



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

1.1 Product Name:

PA 12 3D Printer Monofilament.

1.2 Chemical name:

Polyamide 12.

1.3 Product Use:

3D Printing

1.4 Supplier:

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

1.5 Emergency telephone numbers (24 hours a day):

(Medical Information) (651) 632-9273 (Transportation Information) CHEMTREC: 800-424-9300 (in the United States) (Transportation Information) CHEMTREC: (703) 527-3887 (outside the United States)

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
- Labeling 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 12 >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 12	> 95,0%

4. FIRST AID MEASURES

Emergency telephone numbers (24 hours a day):

- (Medical Information) (651) 632-9273
- (Transportation Information) CHEMIREC: 80 -424-930 (in the United States)
- (Transportation Information) CHEMIREC: (703) 527-387 (outside the United States)

- 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

5.1 Extinguishing media

Suitable extinguishing agents:

Water

Fire-extinguishing powder Carbon dioxide

5.2 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)

5.3 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:	1.09-1.19 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 12		
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, maximization 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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