

Material Safety Datasheet



colorFabb Material Safety Data Sheet according to EC Regulation No. 453/2010 (No. 1907/2006 Annex II REACH) Date revised: 21 May 2015

1. Material and Company Identification

Identification of the material

colorFabb PLA-2014/048 (KTA2014/048)

This materials code is given on each minimal packaging size (bag or octabin).

Typical use of the material

This material is suitable for producing plastic parts by extrusion or injection-moulding.

Identification of the company

This material has been produced for:

colorFabb
Noorderpoort 45
5916 PJ VENLO
The Netherlands
Tel: + 31 (0)77 - 398 09 09

24 Hour Emergency Assistance: Tel: + 31 (0)77 - 398 09 09

2. Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 Directive 67/548/EEC & Directive 1999/45/EC

Component Bronze powder classified; R50 – very toxic to aquatic organisms.

2.1.2 Regulation (EC) No. 1272/2008 (CLP)

Component Bronze powder classified; Hazard statement H400 – very toxic to aquatic life.

2.2 Label elements: GHS09



Note: The components of this product are embedded in a polymer matrix and are therefore considered to present a negligible exposure risk under normal conditions of processing and handling, unless they are liberated during processing (fumes from melting, dusts). No toxicological studies have been performed so far on this compound (polymer mixture). This material is NOT intended to be used for medical applications, and NOT intended to be used for applications in contact with food and/or drinking water.

2.3. Other hazards

Material processing under extreme conditions above 240°C may result in fumes irritating to the eyes, nose and throat. Furthermore, there is a danger of burns while handling the heated or molten product.

3. Composition/Information on Ingredients

Chemical nature: Biodegradable thermoplastic PLA (PolyLactic Acid) blend, bronze powder-filled, with proprietary additivation.

4. First Aid Measures

If inhaled

After inhalation of decomposition products, bring the affected person to a source of fresh air and keep calm. Provide medical aid.

On skin contact

Areas affected by molten material should be quickly placed under cold running water. Burns caused by molten material require hospital treatment.

On contact with eyes

In case of contact with eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek immediate medical attention.

On ingestion

Rinse mouth and then drink plenty of water. If difficulties occur, seek medical attention.

Note to the physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire Fighting Measures

Suitable extinguishing media

Dry extinguishing media, foam, carbon dioxide, water spray or fog.

Specific hazards

Carbon dioxide CO₂, carbon monoxide CO, hydrocarbon fragments. These substances/ groups of substances mentioned can be released in case of fire.

Special protective equipment

Full protective clothing and self contained breathing apparatus.

Further information

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions

Avoid inhalation. Sources of ignition should be kept well clear.

Methods for cleaning up or taking up

Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation.

Additional information

High risk of slipping due to leakage/spillage of product. Avoid ingress of material into sewer systems.

7. Handling and Storage

Handling

Processing machines must be fitted with local exhaust ventilation. Earth/ground all equipment.

Protection against fire and explosion

Avoid dust formation. Dust can form an explosive mixture with air. Provide exhaust ventilation. When the product is ground (chopped), dust explosion regulations should be noted.

Storage

Protect against moisture. Store material in dry rooms and always carefully seal again after portions of material have been withdrawn. Store at ambient temperatures. Avoid all source of ignition: heat, sparks, open flame.

8. Exposure Controls and Personal Protection

Control Parameters

Occupational exposure limits

Given suitable ventilation, it can be assumed that the threshold limits will not be reached.

Ideally, granulated material is not expected to contain dust; however, dust may be generated by material abrasion in transport systems, or by cutting or machining of plastic material.

Ingredient agency values

OSHA-PEL : Nuisance Dust 15 mg/m³; Respirable Dust 5 mg/m³.

US ACGIH : Inhalable Dust 10 mg/m³ ; Respirable Dust 3 mg/m³.

EH40-WEL (rev.2011) :

Inhalable Dust 8-hour TWA 10 mg/m³ ; Respirable Dust 8-hour TWA 4 mg/m³.

