

1- Product and Company Identification

1.1 Product identification:

Trade name	Zetamix stainless steel
Chemical name	Zetamix INOX 316L

1.2 Identified use: 3d printing filament.

1.3 Manufacturer/Supplier : Nanoe
6 rues des frênes
91160 Ballainvilliers
France
+ 33 9 81 98 33 64

1.4 Emergency number: + 33 1 45 42 59 59 (24/24h)

2- Hazards identification

2.1 Classification :

Regulation CLP EC 1272/2008: Not classified

2.2 Label elements :

Labelling according to Regulation (EC) No 1272/2008 [CLP]: not applicable

EUH 210 Safety data sheet available on request.

2.3 Other hazards:

This substance is not classified as dangerous, but it may give off toxic fumes, depending on the concentration of its components, when printing is being made. It is recommended to have a ventilation system in the room.

3- Composition/Data on components

3.1 Composition

CAS N°	EC N°	Substances	Classification 1272/2008	%
65997-19-5	266-048-1	316 L	Classified	80-95
-	-	Organ system	Not classified	5-20

3.2 Mixing

316L stainless steel: This substance, when in powder form, presents a number of risks:

H301 : Toxic if swallowed

H315 : Causes skin irritation

H317: May cause an allergic skin reaction

H319 : Causes serious eye damage

H330 : Fatal if inhaled

H335 : May cause respiratory irritation

H350: May cause cancer by inhalation

H372: Causes damage to organs through prolonged or repeated exposure

H411: Toxic to aquatic life with long lasting effects

To the current state of our knowledge, this substance when present in the 3D printing filament does not need to be classified.

Epsilon-caprolactam :

CAS Number: 105-60-2

EC number: 203-313-2

Concentration : <0.5%

H302: Harmful if swallowed

H315: Causes skin irritation

H319: Causes serious eye damage

H332: Harmful if inhaled

H335: May cause respiratory irritation

4- First aid measures

4.1 Description of first aid measures :

Inhalation	Remove person to fresh air and keep in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration system. See a doctor.
Skin contact	No adverse effect, wash hands after use.
Ingestion	Rinse mouth with plenty of water
Eye contact	Rinse thoroughly and thoroughly with an eyewash station or water.

4.2 Principal symptoms :

Inhaling smoke can cause irritation of the nose

4.3 Indication of any immediate medical attention and special treatment needed :

Treat symptomatically

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5- Firefighting measures**5.1 suitable extinguishing agents :**

The product is compatible with all means of firefighting.

5.2 special hazards arising from the substance or mixture :

No specific risk of fire or explosion.

5.3 Advice for firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No attempt shall be taken involving any personal risk or without suitable training. Firefighters should wear proper protective equipment.

6- Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures:**

Avoid inhaling the gases produced when printing the filament. Provide adequate ventilation.

6.2 Environmental precautions:

Avoid dispersion of spilled material and runoff and contact with soil, watercourses, drains and sewers.

6.3 Methods and materials for containment and cleaning up:

Waste must be disposed of according to current regulations.

6.4 Other information:

Wearing glasses and dust mask.

6.5 Reference to other sections:

See section 1 for emergency contact details

See section 8 for all information on suitable personal protective equipment

See section 13 for additional information on waste treatment.

7- Handling and storage**7.1 Precautions for safe handling:**

Avoid breathing fumes when printing. Use in a well ventilated area.

Staffs are recommended to wash their hands and face before eating, drinking or smoking

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulation.

7.3 Specific end use (s):

Apart from the uses mentioned in section 1.2, there are no other recommended uses.

8- Exposure controls and personal protection

8.1 Control parameters:

CAS N°	Component	Type	Value	Base
105-60-2	Epsilon-caprolactam	VLEP-8h	10 mg/m ³	Occupational exposure limit values for chemical agents in France (INRS)
		VLEP – 15min	40 mg/m ³	

8.2 Exposure control:

Appropriate engineering controls

Handle according to good industrial hygiene and safety practices. Use of local exhaust and / or good general ventilation should be sufficient. Wash hands before each cut and at the end of the work day.

Individual protection measures



Personal protective equipment

Eye/Face protection

Safety glasses with side-shields conforming to EN166

Skin protection

Minimize contact with the skin. When material is heated, wear gloves to protect against burns.

Body protection

No special protective clothing is required.

Respiratory protection

Use suitable breathing equipment (FFP2 masks)

9- Properties of the product

Physical of the product	Filament
Colour	Metallic

Odour	Odourless
Theoretical density	7,5-8,1 g·cm-3
Water solubility	Insoluble

10- Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

During printing, sanding and finishing off gases and dust may form and may cause irritation to the eyes, throat and respiratory tract.

10.4 Conditions to avoid

Avoid heating above the maximum recommended temperature.

10.5 Incompatible materials

None known

10.6 Hazardous decomposition products

Under normal condition of storage and use, no hazardous decomposition products.

11- Toxicological information

Acute toxicity	Not toxicity
Inhalation	Irritating
Dermal	Not irritating
Skin corrosion/irritation	Irritating
Germ cell mutagenicity	No mutagenic effect
Carcinogenic	Non carcinogenic
Reproductive toxicity	Unclassified

12- Ecological information

Toxicity	Unknown
Persistence and degradability	Data not available
Bio accumulation potentiel	Not applicable, the substance is not classified

Mobility in soil	Data not available
Results of PBT and vPvB assessment	Not required
Other adverse effects	No known danger

13- Disposal considerations

Waste treatment methods

Product: Dispose of surplus and non-recyclable products at an approved disposal company.

Contaminated packaging: Throw it away as unused product.

14- Transport information

DOT (US)/IMDG/IATA/ADR/RID: non-dangerous goods.

15- Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

According to the CLP regulation EC 1272/2008, the constituent substances are not classified as dangerous.

15.2 Chemical safety assessment

This product contains substances which require a chemical risk assessment

16- Other information

Full text of the H declarations cited in Articles 2 and 3. Not applicable

Further information

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