



Safety Data Sheets

I.C.R:PC-09.18

Revision Date:22/03/17

Revision Number: 00

SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200:2012, ANSI Z400.1-2010, and ISO 11014-1: 2009.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name:

PA 6 3D Printer Monofilament.

Chemical name:

Polyamide 6.

Product Use:

3D Printing

Supplier:

Nicieza y Taverna Hnos. S.A.I.C.y A., 6620, Chivilcoy, Buenos Aires , Argentina.

2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
The product is not classified according to the CLP regulation.
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008 None
- Hazard pictograms None
- Signal word None
- Hazard statements None
- 2.3 Other hazards Chronic toxicity / Carcinogenicity: IARC4
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.2 Chemical characterisation: Mixtures
- Description:
Mixture: consisting of the following components.
Polyamide 6 >95% , Epsilon-Caprolactam <5%

· Dangerous components:		
CAS: 105-60-2 EINECS: 203-313-2 Reg.nr.: 01-2119457029-36-0006	epsilon-caprolactam solid ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	< 5.0%
· Non dangerous components		
24993-04-2	Polyamide 6	> 95,0%

4. FIRST AID MEASURES

- 4.1 Description of first aid measures
- After inhalation:
Melted state:
Supply fresh air; consult doctor in case of complaints.
- After skin contact:
After contact with the molten product, cool rapidly with cold water. Do not pull solidified product off the skin.
Seek medical treatment.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
Rinse out mouth and then drink plenty of water. Seek medical treatment.
- 4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

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5. FIRE-FIGHTING MEASURES

Extinguishing media Suitable
extinguishing agents:

Water

Fire-extinguishing powder Carbon dioxide

Special hazards arising from the substance or mixture

In case of fire, the following can be released: Carbon monoxide (CO)

Carbon Dioxide (CO₂)

Under certain fire conditions, traces of other toxic gases cannot be excluded,
e.g.: Hydrogen cyanide (HCN)

Ammonia (NH₃)

Advice for firefighters

Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
Send for recovery or disposal in suitable receptacles.
- 6.4 Reference to other sections
See Section 7 for information on safe handling.

7. HANDLING AND STORAGE

•7.1 Precautions for safe handling

No special measures required.

Handle with care - Do not subject to grinding/shock/friction. Ensure good ventilation/exhaustion at the workplace.

•Information about fire - and explosion protection: Protect against electrostatic charges.

•7.2 Conditions for safe storage, including any incompatibilities

•Storage:

•Requirements to be met by storerooms and receptacles:

Store in cool, dry conditions in well sealed receptacles.

•Information about storage in one common storage facility: Not required.

•Further information about storage conditions: Protect from heat and direct sunlight.

•7.3 Specific end use(s) No further relevant information available..

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:
ACGIH (2004): Epsilon-caprolactam 5 mg/m³ (TWA)
ACGIH (2004): Epsilon-caprolactam 5 mg/m³ (TWA)
- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals. Avoid skin contact with the liquefied material.
Avoid breathing dust/fume/vapours.
- Respiratory protection: Not necessary if room is well-ventilated.
- Protection of hands:
Melted state:



Protective gloves

Heat protection gloves

- Material of gloves
- Melted state:

Heat protection gloves



- Eye protection:
Safety glasses Melted state:
Face protection

- Skin and body protection: Protective work clothing

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9. PHYSICAL AND CHEMICAL PROPERTIES OF THE POLYMER

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Pellets
Colour:	Brown & white
· Odour:	Odourless
· Change in condition	
Melting point/Melting range: approx.190 °C	
· Flash point:	Not applicable.
· Flammability (solid, gaseous): Product is not flammable.	
· Ignition temperature	>400 °C
· Danger of explosion:	Product does not present an explosion hazard.
· Density at 20 °C:	1.14 g/cm ³
· Solubility in / Miscibility with water:	Insoluble.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· 9.2 Other information	No further relevant information available.

10. STABILITY AND REACTIVITY

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
Stable at environment temperature.
No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: Oxidizing agents, acids, bases and reactive agents.
- 10.6 Hazardous decomposition products:
Carbon monoxide Carbon dioxide
Hydrogen cyanide (prussic acid) Ammonia

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11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
- Acute toxicity Based on available data, the classification criteria are not met.

• LD/LC50 values relevant for classification:		
25038-54-4 Polyamide 6		
Oral	LD50	3,200 mg/kg (rat)
105-60-2 epsilon-caprolactam solid		
Oral	LD50	1475-1876 mg/kg (rat)
Dermal	LD50 LC50/4	>2000 mg/kg (rabbit)
Inhalative	h	8.16 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation 500 mg/24hrs mild (rabbit)
- Serious eye damage/irritation 20 mg/24hrs moderate (rabbit)
- Respiratory or skin sensitisation Not sensitizing (guinea pig, maximation test)
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity:Negative (rat)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

· Aquatic toxicity:	
105-60-2 epsilon-caprolactam solid	
EC50/48 h	>500 mg/l (daphnia magna)
EC50/72 h	130 mg/l (algae)
LC50/96 h	500-1000 mg/l (bluegeil)

- 12.2 Persistence and degradability biodegradable
- Other information:
The product is biodegradable. 82% after 14 days (OECD 301C)
90-100% DOC after 28 days (OECD 301 A and B)
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods
- Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

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14. TRANSPORT INFORMATION

· 14.1 UN-Number · ADR, ADN, IMDG, IATA	None
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	None
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	None
· 14.4 Packing group · ADR, IMDG, IATA	None
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to AnnexII of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	None

15. REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
H302 Harmful if swallowed. H315 Causes skin irritation.
H319 Causes serious eye irritation. H332 Harmful if inhaled.
H335 May cause respiratory irritation.
- Department issuing MSDS: Product Liability group
- Contact: E-mail: sds.ube.eu@ube.es
- Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by

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Road)

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity, Hazard Category 4

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