SAFETY DATA SHEET

IN ACCORDANCE WITH OSHA 29 CFR 1910.1200

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TPU 4073

1: IDENTIFICATION

1.1. PRODUCT IDENTIFIER

Product Name:

TPU4073 POWDER

Other means of identification

Not applicable

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use:

Hot-melt adhesives

Restrictions on use:

No information available

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Responsible Party:

Velflex Imports Pty Ltd
18 Johnstone Road,
Brendale QLD 4500 Australia

Phone: 1300 765 414

Email: help@velflex.com.au

2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Combustible dust

Hazards not otherwise classified (HNOC)

Not applicable

2.2. LABEL ELEMENTS

Warning

May form combustible dust concentrations in air

Appearance Powder **Physical state** Solid **Odor** Characteristic

0 % of the mixture consists of ingredient(s) of unknown toxicity

2.3. OTHER INFORMATION

Contact with product at elevated temperatures can result in thermal burns.

3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Not applicable.

Mixture

CHEMICAL NAME	CAS NO.	WEIGHT-%
Silica gel, precipitated, crystalline free	112926-00-8	1 - <5

*The exact percentage (concentration) of composition has been withheld as a trade secret

4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

Inhalation

Molten: Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Solid: Do not breathe dust.

Eye contact

Solid: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Molten: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Contact with molten materials requires immediate medical assistance.

Skin contact

Solid: Wash skin with soap and water.
Molten: After contact with molten product, cool skin area rapidly with cold water. For severe burns, immediate medical attention is required. Do not remove clothing if adhering to skin. Removal of solidified molten material from skin requires medical assistance. Do not try to removed solidified material from the skin.

Ingestion

Get immediate medical advice/attention. Do not induce vomiting without medical advice.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms

Contact with molten substance may cause severe burns to skin and eyes.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Note to physicians

Burns caused by molten material must be treated clinically. Treat any burns as thermal burns, after decontamination.

5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media:

CO2, dry chemical, dry sand, alcohol-resistant foam. Water spray.
CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media:

Full water jet. Danger of dust explosions. Do not use straight streams.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Specific hazards arising from the chemical

The melted product can cause severe burns. Dust explosion characteristics vary with the particle size, particle shape, moisture content, contaminants, and other variables. Dusts or fumes may form explosive mixtures in air. This material can accumulate static charge by flow or agitation and can be ignited by static discharge.

Hazardous combustion products

No information available

Explosion data

Sensitivity to mechanical impact: None.

Sensitivity to static discharge: Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.3. ADVICE FOR FIREFIGHTERS

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal precautions:

Use personal protective equipment as required. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Stop leak if you can do it without risk. Evacuate personnel to safe areas. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid contact with hot, molten product.

Other information:

Refer to protective measures listed in Sections 7 and 8. Where possible allow molten material to solidify naturally.

6.2. ENVIRONMENTAL PRECAUTIONS

Keep out of drains, sewers, ditches and waterways. Do not allow to enter into soil/subsoil.

See Section 12 for additional Ecological Information.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Methods for containment:

Prevent dust cloud. ***Molten:*** Cover with dry sand/earth. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up:

Use personal protective equipment as required. ***Solid:*** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust.
Molten: Where possible allow molten material to solidify naturally. Take up mechanically, placing in appropriate containers for disposal.

6.4. REFERENCE TO OTHER SECTIONS

See *Section 8* for more information. See *Section 13* for more information.

7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Advice on safe handling:

Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid generation of dust. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Prevent dust accumulation (to minimize explosion hazard). Airborne dusts are potentially explosive. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Avoid contact with skin and eyes. Wash thoroughly after handling. Facilities for quickly drenching the body should be

provided within the immediate work area for emergency use where there is a possibility of exposure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage Conditions:

Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep container closed when not in use. Observe all National Fire Protection Association (NFPA) Codes, which pertain to the specific local conditions of storage and use, including NFPA 654.

Recommended storage temperature

Keep at temperatures between 50 and 95 °F / 10 and 35 °C.

7.3 REFERENCES TO OTHER SECTIONS

Section 10: STABILITY AND REACTIVITY

Section 13: DISPOSAL CONSIDERATIONS.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Exposure Limits

CHEMICAL NAME	ACGIH TLV	OSHA PEL	NIOSH
Silica gel, precipitated, crystalline free 112926-00-8	-	(vacated) TWA: 6 mg/m³ TWA: 20 mppcf : (80)/(% SiO2) mg/m³ TWA	-

CHEMICAL NAME	ARGENTINA	BRAZIL	CHILE	COLOMBIA
Silica gel, precipitated, crystalline free 112926-00-8	TWA: 10 mg/m³	-	TWA: 5.3 mg/m³	-

CHEMICAL NAME	COSTA RICA	PERU	URUGUAY	VENEZUELA
Silica gel, precipitated, crystalline free 112926-00-8	-	TWA: 10mg/m³	-	TWA: 10mg/m³

8.2. EXPOSURE CONTROLS

8.2.1. Appropriate engineering controls

Engineering controls

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Consult ACGIH ventilation manual, NFPA Standard 91 and NFPA Standard 654 for design of exhaust system and safe handling. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof ventilating equipment. Use spark-proof tools and explosion-proof equipment.

