Tectonic 3D

Safety Data Sheet

SECTION 1 – Identification of the substance/mixture and of the company

Product Name Vulcan PEI 9085
Chemical Name Polyetherimide 9085
Pure substance/mixture Mixture

Section 1.2 – Relevant identified uses of the substance or mixture and uses advised against

Application Additive Manufacturing
Used advised against Not identified.

Section 1.3 – Details of the supplier of the safety data sheet

Manufacturer

Tectonic 3D B.V.
High Tech Campus 9
5656 AE Eindhoven
The Netherlands
Tel +31 (0) 408517575
https://www.tectonic-3d.com/

E-mail address info@tectonic-3d.com

Section 1.4 – Emergency telephone number

Europe
Emergency telephone +31 (0) 408517575 (08.00-17.00 CET)

United Kingdom See above.

SECTION 2 - Hazards Identification Summary

Section 2.1 – Classification of the substance or mixture

Classification according to Regulation (EC) N0. 1272/2008 [CLP]
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

Section 2.2 – Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

Symbols/Pictograms
Not applicable.

Signal word
None.

Hazard Statements
Not applicable.

Precautionary Statements
Not applicable.

Section 2.3 – Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3 – Composition/information on ingredients

Section 3.1 – Substances

Not applicable

Section 3.2 – Mixtures

Chemical Name	EC No	CAS No	REACH Registration Number	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Titanium Dioxide PW6	Not available	13463-67-7	No data available	> 5 - < 10	Not classified

* Full text of H- and EUH-phrases: see section 16

SECTION 4 – First Aid Measures

Section 4.1 – Description of first aid measures

Inhalation

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. Consult a physician after significant exposure.

Skin Contact

In contact with molten product immediately flush with cold water for at least 10 min. Do not peel solidified polymer of skin. Obtain medical attention.

Eye Contact

Rinse thoroughly with plenty of water for at least 20 minutes, Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists. Consult a physician immediately.

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 mSDS.

Section 4.2 – Most important symptoms and affects, both acute and delayed

Inhalation	Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
Skin Contact	After contact with skin, wash immediately with plenty of cold water. Wash off immediately with soap and plenty of water. Consult a physician. If skin irritation persists, call a physician.
Eye Contact	Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, consult a specialist.
Ingestion	Negligible or unlikely exposure pathways. If accidentally swallowed obtain immediate medical attention. Get medical attention if symptoms occur and show mSDS.

Section 4.3 – Indication of any immediate medical attention and special treatment needed
No information available

SECTION 5 – Firefighting Measures

Section 5.1 – Extinguishing media
Suitable extinguishing media
Water spray(fog), Foam, Carbon Dioxide(CO_2), Extinguishing powder, Dry chemical.

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Section 5.2 – Special hazards arising from the substance or mixture
Hazardous combustion products
Hydrocarbon fragments, Hydrogen cyanide, Nitrogen oxides, Carbon monoxide (CO), Carbon Dioxide (CO_2).

Section 5.3 – Advice for firefighters
In the event of fire, wear self-contained breathing apparatus. Keep distance from source.

Further information
Take precautionary measures against static discharges. During processing, dust may form explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 – Accidental Release Measures

Section 6.1 – Personal precautions, protective equipment and emergency procedures
Use personal protective equipment as required. Avoid contact with eyes and skin. Remove all sources of ignition.

Section 6.2 – Environmental precautions
Do not flush into surface water or sanitary sewer system. Should not be released into the environment. See section 12 for additional ecological information.

Section 6.3 – Methods and material for containment and cleaning

Methods for containment
Prevent product from entering drains.

Methods for cleaning
Collect in closed and suitable container for disposal.

Section 6.4 – Reference to other sections
See section 8 for more information. See section 13 for more information.

Section 7 – Handling and Storage

Section 7.1 – Precautions for safe handling
Ensure adequate ventilation, especially in confined areas. Protect from direct sunlight. Keep away from heat. Use personal protective equipment as required.

