

SAFETY DATA SHEET



1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

- 1.1 Identification of the substance or preparation:** Colorfabb LW-PLA. High quality Expanding PLA 3D printing filament; using an active foaming technology to achieve light weight, low density PLA parts.
All information in this SDS is applicable to the PLA filament material, not the filament spool itself.
- 1.2 Use of the substance or preparation:** FDM 3D printing
- 1.3 Company/undertaking identification** Colorfabb B.V.
NL-5916 PJ Venlo, The Netherlands
Tel.: +31 77 4664015
Fax: +31 77 3971414
E-mail: sales@colorfabb.com
- 1.4 Emergency telephone:** Colorfabb B.V.; Tel.: 077 4664015 (only during office hours)

2. HAZARDS IDENTIFICATION

- 2.1 Classification** The material is not hazardous according EC 1272/2008
- 2.2 Label elements**
- | | |
|-------------------------|---|
| Health hazards: | Not hazardous |
| Environmental hazards | Not hazardous |
| Hazard symbol | None |
| Signal Word | None |
| Hazard Statement | None |
| Precautionary statement | None |
| PBT and vPvB substances | Material does not contain PBT and vPvB substances |

3. COMPOSITION AND INFORMATION ON INGREDIENTS

- 3.1 Description** The material is a mixture of chemical substances in a solid polymer matrix.

3.2 Hazardous ingredients

Substance name	CAS number	Concentration	Classification	H-Phrases
No hazardous ingredients	N/A	N/A	None	None

- 3.3 Additional information** The material does not contain amounts of substances fulfilling the criteria of hazard classification.

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4. FIRST AID MEASURES

- 4.1 Skin contact** If burned by contact with molten material, cool down with water for at least 10 minutes. In case of severe burns, do not remove molten material from skin and consult a physician.
- 4.2 Eye contact** Not likely due to physical state. Grinding or pelletizing of filament may lead to fine dust particles which can cause eye irritation. Wash with plenty of water and get medical attention if symptoms persist.
- 4.3 Inhalation** Not likely due to physical state.
- 4.4 Ingestion** Not likely due to physical state. Material is not expected to be absorbed by gastrointestinal, No first aid measures necessary.

5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing media** Water mist, carbon dioxide, foam, dry powder
- 5.2 Extinguishing media not to be used for safety reasons** High pressure water jet
- 5.3 Special hazards arising from the mixture** Thermal decomposition and burning may release oxides of carbon and nitrogen, acetaldehyde
- 5.4 Protective equipment for fire fighters** Use full protective clothing for chemicals and a self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions** Avoid dust formation and static discharge. Do not overheat material
- 6.2 Environmental precautions** Should not be released into environment. Do not allow material to enter drains or water courses.
- 6.3 Cleanup, containment and disposal of spill** Avoid dust formation. Sweep up into suitable container for disposal.
- 6.4 Reference to other sections** See section 8 and 13

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke at the workplace. Avoid dust formation by cutting or grinding.

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During printing, ensure good ventilation and local exhaust.

7.2 Conditions for safe storage

To ensure technical integrity of the product store in the original container/box and keep at temperatures below 50°C and in a dry place. Protect from moisture, product may be hygroscopic

7.3 Specific use

Under anticipated conditions of use no further measures required. No available exposure scenario's.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits No information available

Biological limit values Not established

Recommended monitoring procedures No information available

Derived No Effect Level (DNEL) No information available

8.2 Exposure controls

Appropriate Engineering Controls Keep at temperatures below 250°C. Ensure adequate ventilation in confined areas.

Individual protection measures

Eye protection Not required (for FDM printing)

Hand protection Not required (for FDM printing)

Skin protection Not required (for FDM printing)

Respiratory protection Not required (for FDM printing)

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.

Environmental exposure controls Do not allow product to enter drains, water courses or soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Density 1.2-1,3 g/cm³

Odour Negligible

9.2 Important health, safety and environmental information

Glass transition Approx. 55°C

Boiling point n.a.

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Auto flammability	>450°C
Bulk density	n.a.
Melting point	n.a.
pH-value	n.a.
Viscosity	n.a.
Flashpoint	Non-volatile burning solid
Solubility in water	Negligible
Vapour pressure	n.a.

10. STABILITY AND REACTIVITY

10.1 Reactivity	Not reactive under normal handling conditions
10.2 Chemical stability	Stable for handling under normal handling conditions
10.3 Possibility of hazardous reactions	No hazardous reactions with other chemicals known, under normal handling conditions.
10.4 Conditions to avoid	Do not grind, pelletize or mill the material . Avoid temperatures above 250°C.
10.5 Incompatible materials	Avoid water which can cause degradation of material. Material can react with strong oxidizers.
10.6 Hazardous decomposition products	Hazardous decomposition products may form under fire conditions: carbon dioxide, acetaldehyde.

11. TOXICOLOGICAL INFORMATION

LD 50 (Rat oral)	>5000 mg/kg (PLA)
Skin irritation	Not tested (not to be expected)
Eye irritation	Not tested (not to be expected)
Skin sensitisation	Not tested (not to be expected)
Respiratory sensitisation	Not tested (not to be expected)
CMR effects	No information available
General remarks	No harmful, toxic and sensitive effects have been reported to date Information listed in this section is transferred from safety data from the ingredients of this product.

12. ECOLOGICAL INFORMATION

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12.1 Aquatic toxicity	No information available
12.2 Persistence and degradability	Minimal degradation
12.3 Bioaccumulative potential	No information available
12.4 Mobility in soil	No information available
12.5 Results of PBT and vPvB assessment	No information available
12.6 Other adverse effects	No adverse effects known to date
12.7 Additional ecotoxicological information	The material is practically non soluble in water and solid. Therefore, under environmental conditions, no detrimental effects on plants, animals and micro-organisms are to be expected.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Dispose of in accordance with local regulations
13.2 Additional information	n.a.
13.3 Packaging	Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

14.1 RID / ADR	Not listed / free
14.2 ICAO / IATA-DGR	Not listed / free
14.3 GGVSEE / IMDG-CODE	Not listed / free
14.4 UN-NR	Not listed / free

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the substance or mixture

Restrictions of use	None
Other regulations	No information available

15.2 Chemical safety assessment	A safety assessment is not required
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16. OTHER INFORMATIE

Relevant H-phrase: None

Changes compared to previous version: n.a.

Abbreviations

- REACH; Registration, Evaluation, Authorisation and restriction of chemical substances
- EC: European Community
- STOT: Specific Target Organ Toxicity
- PBT: Persistent, Bioaccumulating, Toxic
- vPvB: very Persistent, very Bioaccumulating
- ADR; Accord européen relative au transport international des marchandises Dangereuses per Route
- ADN: Accord européen relative au transport international des marchandises Dangereuses per voies de Navigation intérieures
- RID: Regulations for the international Transport of dangerous goods by rail
- IMDG: International maritime dangerous goods code
- ICAO: International civil aviation organization

This safety datasheet complies with the requirements of EC 1907/2006 and regulation EC 2015/830. Label element according to regulation EC 1272/2008.

Disclaimer

The information provided in the safety datasheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is

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not to be considered a warranty or quality specification. The information only relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.