Copper:

Short term value: 2 mg/m³ (dusts and mists)

Long term value: 0.2 mg/m³ (dusts and mists)

Tin:

Short term value: 4 mg/m³ (dusts and mists)

Long term value: 2 mg/m³ (dusts and mists)

Personal protective equipment

Respiratory protection (only when dust has formed):

Particle filter Type P1 or FFP1 (low efficiency for solid particles e.g. EN143, 149).

Hand protection:

Use additional heat protection gloves when handling hot molten masses (e.g. of textile or leather; EN 374).

Eye protection:

Safety glasses with side-shields (frame goggles) (EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical protection suit (according to DIN-EN 465)

General safety and hygiene measures:

Avoid contact of molten material with skin. Avoid inhalation of dust/mists/vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

| | |
|----------------------------|--|
| Form: | Granules. |
| Colour: | Brown. |
| Odour: | Almost odourless. |
| Melting range: | Approx.. 150- 170 °C |
| Flash point: | Not applicable |
| Volatiles content (Vol. %) | < 1 |
| Density: | Approx. 3.90 g/cm ³ (20°C, 1 bar) |
| Thermal decomposition | > 240 °C |
| Solubility in water: | Insoluble |

10. Stability and Reactivity

Stability

The material is stable under normal conditions.

Conditions to avoid

Avoid moisture absorption. Avoid all sources of ignition: heat, sparks, open flame.

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Thermal decomposition

To avoid thermal decomposition, do not overheat. See on the technical datasheet for the appropriate processing temperatures.

Hazardous reactions

The product is chemically stable.

Hazardous decomposition products

Carbon dioxide CO₂, carbon monoxide CO, hydrocarbon fragments.

11. Toxicological Information

Acute toxicity: no data, but not expected.

Primary irritant effect:

- **on the skin:** Irritation could be caused by dust formed during product handling
- **on the eye:** Irritation could be caused by dust formed during product handling

Sensitization: No sensitizing effects known.

Inhalation: Large quantities may cause irritation and give rise to symptoms similar to metal fume fever.

12. Ecological Information

Basis for assessment

No ecotoxicological data has been generated for this product. The information below is based on components and on similar products.

Aquatic toxicity: No data have been generated for this mixture; bronze powder does not meet the classification for chronic aquatic toxicity.

Information about elimination (persistence and degradability): PLA base resin of this compound is biodegradable

Other adverse effects: Bronze powder filler is not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

PBT: Not applicable

VPvB: Not applicable.

13. Disposal Considerations

Product disposal

Recover or recycle if possible, contact supplier for recycling information. Dispose as hazardous waste, using the applicable EWC. Do not allow to enter the water course or sewage system.

Container disposal

Remove all packaging for recovery or disposal in line with the local authority regulations and EWC.

Local legislation

Consult local, state, federal, international or country specific regulations as appropriate.

14. Transport Information

International Air Transportation Association Classification (IATA)

This product is not classified.

International Maritime Organization (IMDG)

This product is not classified.

UN, IMO, ADR/RID, ICAO Code

This product is not dangerous.

15. Regulatory Information

This document is compliant with the Globally Harmonized System (GHS) for the classification, labeling, and packaging (CLP) of substances and mixtures.

EU Regulation (EC) 1907/2006 REACH

Polymers are exempted from registration and evaluation. Therefore, colorFabb products are exempted by regulation. Annex V exempts from registration additives used in our polymers as antioxidants, defoaming agents, stabilisers, etc., and exempts substances that are naturally occurring that have not been chemically modified, Article 2(7)(b).

16. Other Information

In addition to the information given in the safety data sheet we refer to the products specific 'Technical Datasheet'.

Disclaimer

The information given in the Material Safety Data Sheet only applies to the described product in connection with its appropriate use. All information is based on the latest state of our knowledge. In particular, it describes our product under the aspect of possible hazards and pertaining safety measures. The information does not constitute any guarantee of specific product and/or quality properties.