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Safety data sheet: Z-ESD v2

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. PRODUCT IDENTIFIER

Trade name: Z-ESD v2

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Identified use: thermal processing for 3D printing in Layer Plastic Deposition (LPD) technology.

Use advised against: other than listed above.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: Zortrax S.A.
Lubelska 34
10-409 Olsztyn
Poland
TEL. +48 89 672 40 01

Made in: UE

1.4. EMERGENCY TELEPHONE NUMBER

Emergency telephone number: 112

SECTION 2. HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

According to Regulation (WE) No 1272/2008 [CLP]: The product is not classified as hazardous.

2.2. LABEL ELEMENTS

According to Regulation (WE) No 1272/2008 [CLP]: The product does not require a hazard warning label in accordance with EU and national regulations.

2.3. OTHER HAZARDS

According to Regulation (WE) No 1272/2008 [CLP]: No specific dangers are known, if the regulations/notes for storage and handling are considered. Generation of dust should be avoided, since this may cause slight irritation of eyes, skin and respiratory system.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Not applicable.

3.2. MIXTURES

Chemical composition:

- copolyester,
- carbon based additives,
- functional additives if needed.

SECTION 4. FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

Inhalation:	Move the victim to fresh air. Immediately contact a doctor.
Skin contact:	If molten material comes into contact with the skin, immediately rinse the skin with plenty of water with soap for at least 15 minutes. If the irritation persists, get medical assistance. Cool the skin with cold water after contact with a hot and molten polymer. Do not pull solidified product away from the skin.
Eye contact:	Dust: Rinse eyes thoroughly with lots of water for at least 15 minutes. If irritation occurs, contact a doctor.
Ingestion:	Rinse mouth with water and drink plenty of water. If it's necessary, get medical assistance.
Information for medical:	Treat symptoms.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms:	Dust: May cause skin irritation, and may cause redness and irritation to the eyes.
Hazards:	If hot material is used incorrectly, there is a burn hazard. No other hazards are expected if the material is used as intended.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Continuation of first aid measures. Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5. FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media:

Water spray, foam, dry powder, carbon dioxide (CO₂).

Unsuitable extinguishing media:

High volume water jet.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

In the case of combustion:

Release of carbon monoxide, carbon dioxide, nitrogen oxide, organic decomposition products.

5.3. ADVICE FOR FIREFIGHTERS

Special protective equipment for firefighters:

Provide/wear breathing apparatus. Wear suitable protective clothing.

Other information:

The degree of risk depends on the substance that is on fire and fire conditions. Combustion may produce toxic gases/vapors. Fire residues and contaminated extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Store away from sources of ignition. Avoid contact with eyes and skin. Do not inhale dust. If it's necessary, wear a dust mask and safety glasses.

6.2. ENVIRONMENTAL PRECAUTIONS

The material should not be released to environment, especially into drains and water reservoirs.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Sweep up and gather. Avoid raising dust. Provide adequate ventilation. Dispose of the collected material according to regulations.

6.4. REFERENCE TO OTHER SECTIONS

Exposure controls/personal protection see SECTION 8. Disposal considerations see SECTION 13.

SECTION 7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Machines for processing the material must be placed in a room with proper ventilation. Avoid the formation and accumulation of dust. Handle the material according to the rules of health and safety at work.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Information about fire and explosion protection:

Apply general fire prevention rules.

In the case of dust formation:

Take measures to prevent electrostatic charging. Avoid any sources of ignition: heat, sparks, open fire.

Storage:

Properly closed/packed, cool and dry. Protect against moisture, direct and strong sun light, high temperature. Avoid contamination with other substances. Avoid storage together with hazardous substances.

7.3. SPECIFIC END USE(S)

Advice mentioned in this section should be observed in accordance with the relevant identified uses listed in SECTION 1.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

The product does not contain any hazardous substances with occupational exposure limits.

