Safety Data Sheet INNOVATEFIL® COPOLYESTER TEMPERATURE +

1. Identification of the substance or mixture and company responsible for product identification manufacturing / marketing:

1.1 Identification

INNOVATEFIL® COPOLYESTER TEMPERATURE+

1.2 Forms of use

Uses: Filament for 3D printing FDM supports any printer type

1.3 Company

SMART MATERIALS 3D

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INNOVATEFIL® *by Smart Materials 3D*

1.4 Emergency phone: 112

2. Hazards identification.

2.1 Classification

- Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

3. Composition.

- Thermoplastic copolyester

3.1 Chemical characterization: Mixes

Description: Polymer

Dangerous components: Non-applicable.

Other components: Non-applicable

Additional information
The product is exempt from REACH registration (polymer).

4. First aids:

4.1 Description of First Aids

- In case of inhalation: First aid measures not required, but get fresh air for personal comfort.
- In case of skin contact: First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
- Ingestion: If a large quantity has been ingested or if you fell unwell, get medical advice/attention.
- After contact with molten product, cool rapidly with cold water. No skin separating the solidified product. Call a doctor immediately.

5. Firefighting measures:

5.1 Suitable extinguishing media

Water spray (fog), Foam, Carbon dioxide (CO2), Extinguishing powder.

5.2. Unsuitable extinguishing media for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.3 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapours: Carbon monoxide (CO), Carbon dioxide (CO2).

5.4 Advice for firefighters

Protective equipment: Wear protective breathing apparatus independent of the ambient air.

6. Measures in case of accidental release.

6.1 Personal precautions

Ensure adequate ventilation, especially in confined areas.

6.2 Environmental cautions:

Do not discharge into drains / surface water / ground water.

6.3 Methods and materials for containment and cleaning up:

Allow to solidify, pick up mechanically

Dispose of the material collected according to regulations.

7. Handling and Storage:

Ensure adequate ventilation, especially in confined areas. Protect from direct sunlight. Keep away from heat.

General Hygiene Considerations:

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before re-use. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

- Requirements to be met by storerooms and receptacles:
  Innovatefil® COPOLYESTER is delivered in a vacuum bag with a great barrier against moisture so that the filament cannot absorb humidity. Before bagging, the filament follows the strictest quality controls by dehumidifying the raw material until the moisture content is lower than 0.02%. During the process the filament is cooled down by dry air and next it is bagged to make sure the product is the highest quality. Once the product is unpacked we recommend to keep it in a dry and dark environment. For an optimal use it is advisable to use a preheating and dehumidification system on the machine. If not maintained in a suitable environment the material can absorb up to 0.5% of atmospheric humidity, this could create water vapour in the extrusion that will bring a poor surface finish.

8.Exposure controls / personal protection.

8.1 Control parameters

Exposure Limits:

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2 Personal protection equipment.

General safety and hygiene:

- Keep away from foodstuffs, beverages, and food.
- Do not eat, drink, smoke, or sniff snuff during work.
- Do not breathe dust / smoke / mist.
- Avoid contact with eyes and skin.
- Wash hands before breaks and after work.

Breathing equipment:

- Surely concentrations below the value of the CMA does not require special measures.

Eye protection:

- No special technical protective measures are necessary.

Hand protection:

- Protective gloves not really required. However, we recommend using protective gloves made of rubber. PVC gloves, Butyl rubber, Chloroprene rubber, CR.

Body protection:

- For handling, hot / molten heat resistant protective clothing product.

9.Fisical and chemical properties:

A. Appearance: C
B. Odor: Odourless
C. Odour Threshold: NA
D. pH: NA
E. Boiling Point (° C): NA
F. Melting point (° C): 96 °C Glass transition
G. Softening point (° C): NA
H. Evaporation Rate: NA
I. Properties Flammable / Explosive: NA
J. Vapor pressure / vapor density: NA
K. Relative density: 1.24
L. Solubility: Insoluble in water
M. Octanol / water partition: NA
N. Auto-ignition temperature: NA
O. Decomposition temperature: NA
P. Viscosity: NA
Q. Other properties: NA

10. Stability and reactivity

10.1 Reactivity

Non-applicable

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of dangerous reactions.

None under normal processing.

10.4 Conditions to be avoided

No information available.

10.5 Strong decomposition products

- Irritant gases / vapours.
- Toxic gases / vapours.
- Smoke.
- Carbon monoxide (CO) and carbon dioxide (CO_2) emissions

11. Toxicological Information

11.1 Information on toxicological effects

Information on likely routes of exposure

Inhalation, Dermal.

Symptoms related to the physical, chemical and toxicological characteristics

None known.

Numerical measures of toxicity

Acute toxicity

Caution - substance not yet fully tested. Due to the structure of the substance and studies made on similar products we believe that the product is unclassified. The polymer is not bioavailable because of its molecular size.

Thermoplastic copolyester (XXX-XX-X)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity		Oral	>2000	LD50 (lethal dose) mg/kg
OECD Test No. 402: Acute Dermal Toxicity		Dermal	>2000	LD50 (lethal dose) mg/kg

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No sensitizing effects known.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure: No information available

STOT - repeated exposure: No information available

Aspiration hazard

No information available.

12. Ecological information

12.1 Toxicity

The polymer is not bioavailable because of its molecular size.

12.2 Mobility

No information available.

12.3 Persistence and degradability

Not biodegradable

12.4 Results of PBT y mPmB

PBT: Non-applicable.

mPmB: Non-applicable.

13 Disposal considerations

13.1 Methods for treating waste

Recommendation: Disposal according to official regulations.

European waste catalog:

Allocation of waste codes according to the European waste list depends on the source generating the waste.

Contaminated packaging:

Recommendation: Disposal according to official regulations.

14 Transport information

Not regulated.

15 Regulatory information

Not applicable.

16 Other information

The data is based on the current state of knowledge, but it is not a guarantee of the product features and it is not legally valid in a contractual relationship.

The statements made here should describe the product with regard to the necessary safety precautions – they are not meant to guarantee definite characteristics – but they are based on our present up-to-date knowledge.