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

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**Product Name** Vulcan PEKK-A  
**Chemical Name** Polyetherketoneketone PEAK Family  
**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.

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**SECTION 2 - Hazards Identification Summary**

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**Section 2.1 – Classification of the substance or mixture****Classification according to Regulation (EC) NO. 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**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

**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]*
1,4-Benzenedicarbonyl dichloride, polymer with 1,3-Benzenedicarbonyldichloride and 1,1'-oxybis[benzene]	Not available	25917-05-9	Not available	< 100	Not classified
[4,(4-phenoxybenzoyl)phenyl]-(4-phenoxyphenyl)methanone	Not available	54299-17-1	Not available	< 1	H413

\* 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, also under the eyelids. 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**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

**Section 4.3 – Indication of any immediate medical attention and special treatment needed**

Treat symptomatically



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## SECTION 5 – Firefighting Measures

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### 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

Carbon monoxide (CO), Carbon Dioxide ( $CO_2$ ).

### Section 5.3 – Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

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## Section 6 – Accidental Release Measures

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### 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. 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.

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## Section 7 – Handling and Storage

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### 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 below 50 °C ( 122 °F).



## Section 7.3 – Specific end use(s)

See the Technical data sheet (TDs) for further information

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## Section 8 – Exposure Controls/Personal Protection

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### 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

Hand Protection

Skin and Body protection

Respiratory protection

Wear safety glasses with side shields (or goggles)

Protective gloves not necessarily. However, recommend using protective gloves mad of rubber PVC gloves, Butyl rubber, Chloroprene rubber, CR.

Long sleeved clothing

None under normal conditions. Provide adequate ventilation.

### Environmental exposure controls

No information available

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## Section 9 – Physical and Chemical Properties

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### Section 9.1 – Information on basic physical and chemical properties

**Appearance**

Filament

**Color**

Gold

**Odor**

None

**Odor threshold**

Not applicable



Property	Value	Remarks Method
<b>PH</b>		No information available
<b>Melting point/ freezing point</b>	300 - 365 °C ( 572 - 689 °F)	ISO 3146
<b>Boiling point / boiling range</b>		Not determined
<b>Flash point</b>		Not determined
<b>Evaporation rate</b>		No information available
<b>Flammability (solid, gas)</b>		Not determined
<b>Explosive limits</b>		No information available
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
<b>Vapor Pressure</b>		Not determined
<b>Vapor Density</b>		No information available
<b>Relative Density</b>		No information available
<b>Water Solubility</b>		Insoluble in water
<b>Solubility(ies)</b>		No information available
<b>Partition Coefficient</b>		No information available
<b>Autoignition Temperature</b>		No information available
<b>Decomposition Temperature</b>		No information available
<b>Kinematic Viscosity</b>		No information available
<b>Dynamic Viscosity</b>		No information available
<b>Explosive properties</b>		No information available
<b>Oxidizing properties</b>		No information available
<b>Density</b>	1.28-1.31 g/cm <sup>3</sup>	ISO 1183-1
<b>Bulk Density</b>		No information available

**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**

Strong acids, Strong oxidizing agents

**Section 10.5 – Incompatible materials**

Oxidizing substances.



**Section 10.6 – Hazardous decomposition products**

May emit toxic fumes under fire conditions: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

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**Section 11 – Toxicological Information**

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**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

**[4-(4-phenoxybenzoyl)phenyl]-(4-phenoxyphenyl)Methanone (54299-17-1)**

Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Rat	Oral	> 2000	LD0 (mg/kg)
OECD Test No. 401: Acute Dermal Toxicity	Rat	Dermal	> 2000	LD0 (mg/kg)
OECD Test No. 401: Acute Inhalation Toxicity	Rat	Inhalation	< 5	LCO (mg/l)
OECD Test No. 401: Acute Eye Irritation Toxicity	Rabbit	Eye Irritation	Unknown	Mild eye irritation

**Skin corrosion/irritation**

No information available.

**Serious eye damage/eye irritation**

No information available.

**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

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## Section 12 – Ecological Information

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### Section 12.1 – Toxicity

This polymer is not bioavailable because of its molecular size.

### [4-(4-phenoxybenzoyl)phenyl]-(4-phenoxyphenyl)Methanone (54299-17-1)

Method	Biodegradation %	Remarks
OECD Test No. 301	0	Not biodegradable

### 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

The components in this formulation do not meet the criteria of classification as PBT or vPvB

### Section 12.6 – Other adverse effects

No information available.

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## Section 13 – Disposal Considerations

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### Section 13.1 – Waste treatment methods

#### Waste from residues/unused products

The product is not classified as hazardous waste. Incinerate at a licensed installation.

#### Contaminated packaging

Thoroughly emptied and clean packaging may be recycled.

#### Other information

Waste codes should be assigned by the user based on the application for which the product was used.

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**Section 14 – Transport Information**

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**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.

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**Section 15 – Regulatory Information**

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

Not applicable.

**European Union**

Not applicable.

**France**

Occupational Illnesses (R-463-3, France)

Not applicable.

**Germany**

Water hazard class (WGK)

Not applicable. (Water endangering class = 1 (self-classification))

**Section 15.2 – Chemical safety assessment**

Not applicable.

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**Section 16 – Other information**

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

12-April-2023

**Revision Date**

11-November-2024

**Revision Note**

No information available

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

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**End of Safety Data Sheet**