8.2.2. Individual protection measures, such as personal protective equipment

Eye/face protection:

Tight sealing safety goggles. Avoid contact with eyes.

Hand protection:

Heat resistant gloves are recommended when handling molten materials. Solid: . For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Skin and body protection:

Long sleeved clothing. Impervious clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations

Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Do not breathe dust. Avoid contact with skin, eyes or clothing. Wash hands and face before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended.

9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid
Appearance: Powder
Colour: White
Odor: Characteristic
Odor threshold: no information available

PROPERTY	VALUES	REMARKS • METHOD
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	110 - 120 °C / 230 - 248 °F	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air	No data available	None known
Upper flammability or explosive limits	No data available	None known
Lower flammability or explosive limits	No data available	None known
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	>350 °C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

9.2. OTHER INFORMATION

PROPERTY	VALUES	REMARKS • METHOD
Explosive properties	No information available	
Oxidizing properties	No information available	
Solvent content (%)	No information available	
Solid content (%)	No information available	
Softening Point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	

PROPERTY	VALUES	REMARKS • METHOD
Density	>1 g/cm^3	
Bulk density	No information available	

10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No data available

10.2. CHEMICAL STABILITY

Stable under normal conditions

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

None under normal processing

10.4. CONDITIONS TO AVOID

Static discharge (electrostatic discharge). Extremes of temperature and direct sunlight. Do not add water or other volatile material to molten adhesive. Under dusty conditions avoid all sources of ignition, including sparks and static electricity.

10.5. INCOMPATIBLE MATERIALS

Strong oxidizing agents, strong acids, and strong bases.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition can lead to release of irritating and toxic gases and vapors

11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Inhalation

Based on available data, the classification criteria are not met. Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact

Based on available data, the classification criteria are not met. Dust contact with the eyes can lead to mechanical irritation.

Skin contact

Based on available data, the classification criteria are not met. Contact with dust can cause mechanical irritation or drying of the skin.

Ingestion

Based on available data, the classification criteria are not met.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

No information available.

ACUTE TOXICITY

Numerical measures of toxicity

Component Information

CHEMICAL NAME	ORAL LD50	DERMAL LD50	INHALATION LC50
Silica gel, precipitated, crystalline free 112926-00-8	LD50 >10000 mg/Kg (Rattus)	5000 mg/kg (Oryctolagus cuniculus)	2.2 mg/L (Rattus) 1 h

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

CHEMICAL NAME	ACGIH	IARC	NTP	OSHA
Silica gel, precipitated, crystalline free 112926-00-8	-	Group 3	-	-

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

12: ECOLOGICAL INFORMATION

12.1. TOXICITY:

Ecotoxicity

CHEMICAL NAME	ALGAE/ AQUATIC PLANTS	FISH	TOXICITY TO MICROORGANISMS	CRUSTACEA
Silica gel, precipitated, crystalline free 112926-00-8	-	CL50 (96h) >=10000 mg/L (Brachydanio rerio)	-	CE50 (24h) >=1000 mg/L (Daphnia magna)

12.2. PERSISTENCE AND DEGRADABILITY

No information available.

12.3. BIOACCUMULATIVE POTENTIAL

There is no data for this product.

12.4. MOBILITY IN SOIL

No information available

12.5. OTHER ADVERSE EFFECTS

No information available

12.6. OTHER ADVERSE EFFECTS

No data available

13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Waste from residues/unused products

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Contaminated packaging

Dispose of in accordance with federal, state and local regulations.

14: TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15: REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA Listed

DSL Listed

LEGEND:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Listed - The components of this product are either listed or exempt from listing on inventory. Not Listed - One or more components of this product are not listed on inventory.

US FEDERAL REGULATIONS

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Fire Hazard.

EUROPE

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU

This product does not contain Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-Ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) above the regulated limit mentioned in this regulation. This document is based on the information given to us by our own suppliers at the date of this document.

SVHC: Substances of Very High Concern for Authorization:

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

16: OTHER INFORMATION

KEY OR LEGEND TO ABBREVIATIONS AND ACRONYMS USED IN THE SAFETY DATA SHEET

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By Product Safety & Regulatory Affairs

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DISCLAIMER

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.