed with plenty of water. Get medical attention if eye irritation develops or persists.
Ingestion	Not normally required. Get medical advice/attention if you feel unwell.
Most important symptoms and effects, both acute and delayed	None
Indication of the immediate medical attention and special treatment needed	None

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

-Suitable Extinguishing Media	Extinguish with waterspray, dry chemical, sand or carbon dioxide.
-Unsuitable Extinguishing Media	None anticipated.

Special hazards arising from the substance or mixture

This product may give rise to hazardous fumes in a fire.

Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Not normally required.

Environmental precautions

Not normally required.

Methods and material for containment and cleaning up

Transfer to a container for disposal or recovery.

Reference to other sections

None

Additional Information

None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid overheating. Avoid breathing fumes.

Conditions for safe storage, including any incompatibilities

-Storage Temperature	Store at room temperature.
-Incompatible materials	Strong oxidising agents.

Specific end use(s)

Melt-processing / Injection Molding / Extrusion / Etc.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION




Control parameters

Occupational Exposure Limits



Thermoplastic Polyurethane (TPU)

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)		STEL (ppm)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
None	----	----	----	----	----	

Recommended monitoring method	None
Exposure controls	
Appropriate engineering controls	Provide local exhaust ventilation at melting / extrusion zones.
Personal protection equipment	
Eye/face protection 	Wear protective eyewear (goggles, face shield, or safety glasses).
Skin protection (Hand protection/ Other) 	Leather or thick textile gloves.
Respiratory protection 	Not normally required.
Thermal hazards	Leather or thick textile gloves.
Environmental Exposure Controls	Not normally required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid
Colour	White / Off-white
Odour	Slight
Odour Threshold (ppm)	Not available
pH (Value)	Not applicable
Melting Point (°C) / Freezing Point (°C)	150°C
Boiling point/boiling range (°C):	Not available
Flash Point (°C)	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available
Explosive limit ranges	Not available
Vapour Pressure (Pascal)	Not available
Vapour Density (Air=1)	Not available
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Temperature (°C)	Not available
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt) @ 40°C	Not applicable
Explosive properties	Not explosive.



Thermoplastic Polyurethane (TPU)

Oxidising properties

Not oxidising.

Other information

Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	None
Incompatible materials	Oxidizers
Hazardous Decomposition Product(s)	Carbon monoxide, Carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

-Ingestion	LD50 > 5000 mg/kg (rat)
-Inhalation	LC50 > 5.2 mg/l (4 hour(s)) (rat)
-Dermal	LD50 > 3000 mg/kg (rabbit)
-Irritation	Non-irritant.

Sensitisation

It is not a skin sensitiser.

Repeated dose toxicity

Not to be expected.

Mutagenicity

Not to be expected.

Carcinogenicity

Not to be expected.

Other information

IARC, NTP, OSHA, ACGIH do not list this product or any components thereof as known or suspected carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity - By analogy with similar materials:

Acute toxicity	Not to be expected.
Long Term	Not to be expected.

Persistence and degradability

Persistent

Bioaccumulative potential

Not to be expected.

Mobility in soil

The product is predicted to have low mobility in soil.

Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Additional Information

None known.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT / ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number			
Proper Shipping Name			
Transport hazard class(es)			
Packing group			

Not classified as dangerous for transport.



Thermoplastic Polyurethane (TPU)

Environmental hazards
Special precautions for user

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories: None

- Fire
 Sudden Release
 Reactivity
 Immediate (acute)
 Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Date of preparation: February 5, 2017

Additional Information: None.

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Permawick gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Permawick accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.