General Hygiene Considerations
Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Ensure good ventilation at the work station.

Section 7.2 – Conditions for safe storage, including any incompatibilities
Keep tightly closed in a dry and cool environment. Keep away from heat an sources of ignition. Residual monomer vapors can accumulate in the headspace of closed containers.

Section 7.3 – Specific end use(s)
See the Technical data sheet (sTDs) for further information

Section 8 – Exposure Controls/Personal Protection

Exposure limits
Keep personal exposure below Derived No Effect Level (DNEL) and national exposure limit values(if existing)

Derived No Effect Level (DNEL) – Worker
Not Determined

Derived No Effect Level (DNEL) – Consumer
Not Determined

Predicted No Effect Concentration (PNEC)
Not Determined

Section 8.2 – Exposure Controls

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles)
Hand Protection	Protective gloves not necessarily. However, recommend using protective gloves mad of rubber PVC gloves, Butyl rubber, Chloroprene rubber, CR.
Skin and Body protection	Long sleeved clothing
Respiratory protection	None under normal conditions. Provide adequate ventilation.

Environmental exposure controls
No information available

Section 9 – Physical and Chemical Properties

Section 9.1 – Information on basic physical and chemical properties

Appearance	Filament
Color	Grey
Odor	None or Slight
Odor threshold	Not applicable

Property	Value	Remarks Method
PH		No information available
Melting point/ freezing point		This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Boiling point / boiling range		Not determined
Flash point		Not determined
Evaporation rate		No information available
Flammability (solid, gas)		Not determined
Explosive limits		No information available
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
Vapor Pressure		Negligible
Vapor Density		Not determined
Relative Density		> 1
Water Solubility		Insoluble in water
Solubility(ies)		No information available
Partition Coefficient		No information available
Autoignition Temperature		No information available
Decomposition Temperature		No information available
Kinematic Viscosity		No information available

Dynamic Viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density	No information available
Bulk Density	500 kg/m^3

Section 9.2 – Other information
No information available

Section 10 – Stability and Reactivity

Section 10.1 – Reactivity
There exists no specific test data for this product. For further information, see subsequent subsections of this chapter.

Section 10.2 – Chemical stability
Stable under recommended storage conditions.

Section 10.3 – Possibility of hazardous reactions
None under normal processing.

Section 10.4 – Conditions to avoid
To avoid thermal decomposition, do not overheat. Heating can release hazardous gases. Do not exceed melt temperature recommendations in product literature. Purging's of hot material should be collected in small, flat, thin shapes and quenched with water to allow for rapid cooling. Do not allow product to remain in barrel at elevated temperatures for extended periods of time.

Section 10.5 – Incompatible materials
No special restrictions on storage with other products.

Section 10.6 – Hazardous decomposition products
Process vapors under recommended processing conditions may include trace levels of, hydrocarbons, phenols, alkylphenols, diarylcarbonates

Section 11 – Toxicological Information

Section 11.1 – Information on toxicological effects

Information on likely routes of exposure
Inhalation, Dermal.

Symptoms related to the physical, chemical and toxicological characteristics
Unknown

Numerical measures of toxicity

Acute toxicity
Caution – mixture not yet fully tested. Due to the composition of the mixture and studies made on similar products, we believe that the mixture is not classified as hazardous. The polymer is not bioavailable because of its molecular size.

The following values are calculated based on chapter 3.1 of the GHS document

Titanium Dioxide PW6 (13463-67-7)

Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Unknown	Oral	> 5000(estimated)	LD50 (lethal dose mg/kg)
OECD Test No. 401: Acute Dermal Toxicity	Unknown	Dermal	> 2000 (estimated)	LD50 (lethal dose mg/kg

Skin corrosion/irritation
Not a hazard during normal industrial use. If present, some additives (like glass fiber or flame retardants) may cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Resin particles, like other inert materials, are mechanically irritating to eyes.

Respiratory or skin sensitization
No sensitizing effects known.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available.

