

Safety Data Sheet According to EU Directive 1907/2006

Product name: Ultra Diamond PLA Date of issue: 25.10.2018

Version: 1.1

Identification of the substance/preparation and of the company

1.1 Trade name:

Ultra Diamond PLA

1.2 Use of the product:

3D Printer Filament

1.3 Supplier:

Tiamet Technologies B.V., Marconistraat 16, 3029 AK, Rotterdam, The Netherlands. +31614859420

2. Hazards identification

2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP] No need for classification according to GHS criteria for this product

2.2 Label elements

None

2.3 Other hazards

This product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

3. Composition/information on ingredients

3.2. Mixtures

Chemical name	EC-No	CAS-No	Weight %	Classification	REACH
				(1272/2008/EC)	reg. no
Polylactic acid -	9051-89-2	~ 99 %			Exempted
Additives		~ 1%			
(incl. Nano Diamond)					

4. First aid measures

4.1 Description of first aid measures

General Advice

No hazards which require special first aid measures.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Ingestion

Rinse mouth. Get medical attention immediately if symptoms occur.

Inhalation

Move to fresh air. Get medical attention immediately if symptoms occur.

Protection of first-aiders

Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No acute and delayed symptoms and effects are observed.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, Foam, Dry powder, Carbon dioxide (CO₂). Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions: Carbon oxides, Acetaldehyde.

5.3 Advice for firefighters

Fire fighting measures

Evacuate non-essential personnel

Move containers from fire area if you can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the groundwater system. Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Risk of slipping. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe dust and or fumes associated with processing of materials. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and materials for containment and cleaning up

Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Following product recovery, rinse area with water.

6.4 Reference to other sections

Refer to section (8)

7. Handling and storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust and or fumes resulting from processing 3D printing materials. Ensure adequate ventilation. Wear personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a cool, well- ventilated place. Protect from moisture / Water.

8. Exposure controls/personal protection

8.1 Control parameters

Components with occupational exposure limits Contains no substances with occupational exposure limit values. Biological Limit Values Not established. PNEC The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers. DNEL The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

8.2 Exposure controls Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Keep at temperatures below 235 °C / 455 °F.

Individual protection measures, such as personal protective equipment Eye Protection

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Recommended Filter Type P2 / FFP2.

Hygiene Measures

Handle in accordance to good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid Filament
Odour	Odourless
Colour	depending on product grade
Odour threshold	Odourless

pH	Not applicable
Melting/freezing point	150-230 °C/ 0 °C 302-446 °F/ 32 °F
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	flammable
Upper/lower flammability or explosive	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	Ca. 1.1-1.3 g/cm ³
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	No information available
Decomposition temperature	>230°C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

10. Stability

10.1 Reactivity: No information available

10.2 Chemical stability:

Decomposes in contact with hot water.

10.3 Possibility of hazardous reactions:

No hazardous reactions observed under normal handling and storage conditions

10.4 Conditions to avoid

Temperatures above 235 °C / 455 °F.

10.5 Incompatible materials: Moisture, Water keep filament dry to ensure best printing results

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: Carbon oxides, Acetaldehyde.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Ingestion:	No known effect.
Skin Contact :	No known effect.
Inhalation :	No known effect.
Skin Corrosion/Irritation:	No known effect.
Serious eye damage/irritation	No known effect.
Respiratory or skin sensitisation	No known effect.
Germ Cell Mutagenicity	Not known to cause heritable genetic damage.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No known effect
STOT-single exposure	No known effect.
STOT-repeated exposure	No known effect.
Aspiration Hazard	No known effect.

12. Ecological information

12.1 Toxicity

Contains no substances known to be hazardous for the environment.

12.2 Persistence and degradability

Decomposes in contact with water. Industrially biodegradable.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

No information available..

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/ICAO

14.1 UN number Not applicable

14.2 UN proper shipping name Not applicable

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group Not applicable

14.5 Environmental hazards No additional data is available

14.6 Special precautions for user No data available

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not evaluated

15. Regulatory information

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

mixture

Restrictions on use: None

Other Regulations : No information available

15.2 Chemical Safety Assessment

No information available.

16. Other information

Information is referenced from other manufacturers.

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

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