



SAFETY DATA SHEET

FILAMENT | BRONZE ULTRA

V 1.0 | 25-05-2020



According to EU Regulation No. 1907/2006

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

1.1 TRADE NAME

BRONZE ULTRA

1.2 CHEMICAL NAME

Highly Bronze filled PLA based polymer blend

1.3 TYPICAL USE OF THE MATERIAL

Monofilament for FFF/FDM technology based 3D printing

1.4 IDENTIFICATION OF THE COMPANY

VOLUMIC 3D
12b Rue Louis GARNERAY
06300 NICE
FRANCE

Téléphone: +33 9 500 27 400

SECTION 2. HAZARDS IDENTIFICATION

2.1 RISK ADVISE TO MAN AND THE ENVIRONMENT

No risk exists to the health of users if the product is handled and processed properly.

2.2 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Directive 1272/2008/EEC.
Aquatic Acute 1: H400 Very toxic to aquatic life.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.3 LABEL ELEMENTS

Labelling according to Directive 1272/2008/EEC.
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms: GHS09



Signal word: Warning

Hazard statements
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P273: Avoid release to the environment.
P391: Collect spillage.

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P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.4 SPECIAL ADVICE ON HAZARDS

Danger of burns while handling the heated or molten product.
Inhalation of dust or fumes leads to irritation of respiratory system.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 CHEMICAL NATURE

Blend of PLA based polymers filled with copper powder enhanced for 3D printing

3.2 CAS NUMBER

Copper: 7440-50-8
Tin: 7440-31-5
PolyLactic Acid: 9051-89-2

3.3 ADDITIONAL INFORMATION

None of the substances, named in the Candidate list art. 59 (1,10) of the REACH regulation EC no. 1907/2006 has been used in a concentration > 0,1%.

SECTION 4. FIRST-AID MEASURES

4.1 IF INHALED

After inhalation of decomposition products, gases or dust, bring the affected person to a source of fresh air and keep calm. Contact a physician in case of discomfort.

4.2 ON SKIN CONTACT

In case of contact with melted material, immediately cool the skin with plenty of cold running water. Removal of adhering to skin polymer, or burns caused by molten material require hospital treatment.

4.3 ON CONTACT WITH EYES

In case of contact with eyes, rinse open eyes thoroughly with water. If irritation develops, seek immediate medical attention.

4.4 ON INGESTION

Rinse mouth with water and induce vomiting immediately. Seek immediate medical attention. If a person vomits when lying on his back, place him in the recovery position.

4.5 NOTE TO THE PHYSICIAN

Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

5.1 SUITABLE EXTINGUISHING MEDIA

Dry chemical extinguishing media, foam, CO2, water spray jet.

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5.1.1 UNSUITABLE EXTINGUISHING MEDIA

High volume water jet.

5.2 SPECIFIC HAZARDS

Do not use a solid water stream as it may scatter and spread fire. Exposure to decomposition products may be a hazard to health. In case of fire possible decomposition products are, Carbon oxide's

5.3 SPECIAL PROTECTIVE EQUIPMENT

Full protective clothing and self-contained breathing apparatus.

5.4 FURTHER INFORMATION

Fine dust dispersed in air may ignite. Risk of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust.
Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS

Use personal protective equipment/clothing (see Section 8). Avoid eye contact and dust formation and remove all sources of ignition. Sweep up to prevent slipping hazard.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent entry into drainage systems, or surface water.

6.3 METHODS FOR CLEANING UP

Sweep/shovel into suitable container for disposal.
Avoid raising dust and ensure adequate ventilation.
Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE

7.1 HANDLING

Handle in a well ventilated area. Install local exhaust at 3D printers area is recommended when many printers are operated at once. Avoid contact with heated or molten product. Use personal protective equipment (see Section 8). Avoid dust formation and electrostatic charge.
Keep away from fire ignition sources.

7.2 STORAGE

Protect from water, moisture and direct sunlight. Store material in dry rooms and keep material in closed packaging/container with desiccant when not in use. Store at ambient temperatures. Avoid all sources of ignition.
Keep away from food, drink and animal feedingstuffs.

7.3 PRECAUTIONS

No special precautions required.

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7.4 SPECIFIC END USE(S)

Primarily used for 3D printing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 OCCUPATIONAL EXPOSURE LIMITS

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

8.2 EXPOSURE CONTROLS

Provide appropriate exhaust ventilation at places where dust is formed.

Avoid electrostatic charge by use of grounding cables.

In the case of dust or aerosol formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143).

8.3 PERSONAL PROTECTIVE EQUIPMENT

8.3.1 HAND PROTECTION

Wear heat protection gloves, preferably cotton or leather, when handling hot molten product.

