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

Product Name KRATIR MII PA6 CF
Chemical Name Polyamide 6 with carbon fiber
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

No classified.

Section 2.2 – Label elements**GHS label elements**

Signal word Not signal word.
Hazard Statements No known significant effects or critical hazards

Precautionary Statements

Prevention: Not applicable.
Response: Not applicable.
Storage: Not applicable.
Disposal: Not applicable

Section 2.3 – Other Hazards

No data available



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]
Polyamide 6	-	25038-54-4	No data available	90-100	Not classified
Carbon Fiber	-	7440-44-0	01-2119966900-32	5-10	Not classified

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. Check for and remove any contact lenses. 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**Potential acute health effects****Inhalation:**

: No known significant effects or critical hazards.

Skin Contact:

: No known significant effects or critical hazards.

Eye Contact:

: No known significant effects or critical hazards.

Ingestion:

: No known significant effects or critical hazards.

Over-exposure signs/symptoms**Inhalation:**

: No specific data.

Skin Contact:

: No specific data.

Eye Contact:

: No specific data.

Ingestion:

: No specific data.

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

Notes to physician: : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: : No specific treatment.

Protection of first aiders: : No action shall be taken involving any personal risk or without suitable training.

SECTION 5 – Firefighting Measures

Section 5.1 – Extinguishing media**Suitable extinguishing media**

ABC-powder Carbon dioxide (CO₂) Water spray jet alcohol resistant foam Extinguishing powder

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

In case of fire may be liberated: Carbon monoxide (CO), Carbon Dioxide (CO₂), Combustible,

Hazardous combustion products

In case of fire: Gases/vapors, toxic

Section 5.3 – Advice for firefighters

Use suitable breathing apparatus. In the event of fire, wear self-contained breathing apparatus and chemical protective clothing.

Section 5.4 – Additional information

Fire class A (Fires of solids, mainly organic nature, which normally burn down under glow forming.) Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Section 6 – Accidental Release Measures

Section 6.1 – Personal precautions, protective equipment and emergency procedures**6.1.1. For non-emergency personnel**

Special danger of slipping by leaking/spilling product. Avoid breathing dust/fume/gas/mist/vapors/spray. Remove persons to safety.

Protective equipment:

Wear breathing apparatus if exposed to vapors/dusts/aerosols. Wear protective gloves/protective clothing/eye protection/face protection

6.1.2. For emergency responders**Personal protection equipment:**

Use appropriate respiratory protection. Personal protection equipment: see section 8

Section 6.2 – Environmental precautions

Take up mechanically. Do not allow to enter into surface water or drains.

Section 6.3 – Methods and material for containment and cleaning**Methods for containment**

Collect spillage. Measures to prevent aerosol and dust generation Wet clean or vacuum up solids.

Methods for cleaning

Water (with cleaning agent)

Section 6.4 – Reference to other sections

Disposal: see section 13 Personal protection equipment: see section 8 Safe handling: see section 7.

6.5 Additional Information

Clear spills immediately. Use appropriate container to avoid environmental contamination.

Section 7 – Handling and Storage

Section 7.1 – Precautions for safe handling**Protective measures****Advices on safe handling**

No special technical protective measures are necessary. Wear personal protection equipment (refer to section 8).

Fire prevent measures

Usual measures for fire prevention.

Measures to prevent aerosol and dust generation

Dust should be exhausted directly at the point of origin.

Advices on general occupational hygiene

Do not eat, drink or smoke or sniff when using this product. Wash hands before breaks and after work. Avoid contact with skin, eyes and clothes.

Section 7.2 – Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Recommended storage temperature <40 °C Keep container tightly closed in a cool, well-ventilated place.

Section 7.3 – Specific end use(s)

See the Technical data sheet (sTDs) for further information

Section 8 – Exposure Controls/Personal Protection

8.1 – Control parameters

No data available.

Section 8.2 – Exposure Controls**8.2.1. Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**8.2.2. Individual protection measures,
such as personal protective equipment**

Eye/face protection

Wear safety glasses with side shields EN 166 (or goggles)

Skin and Body protection

Hand protection is not required. Tested protective gloves must be worn EN ISO 374 Suitable material: Breakthrough time: min in the case of wanting to use the gloves again, clean them before taking off and air them well.

Respiratory protection

Usually no personal respirative protection necessary. Particle filter device (EN 143)

8.2.3. Environmental exposure controls

Do not use above following temperatures: 300 °C

8.3 Additional information

In process of carbon enhanced materials particles of fibers can be released. These comply with alveolar fibers (WHO-Criteria). Such fibers are classified into the category 2 of carcinogenic substances of TRGS 905 (revision of 26.03.2018). Because of that, measures to reduce the loads have to be implemented (enclosure and aspiration). A valuation of the loads at the workplace must be done from the operator.