8.2. EXPOSURE CONTROLS

Personal protective equipment:

Respiratory protection:

Respiratory protection is required in the case of dust formation. Solid particles filter (P1 type).

Hand protection:

Additional protective gloves against thermal risks when handling hot molten masses (EN 407).

Eye protection:

Safety glasses with side-shield (e.g. EN 166).

Body protection:

Body protection must be chosen depending on the activity and possible exposure, e.g. apron, protective boots, suit resistant to chemicals.

General safety and hygiene measures:

Avoid contact of the molten material with the skin. Avoid inhalation of dust/mist/vapors. Ensure that eyewash stations and safety showers are easily accessible. Follow the rule of industrial hygiene and safety practice. Wash hands and/or face before breaks and after work. Do not eat, drink or smoke when using the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	filament
Physical state:	solid (compressed)
Color:	various
Odor:	odorless
Odor threshold:	no data
pH:	no data
Melting point/freezing point:	no data
Initial boiling point and boiling range:	no data
Flash point:	no data
Evaporation rate:	no data
Flammability:	no data
Upper/lower flammability or explosive limits:	no data
Vapor pressure:	no data
Vapor density:	no data
Relative density:	1.31-1.38 g/cm ³
Solubility:	insoluble
Partition coefficient: n-octanol/water:	no data
Auto ignition temperature:	no data
Decomposition temperature:	no data
Viscosity:	no data
Explosive properties:	no data
Oxidizing properties:	no data

9.2. OTHER INFORMATION

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SECTION 10. STABILITY AND REACTIVITY

10.1. REACTIVITY

No reactivity under normal storage and operating conditions.

10.2. CHEMICAL STABILITY

The material is stable under normal storage and operating conditions.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

The material is stable under normal storage and operating conditions.

10.4. CONDITIONS TO AVOID

Avoid extreme heat. Avoid all sources of ignition, heat, sparks, open fire. Protect against moisture, direct and strong sun light.

10.5. INCOMPATIBLE MATERIALS

Strong oxidizing and reducing agents, strong acids and bases.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Prolonged or strong thermal load may lead to release of dangerous combustion products: carbon monoxide, carbon dioxide, nitrogen oxide, organic decomposition products.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

No short- or long-term toxicological effects are known.

SECTION 12. ECOLOGICAL INFORMATION

12.1. TOXICITY

Not determined

12.2. PERSISTENCE AND DEGRADABILITY

Not determined

12.3. BIOACCUMULATIVE POTENTIAL

No data available

12.4. MOBILITY IN SOIL

No data available

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

No data available

12.6. OTHER ADVERSE EFFECTS

There are known no harmful effects.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

The material should not be released to environment, especially into drains and water reservoirs. Dispose of waste according to regulations.

SECTION 14. TRANSPORT INFORMATION

14.1. UN NUMBER

Not applicable

14.2. UN PROPER SHIPPING NAME

Not applicable

14.3. TRANSPORT HAZARD CLASS(ES)

Not applicable

14.4. PACKING GROUP

Not applicable

14.5. ENVIRONMENTAL HAZARDS

Not applicable

14.6. SPECIAL PRECAUTIONS FOR USER

Unknown

14.7. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE

Not applicable

SECTION 15. REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Water hazard class:

not hazardous to water

15.2. CHEMICAL SAFETY ASSESSMENT

A safety data sheet for this product is legally not required and is provided by us just as courtesy to our customers. The product is not classified as hazardous. Chemical safety assessment is not required.

SECTION 16. OTHER INFORMATION

This Safety Data Sheet has been prepared on the basis of the currently available data on the product as well as of the Manufacturer's experience and knowledge. It should be treated as a guide for safe transportation, storage and handling. The given information is not to be considered as a warranty or quality specification. Additionally, it is the user's responsibility to handle the product in accordance with local regulations and standards.

End of Safety Data Sheet

The Zortrax logo is displayed in a bold, lowercase, sans-serif font.

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