



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

InnoGlow

Preparation date: 17-05-2016

Version: 1.0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

Product information

Trade name : InnoGlow

Chemical name : Polylactic Acid

Chemical family : Thermoplastic Polylactic Acid

Use : Monofilament for 3D-printing

Company : Innofil3D BV.
 Eerste Bokslotweg 17
 7821 AT Emmen

Telephone : +31 (0)591 69 2117

Telefax : +31 (0)591 69 3456

2. HAZARDS IDENTIFICATION

According to EC-Dir. 67/548, as amended, the product is not classified as hazardous and does not need to be labeled.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization : Mixture.

Description : Polylactic acid and masterbatch.

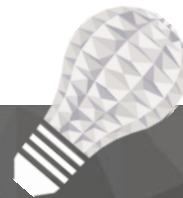
Chemical Composition : Mixture of PLA, color pigments and additives.

4. FIRST AID MEASURES

Inhalation : Move to fresh air. Symptomatic treatment.

Skin contact : Rinse immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.



Ingestion : Seek medical attention.

Note to physician : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Foam, water mist, carbon dioxide (CO₂), dry chemical. Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

Unsuitable media : Full jet of water.

Hazardous decomposition products : Burning produces obnoxious and toxic fumes Aldehydes Carbon monoxide (CO) carbon dioxide (CO₂).

Special protective equipment for firefighters : As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

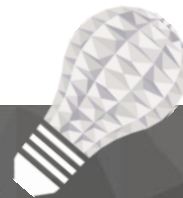
Under fire conditions : Cool containers / tanks with spray water. Water mist may be used to cool closed containers.

Other information : Fine dust dispersed in air may ignite. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Avoid contact with skin and eyes. Sweep up to prevent slipping hazard.

Environmental precautions : Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Collect spilled material and dispose it in accordance with local/national waste regulations.

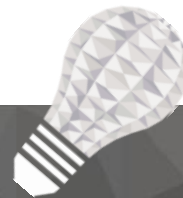


7. HANDLING AND STORAGE

- Safe handling advice : Avoid contact with skin and eyes. Avoid dust formation. Workers should be protected from the possibility of contact with molten material during fabrication. Low hazard for usual industrial or commercial handling. Use personal protective equipment. See Section 8.
- Storage conditions : Store in cool place. Keep at temperatures below 50 °C (122F). No special restrictions on storage with other products.
- Precautions : No special precautions required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures : Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide appropriate exhaust ventilation at places where dust is formed.
- Control parameters : None.
- Technical protective measure: The use of good ventilation and extraction system.
- Personal protective equipment
- Eye protection : Safety glasses with side-shields. Goggles.
- Skin and body protection : Impervious clothing.
- Respiratory protection : Respirator must be worn if exposed to dust. Wear respirator with dust filter. Respiratory protection is needed if any of the exposure limits in Section 2 are exceeded. Consult an industrial hygiene professional prior to respirator selection and use. Use a positive-pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. **WARNING:** Air purifying respirators do not protect workers in oxygen deficient atmospheres.
- Hand protection : Preventive skin protection.
- Hygiene measures : Avoid contact with skin, eyes and clothing.



9. PHYSICAL AND CHEMICAL PROPERTIES

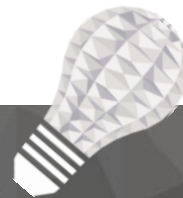
Appearance	: Filament. Solid at room temperature.
Color	: Natural.
Odor	: Sweet.
pH	: Not applicable.
Vapor pressure	: Not determined.
Vapor density	: Not determined.
Evaporation rate	: Not determined.
Density	: 1.24 g/cc.
Boiling point/range	: Not applicable.
Decomposition temperature	: 250 °C (482F).
Melting point/range	: 145 – 160 °C.
Water solubility	: Insoluble.
Solubility in other solvents	: None known.

10. STABILITY AND REACTIVITY

Stability	: Stable under recommended storage conditions.
Conditions to avoid	: Temperatures above 230°C (446F).
Materials to avoid	: Oxidizing agents. Strong bases.
Decomposition	: Burning produces obnoxious and toxic fumes. Aldehydes. Carbon monoxide (CO). Carbon dioxide (CO ₂).
Polymerization	: Not applicable.

11. TOXICOLOGICAL INFORMATION

Principle routes of exposure	: Eye contact. Skin contact. Inhalation. Ingestion.
Acute toxicity	: There were no target organ effects noted following ingestion or dermal exposure in animal studies.
Local effects	: May cause eye/skin irritation. Product dust may be irritating to eyes, skin and respiratory system. Caused mild to moderate conjunctival irritation in eye irritation studies using rabbits. Caused very mild redness in dermal irritation studies using rabbits (slightly irritating). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Long term toxicity	: Did not cause skin allergic reactions in skin sensitization studies using guinea pigs.
Specific effects	: May cause skin irritation and/or dermatitis. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Inhalation of dust may cause shortness of breath,



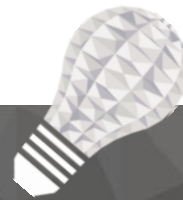
	tightness of the chest, a sore throat and cough. Burning produces irritant fumes.
Mutagenic effects	: Nog mutagenic in AMES Test.
Reproductive toxicity	: No data is available on the product itself.
Carcinogenic effects	: No data is available on the product itself.
Target organ effects	: There were no target organ effects noted following ingestion or dermal exposure in animal studies.

12. ECOLOGICAL INFORMATION	
Mobility	: No data available
Bioaccumulation	: Does not bioaccumulate. Inherently biodegradable.
Ecotoxicity effects	: EC50/72h/algae > 1100 mg/L

13. DISPOSAL CONSIDERATIONS	
<u>Waste from residues / unused products:</u>	
In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.	
<u>Contaminated packaging:</u>	
Empty remaining contents. Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.	

14. TRANSPORT INFORMATION	
IMDG	: Not regulated.
ICAO/IATA	: Not regulated.

15. REGULATORY INFORMATION	
(Not meant to be all inclusive—selected regulations represented).	
According to EEC-Directives 67/548, this product does not require labeling.	
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. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.	



U.S. REGULATIONS.

Sara 313 title III : Not listed.

TSCA Inventory List : Listed.

(STATE REGULATIONS)

California Proposition 65 : Not listed.

OTHER INVENTORIES.

Canada DSL Inventory List : Listed.

REACH/EU EINECS List : Components are in compliance with and/or are listed.

Japan (ECL) : Listed.

Australia (AICS) : Listed.

Korean chemical inventory : Listed.

Phillipines (PICCS) inventory : Not listed.

China inventory of existing chemical substances list : Listed

16. OTHER INFORMATION

-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.