8.3.2 EYE PROTECTION

Wear protective glasses, preferable with side-shields.

8.3.3 SKIN AND BODY PROTECTION

Wear (protective) clothing to avoid direct exposure of skin to hot molten product when handling.

8.3.4 SAFETY AND HYGIENE MEASURES

Avoid contact of hot molten material to skin. Avoid inhalation of dust, mists and vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice. No eating or drinking during working.

8.4 ENVIRONMENTAL EXPOSURE CONTROLS

Prevent entry into drainage systems, or surface water.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 FORM

Filament

9.2 COLOUR

Bronze

9.3 ODOUR

Neutral

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9.4 MELTING POINT

150-170° C

9.5 AUTO-IGNITION TEMPERATURE

No specified

9.6 EXPLOSIONS LIMIT

Not specified

9.7 DENSITY

± 3.50 g/cc

9.8 SOLUBILITY IN WATER

Insoluble

SECTION 10. STABILITY AND REACTIVITY

10.1 STABILITY

Product is stable at recommended storage conditions.

10.2 CONDITIONS TO AVOID

Avoid extreme heat, moisture, static discharges and all other sources of ignition.

10.3 SUBSTANCES TO AVOID

Strong oxidizing agents.

10.4 HAZARDOUS REACTIONS

The product is chemically stable.

10.4.1 HAZARDOUS DECOMPOSITION PRODUCTS

Dangerous/toxic metal fumes and other gaseous products of degradation can be given off if the product is greatly overheated.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Toxicological data has not been determined for this product. Information is based on similar products.

11.1.1 ACUTE TOXICITY

Inhalation: No data available, but not expected.

Ingestion: No data available, but not expected.

Skin contact: No data available, but not expected.

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Eye contact: No data available, but not expected.

11.1.2 IRRITATION

Skin: No data available, but not expected to be irritating.

Eye: No data available, but not expected to be irritating.

11.1.3 SENSITIZATION

Not expected to be a skin sensitizer.

11.1.4 REPEATED DOSE TOXICITY

Negative.

11.1.5 CARCINOGENICITY

No data available, but not expected.

11.1.6 MUTAGENICITY

No data available, but not expected.

11.1.7 TOXICITY FOR REPRODUCTION

No data available, but not expected.

11.2 OTHER INFORMATION

Based on our state of knowledge and experience no injurious health effects are expected if product is properly handled for the designated use.

SECTION 12. ECOLOGICAL INFORMATION

12.1 INFORMATION ON ECO-TOXICITY

No ecological toxicity data has been generated for this product. There are no test results available and information is based on similar products.

12.1.1 ECOLOGICAL TOXICITY EFFECTS

No negative ecological effects are known at the present state of knowledge.

12.2 MOBILITY IN SOIL

No data available, but expected to be insoluble in soil.

12.3 PERSISTENCE AND DEGRADABILITY

No data available concerning biodegradation and elimination, but expected to be difficult to degrade.

12.4 BIOACCUMULATION POTENTIAL

No data available, but product is expected not to be readily bioavailable due to its consistency and insolubility in water.

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SECTION 13. DISPOSAL CONSIDERATIONS

13.1 PRODUCT

Generation of waste should be minimized, check possibility for recycling. Waste product can be incinerated or dumped together with domestic waste in compliance with local authority requirements.

13.2 PACKAGING

Packaging material has to be emptied completely and disposed in accordance with the regulations. Packaging can be recycled if not contaminated.

SECTION 14. TRANSPORT INFORMATION

14.1 INTERNATIONAL AIR TRANSPORTATION ASSOCIATION CLASSIFICATION (IATA)

This product is not classified as hazardous.

14.2 INTERNATIONAL MARITIME ORGANIZATION (IMDG)

This product is not classified as hazardous.

14.3 UN, IMO, ADR/RID, ICAO CODE

This product is not classified as hazardous.

SECTION 15. REGULATORY INFORMATION

15.1 EU / NATIONAL REGULATIONS

This product does not require a hazard warning label in accordance with EC Directives. EU regulation (EC) 1907/2006 (Reach) ANNEX XVII (restrictions) Not applicable.

SECTION 16. OTHER INFORMATION

Company name:
VOLUMIC 3D

Additional data:

In addition to the information given in this Material Safety Data Sheet (MSDS) we refer to the products specific Technical Data Sheet (TDS).

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. The information given in this Material Safety Data Sheet is not required according to article 31 and Annex II of Regulation (EC) No.1907/2006. It merely serves the purpose of providing sufficient information on a voluntary basis to ensure safe use of the compound/product. There is no obligation on the part of Volumic to revise this document.

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