Safety Data Sheet BOUN SMARTFIL®

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

1.1 Identification

SMARTFIL® BOUN

1.2 Forms of use

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

1.3 Company

SMART MATERIALS 3D

Pol. Ind. El Retamar · C/ Tomillo 7 – Vial G

23680 Alcalá la Real (Jaén) SPAIN

Tel. (+34) 953 041 993 - Fax. (+34) 953 113 527

info@smartmaterials3d.com - www.smartmaterials3d.com

SMARTFIL® *by Smart Materials 3D*

1.3 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.
- Classification according to the directive 67/548/CEE or Directive 1999/45/CE: Not classified.
- Classification System: Not required to identify the product according to the calculation procedure in the latest valid version of the "General Classification guideline for preparations of the EU"

2.2 Label elements

Markings according to EC guidelines: According to the method of calculating the " General Classification Guideline for the Production of the EC " in the latest valid version, the product does not require labeling.

The normal safety measures for handling chemicals should be observed.

2.3 Other dangers

- Results of the valuation PBT y mPmB

  PBT: Non-applicable

  mPmB: Non-applicable

3. Composition

- Polylactide Resin – 99% CAS: 9051-89-2

3.1 Chemical characterization: Mixes

Description: Polymer

Dangerous components: Non-applicable.

Other components: Non-applicable

4. First aids:

4.1 Description of First Aids

- General instruction: Change clothes impregnated with the product.
- In case of inhalation: Supply fresh air. In case of disturbances, consult a doctor.
- After inhalation of decomposition products, breathe fresh air, rest, seek medical help.
- In case of skin contact: Wash with soap and water. Visit your doctor if irritation continues skin.
- After contact with molten product, cool rapidly with cold water. No skin separating the solidified product. Call a doctor immediately.
- In case of eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Remove contact lenses, if present and easy. Continue rinsing.
- If swallowed: Rinse mouth and drink plenty of water. Do not induce vomiting. Consult doctor in case of persistent symptoms.

4.2 Most important symptoms and effects, both acute and delayed.

No more data available.

4.3. Indication of immediate medical attention and special treatment needed immediately

No more data available.

5. Firefighting measures:

5.1 Suitable extinguishing media

Any method is applicable

5.2. Unsuitable extinguishing media for safety reasons

Throw water with strong pressure.

Carbon dioxide CO_2.

5.3 Special hazards arising from the substance or mixture

Formation of toxic gases if heated or fire.
Irritant gases / vapors.
During a fire, they can be released:

- Smoke
- Carbon monoxide (CO) and carbon dioxide (CO_2)
- carbonic hydrogens
- Hydrogen cyanide (HCN)

Under certain conditions, during the fire may traces of other toxic materials.
Measures Accidental Spill: Personal precautions

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,

- Protective equipment and emergency procedures
- Avoid dust formation.
- Do not breathe dust.
- Keep away from sources of ignition.
- Avoid eye contact.
- Danger of slipping on spilled product or pouring.

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:

7.1. Precautions for safe handling

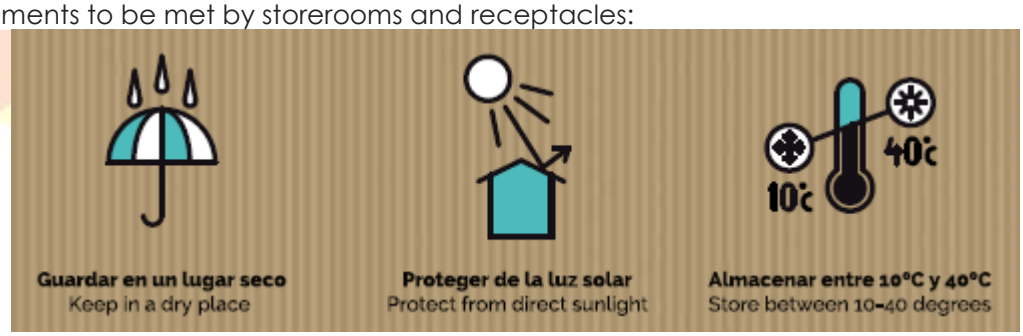
- Ensure good ventilation / exhaustion at the workplace.
- Avoid dust formation.
- Do not inhale fumes / dust produced.
- Remove regularly dust that inevitably form.
- Avoid contact with the eyes and skin.
- Complying value / it is of the CMA.
- Avoid contact with the product I heat.

Prevention of fire and explosion:

- Protect against electrostatic charges.
- Keep away from sources of ignition - No smoking.
- Protect from heat.
- The enrichment of fine dust in presence of air can lead to danger of dust explosion.

7.2. Conditions for safe storage, including any incompatibilities

- Requirements to be met by storerooms and receptacles:



- Standards in one common storage facility: Not required
- Further information about storage conditions: Store it in a tightly sealed container in a cool, dry place.

8.Exposure controls / personal protection

Additional information about design of technical facilities:
No additional data, see point 7.

8.1 Control parameters

Components with admissible limit values that require monitoring at the workplace: Do not exceed the values for dust concentration. Additional information: Based on references valid at the time of processing

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.

Protection of hands:

- For use of chemical protective gloves is required.
- For handling product, I heat / cast heat resistant gloves.

Eye protection:

- Protection glasses

Body protection:

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

9.Fisical and chemical properties:

A. Appearance: natural
B. Odor: Odorless
C. Odour Threshold: NA
D. pH: NA
E. Boiling Point (° C): NA
F. Melting point (° C): 190-220
G. Softening point (° C): 60
H. Evaporation Rate: NA
I. Properties Flammable / Explosive: NA
J. Vapor pressure / vapor density: NA
K. Relative density: 1.2
L. Solubility: Acetone
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

Thermal decomposition / conditions to be avoided:

- No decomposition with storage and proper handling.
- Avoid impact, friction, heat, sparks, and electrostatic charges.

10.3 Possibility of dangerous reactions.

Non-applicable.

10.4 Conditions to be avoided

No further relevant information.

10.5 Incompatible materials

Strong oxidants.

10.6 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

Not applicable Primary irritant effect:

- on the skin: Dust may cause mechanical irritation.
- In the eye: Dust may cause mechanical irritation.
- Sensitization: No sensitizing effects known.
- Subacute to chronic toxicity: no data
- Additional toxicological information: According to our experience and the information we have about the product does not cause any adverse health effects when handled properly and used for the purposes specified.
- CMR effects (carcinogenicity, mutagenicity, and toxicity for reproduction). Based on current information, it is known that no CMR effects.

12. Ecological information

12.1 Ecotoxicity

It is not expected to be very toxic, but if ingested by birds or aquatic life, can cause adverse mechanical effects

12.2 Mobility

Bioconcentration is not expected because of the high molecular weight (MW > 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment material will sink and remain in the sediment.

12.3 Persistence and degradability

This solid water-insoluble polymeric are expected to be inert in the environment. Surface degradation is expected with exposure to sunlight. Appreciable biodegradation is not expected.

12.4 Additional ecological information

General instructions: CPA 1 (auto classification): not dangerous for water.

12.5 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 regulated.

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.