Reproductive toxicity
No information available.

STOT – Single exposure No information available.
STOT – Repeated exposure No information available.

Aspiration hazard
No hazard identified

Section 12 – Ecological Information

Section 12.1 – Toxicity
This polymer is not bioavailable because of its molecular size.

Titanium Dioxide PW6 (13463-67-7)

Method	Species	Exposure route	Effective dose	Remarks
Unknown	Unknown	Unknown	Unknown	EC50 (effective concentration) mg/l

Section 12.2 – Persistence and degradability
No information available.

Section 12.3 – Bio accumulative potential
No information available.

Section 12.4 – Mobility in soil
No information available.

Section 12.5 – Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 12.6 – Other adverse effects
No information available.

Section 12.7 – Additional ecological information
Do not flush into surface water or sanitary sewer system. Based on the ecotoxicology studies conducted on fine particles/fibers in the sub-micron range, this material is not expected to be environmentally hazardous under normal use

Section 13 – Disposal Considerations

Section 13.1 – Waste treatment methods
Waste from residues/unused products
Where possible recycling is preferred to disposal or incineration.

Contaminated packaging
Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations.

Other information
No information available.

Section 14 – Transport Information

ADR Road Transport

14.1 UN Number	Not regulated.
14.2 UN Proper Shipping Name	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group	Not regulated.
14.5 Environmental Hazard	Not applicable.
14.6 Special Precautions For User	None.

RID Rail Transport

14.1 UN Number	Not regulated.
14.2 UN Proper Shipping Name	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group	Not regulated.
14.5 Environmental Hazard	Not applicable.
14.6 Special Precautions For User	None.

IMDG Sea Transport

14.1 UN Number	Not regulated.
14.2 UN Proper Shipping Name	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group	Not regulated.
14.5 Marine Pollutant	Not applicable.
14.6 Special Precautions For User	None.
14.7 Transport In Bulk According to Annex II of MARPOL 73/78 and The IBC Code	No information available.

IATA Air Transport

14.1 UN Number	Not regulated.
14.2 UN Proper Shipping Name	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group	Not regulated.
14.5 Environmental Hazard	Not applicable.
14.6 Special Precautions For User	None.

Section 15 – Regulatory Information

Section 15.1 – Safety, health and environmental regulation/legislation specific for the substance or mixture

International Regulations

Canada DSL Inventory List	This product contains the following components that are not on the Canadian DSL nor NDSL.
Japanese Inventory List ENCS	On the inventory, or in compliance with the inventory

ISHL	For further information, please contact: Manufacturer, importer, supplier
Australia (AICS)	On the inventory, or in compliance with the inventory
New Zealand (NZIoC)	On the inventory, or in compliance with the inventory
Korean Chemical Inventory (KECI)	On the inventory, or in compliance with the inventory
Philippines Inventory (PICCS)	Polymer exemption Not in compliance with the inventory
China Inventory of existing chemical substances list (IECSC)	Not in compliance with the inventory
Taiwan Chemical Substance Inventory List (TCSI)	For further information, please contact: Manufacturer, importer, supplier
Malaysia (EHSNR)	For further information, please contact: Manufacturer, importer, supplier
USA Regulations	
TSCA	On TSCA Inventory list
State Regulations	
California Proposition 65	Listed
European Union	Not applicable.
REACH	For further information, please contact: Manufacturer, importer, supplier
Switzerland	
CH INV	For further information, please contact: Manufacturer, importer, supplier
Turkey	
CICR	For further information, please contact: Manufacturer, importer, supplier
France	
Occupational Illnesses (R-463-3, France)	Not applicable.
Germany	
Water hazard class (WGK)	Water endangering class = 1 (self-classification)

Section 15.2 – Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

Section 16 – Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Issue Date 25-Nov-2024

Revision Date No information available

Revision Note No information available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006, COMMISION REGULATION (EU) No. 830/2015 of 20 May 2015

End of Safety Data Sheet