



MATERIAL SAFETY DATA SHEET
according to Regulation (EU) No. 1907/2006

HiPS by Innofil3D BV

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Trade name	: Innofil3D HiPS
Chemical name	: High impact Polystyrene
Chemical family	: Thermoplastic copolymer
Use	: Monofilament for 3D-printing
Company	: Innofil3D BV
Street address	: Eerste Bokslootweg 17
Postal code and city	: 7821 AT Emmen
Country	: The Netherlands
Telephone number	: +31 (0) 591 820 389

2. HAZARDS IDENTIFICATION

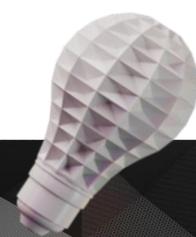
EC regulation 1272/2008	: This substance is classified as not hazardous (CLP).
Directive 67/548/EEC	: This substance is classified as not hazardous.
Dust	: Can cause skin, eye and respiratory tract irritation.
Fine dust	: Explosive.
Melted product	: The melted product can cause severe burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	: Styrene-butadiene copolymer.
CAS Number	: 9003-53-6

4. FIRST-AID MEASURES

Eye contact	: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an eye specialist in the event of irritation. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	: The melted product can cause severe burns. Do not remove the product from the skin without medical assistance. After contact



	with molten product, cool skin area rapidly with cold water. Consult physician.
Inhalation	: Provide fresh air. Put victim at rest and keep warm. Seek medical attention
Ingestion	: Do not induce vomiting. Rinse mouth with water. Drink one or two glasses of water. Never give an unconscious person anything through the mouth.
Note to physician	: Treat symptomatically.
Most important symptoms and effects	: Skin irritation, eye irritations and redness.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Water fog, foam. Only in case of small fires; extinguishing powder, carbon dioxide, sand, earth.
Unsuitable media	: High power water jet.
Hazardous decomposition products	: Smoke, styrene, butadiene, aldehydes and acids (organic), carbon.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Dust forms explosive mixtures with air. Remove all sources of ignition. Provide adequate ventilation. Do not breathe dust. Wear personal protection equipment.
Environmental precautions	: Do not allow to penetrate into soil, waterbodies or drains.
Methods for cleaning up	: Avoid generation of dust. Take up mechanically. Can be reused without regeneration. Otherwise, dump or burning.

7. HANDLING AND STORAGE

Safe handling advice	: Provide adequate ventilation, and local exhaust as needed. Avoid dust formation. In the case of the formation of dust: Withdraw by suction. Molten material: Avoid contact with the substance.
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed. Protect against heat /sun rays.
Precautions	: Dust forms explosive mixtures with air. Take precautionary measures against static discharge. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls	:	Provide good ventilation and/or an exhaust system in the work area.
<u>Personal protective equipment</u>		
Eye protection	:	Tightly sealed goggles or safety glasses.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	In case of dust: Use filter type A-P1 according to EN 14387.
Hand protection	:	Protective gloves according to EN 374.
Hygiene measures	:	Do not breathe dust. Take off immediately all contaminated clothing. When using do not eat, drink or smoke. Wash hands before breaks and after work. Eye wash facility must be provided. In case of dust: Particular danger of slipping when spread on the ground.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Filaments
Color	:	Colorless, natural white.
Physical state	:	Solid at room temperature.
Odor	:	Weak.
Melting point/range	:	No data available.
Boiling point/range	:	No data available.
Decomposition temperature	:	No data available.
Density	:	1.03
pH	:	No data available.
Vapor pressure	:	No data available.
Vapor density	:	No data available.
Evaporation rate	:	No data available.
Water solubility	:	Insoluble.

10. STABILITY AND REACTIVITY

Stability	:	Product is stable under normal storage conditions.
Conditions to avoid	:	Avoid dust formation. Dust forms explosive mixtures with air. Keep away from sources of ignition - no smoking.
Materials to avoid	:	Strong oxidizing agents.
Decomposition	:	In case of fire may be liberated: smoke, Styrene monomer, butadiene, aldehydes and acids (organic), carbon monoxide (CO) and carbon dioxide (CO ₂).



11. TOXICOLOGICAL INFORMATION

Acute toxicity	: Based on available data, the classification criteria are not met. Mild acute toxicity.
Mutagenic effects	: Lack of data.
Reproductive toxicity	: Lack of data.
Carcinogenic effects	: Lack of data. Carcinogen Status: IARC Rating: 3.
Target organ effects	: Lack of data.
Skin	: Based on available data, the classification criteria are not met. Not sensitizing. May cause irritations.
Styrene	: Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure. Lung damages. May be fatal if swallowed and enters airways. Causes serious eye irritation. Causes skin irritation.
Butadiene	: May cause cancer. May cause genetic defects.

12. ECOLOGICAL INFORMATION

Mobility	: Product is not soluble in water. Substance is heavier than water and sinks. Mobility in soil: low.
Bioaccumulation	: To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments. Partition coefficient n-octanol/water: no data available
Ecotoxicity effects	: No evidence of aquatic toxicity.
Persistence and degradability	: Biodegradation: Product is not readily biodegradable. Degradation at UV-radiation/sunlight. Environmental half-life period: ≥ 100 days (estimated). Effects in sewage plants: Not toxic to sewage organisms. In sewage treatment plants it may be separated mechanically.
Other adverse effects	: Do not allow to penetrate into soil, waterbodies or drains.
PBT and vPvB assessment	: This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

13. DISPOSAL CONSIDERATIONS

Waste treatment	: Dispose of waste according to applicable legislation.
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14. TRANSPORT INFORMATION

IMDG	: Not restricted.
ICAO/IATA	: Not restricted.
ADR/RID	: Not restricted.

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the print date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. See other sections for health and safety information.

EU regulation 10/2011	: Listed.
Regulation (EC) No. 1935/2004	: Compliant.
2023/2006/EC GMP	: Compliant.
RoHS Directive	: Certified.
EN 71-3; Toy safety	: Certified.
REACH; 1907/2006/EC	: Certified.
FDA	: Compliant.

16. OTHER INFORMATION

- The information in this Material Safety Data Sheet (MSDS) is mainly based on information used from the supplier of the raw materials which are used for production of the filaments.
- The information in this Material Safety Data Sheet (MSDS) is based on current knowledge and experience. No liability can be assumed for the accuracy and completeness of this information.
- Users should consider this information only as additional to other data gathered. Independent determination of suitability and completeness of information from all available sources is essential to ensure proper and safe use and disposal of these materials.
- The information in this MSDS applies for this specific material only. It therefore does not apply for its usage in combination with other materials or ways of processing.