

## 1- Product and Company Identification

### 1.1 Product identification:

Trade name	Zetamix 17-4PH Stainless steel
Chemical name	Zetamix 17-4PH

**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

P261 : Avoid breathing dust/fume/gas/mist/vapours/ spray

P305 + P351 : If in eyes, rinse cautiously with water for several minutes

### 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	%
30550-56-6	250-752-7	17-4PH	Classified	80-85
-	-	Organic system	Not classified	5-20

## 3.2 Mixing

17-4PH 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 :

<b>Inhalation</b>	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.
<b>Skin contact</b>	No adverse effect, wash hands after use.
<b>Ingestion</b>	Rinse mouth with plenty of water
<b>Eye contact</b>	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

## 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 Number	Composant	Type	Value	Base
105-60-2	Epsilon-caprolactam	VLE-8h VLEP-15min	10 mg/m <sup>3</sup> 40 mg/m <sup>3</sup>	Occupational exposure limit values for chemical agents in France (INRS)

### 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

<b>Physical of the product</b>	Filament
<b>Colour</b>	Metallic
<b>Odour</b>	Odourless
<b>Flammability</b>	Data not available
<b>Evaporation rate</b>	Not applicable
<b>Theoretical density</b>	7.8 g·cm <sup>-3</sup>
<b>Water solubility</b>	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

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

## 12- Ecological information

<b>Toxicity</b>	Unknown
<b>Persistence and degradability</b>	Data not available
<b>Bio accumulation potentiel</b>	Not applicable, the substance is not classified
<b>Mobility in soil</b>	Data not available
<b>Results of PBT and vPvB assessment</b>	Not required
<b>Other adverse effects</b>	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**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release

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