Section 9 – Physical and Chemical Properties**Section 9.1 – Information on basic physical and chemical properties**

Appearance	Filament
Color	Black
Odor	Not determined
Odor threshold	Not applicable

Property	Value	Remarks Method
PH		Not determined
Melting point	220 to 265 °C	DSC, 10K/min DIN EN ISO 11357-3
Freezing point		Not determined
Boiling point / boiling range		Not determined
Flash point	> 350°C (>662°F)	Not determined
Evaporation rate		Not determined
Flammability (solid, gas)		Not determined
Explosive limits		Not determined
Upper explosive limits		Not determined
Lower explosive limits		Not determined
Vapor Pressure		Not determined
Vapor Density		Not determined
Relative Density	> 1 (Water = 1)	Not determined
Water Solubility		Insoluble in water
Solubility(ies)		No information available
Partition Coefficient		No information available
Auto-ignition Temperature	> 420°C	No information available
Decomposition Temperature	> 350°C (> 420°F)	No information available
Kinematic Viscosity		No information available
Dynamic Viscosity		No information available
Explosive properties		No information available
Oxidizing properties		No information available
Density	1.13 g/cm3	No information available
Bulk Density		No information available

Section 9.2 – Other information

No information available

Section 10 – Stability and Reactivity

Section 10.1 – Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion. Combustible

Section 10.2 – Chemical stability

The product is stable under storage at normal ambient temperatures.

Section 10.3 – Possibility of hazardous reactions

Thermal decomposition can lead to the escape of irritating gases and vapors. Danger of dust explosion.

Section 10.4 – Conditions to avoid

Protect from moisture.

Section 10.5 – Incompatible materials

Further information on proper storage: see section 7.

Section 10.6 – Hazardous decomposition products

Gases/vapors, toxic

Section 11 – Toxicological Information

Section 11.1 – Information on toxicological effects**Acute oral toxicity**

No data available.

Acute dermal toxicity

No data available.

Acute inhalation

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.



Reproductive toxicity

No data available.

STOT – Single exposure

No data available.

STOT – Repeated exposure

No data available.

Aspiration hazard

No data available.

Section 11.2 – Information on other hazards

No data available.

Section 12 – Ecological Information

Section 12.1 – Toxicity

No data available.

Section 12.2 – Persistence and degradability

No data available.

Section 12.3 – Bio accumulative potential

No data available.

Section 12.4 – Mobility in soil

No data available.

Section 12.5 – Results of PBT and vPvB assessment

No data available.

Section 12.6 – Endocrine disrupting properties

No data available.

Section 12.7 – Other adverse effects

No known significant effects or critical hazards.

Section 13 – Disposal Considerations

Section 13.1 – Waste treatment methods**Waste from residues/unused products****13.1.1. Product/Packaging disposal****Appropriate disposal / Package:**

Completely emptied packages can be recycled.

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.

Section 14 – Transport Information

RID/ADR: Land Transport

14.1 UN Number	No dangerous good in sense of these transport regulations.
14.2 UN Proper Shipping Name	No dangerous good in sense of these transport regulations.
14.3 Transport Hazard Class(es)	Not relevant.
14.4 Packing Group	Not relevant.
14.5 Environmental Hazard	Not relevant.
14.6 Special Precautions For User	Not relevant.

AND: Inland waterway craft

14.1 UN Number	No dangerous good in sense of these transport regulations.
14.2 UN Proper Shipping Name	No dangerous good in sense of these transport regulations.
14.3 Transport Hazard Class(es)	Not relevant.
14.4 Packing Group	Not relevant.
14.5 Environmental Hazard	Not relevant.
14.6 Special Precautions For User	Not relevant.

IMDG: Sea Transport

14.1 UN Number	No dangerous good in sense of these transport regulations.
14.2 UN Proper Shipping Name	No dangerous good in sense of these transport regulations.
14.3 Transport Hazard Class(es)	Not relevant.
14.4 Packing Group	Not relevant.
14.5 Marine Pollutant	Not relevant.
14.6 Special Precautions For User	Not relevant.
14.7 Transport In Bulk According to Annex II of MARPOL 73/78 and The IBC Code	Not relevant.

ICOA-TI / IATA-DGR: Air Transport

14.1 UN Number	No dangerous good in sense of these transport regulations.
14.2 UN Proper Shipping Name	No dangerous good in sense of these transport regulations.
14.3 Transport Hazard Class(es)	Not relevant.
14.4 Packing Group	Not relevant.
14.5 Environmental Hazard	Not relevant.
14.6 Special Precautions For User	Not relevant.

14.7 Maritime Transport in bulk according to IMO instruments

No data available.

Section 15 – Regulatory Information

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

International Regulations Not applicable.

Source:

European Union Not applicable.

National regulations Not applicable.

Section 15.2 – Chemical Safety assessment

Not data available



Section 16 – Other information

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

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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