

Material Safety Datasheet

SECTION 1: Identification of the substance and of the company

Product identifier

Name:

ExcelFil TECH Bronze/Aluminium/Copper 3D printing Filament
(Polylactide Resin & Milled Metal Powders)

SKUS: EF-TEC-XXX-BRNZ1, EF-TEC-XXX-ALUM1, EF-TEC-XXX-COPP1

Relevant identified uses of the substance or mixture and uses advised against

Use only in 3D FFD Printers

Details of the supplier of the safety data sheet

Company	Voltivo Group Ltd.
Address	84-11F, No. 50, Sec. 4, Ren Ai Road, Taipei 10685, Taiwan
Information Phone	+886 2-27032003 (Customer Care)
Emergency Phone	+886 2-27032003 (Customer Care)

SECTION 2: Hazards identification

Unusual Explosion Hazard and Fire	The material will burn if exposed to sufficient heat and an ignition source. Avoid dispersion of dust in the air to reduce dust explosion hazard potential.
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SECTION 3: Composition/information on ingredients

70% Chemical Name: Polylactide Resin

CAS Number: 9051-89-2

Common Names: Polylactic Acid, PLA

30% Milled Metal Powder

SECTION 4: First aid measures

Skin Contact	Solid or dust may cause irritation or corneal injury due to mechanical action
Eyes Contact	Essentially nonirritating to skin, Mechanical injury only
Inhalation	No harmful effects expected. Consult a physician.
Swallowing	No harmful effects expected. Consult a physician.

SECTION 5: Firefighting measures

Unusual Explosion Hazard and Fire	The material will burn if exposed to sufficient heat and an ignition source. Avoid dispersion of dust in the air to reduce dust explosion hazard potential.
Extinguished Media	Water, Carbon dioxide, Dry chemical power, Foam.
Special Extinguishing Procedures	Firefighters must wear self-contained breathing apparatus and fully protective equipment.

SECTION 6: Accidental release measures

Personal precautions: Use personal protective equipment. See Section 8. 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.

Methods for cleaning up: Dispose into suitable container for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Wash thoroughly after handling. Hot and/or melted polymer can severely burn the skin. Handle with care.

Conditions for safe storage, including any incompatibilities

Avoid contacting with atmospheric moisture. Store materials at < 60 degrees C with a desiccant in original containers to maintain product quality. Keep the container closed until it is ready for use.

SECTION 8: Exposure controls/personal protection

General Control Measures and procedures	None for normal use.
Personal Protective Equipment	Rubber gloves, Safety glasses

SECTION 9: Physical and chemical properties

Physical state	Solid Wire
Odor	Sweet
Odor threshold	No data available
pH	Not applicable
Vapor pressure	Not determined
Vapor density	Not determined
Evaporation rate	No data available
Density	1.24 g/cc
Decomposition temperature	482F (250C)
Melting point/range	Not determined
Water solubility	Insoluble
Solubility in other solvents	None known

SECTION 10: Stability and reactivity

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

SECTION 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

SECTION 12: Ecological information

Bioaccumulation: Does not bio accumulate, Inherently biodegradable.

Eco toxicity effects: EC50/72h/algae > 1100 mg/L

SECTION 13: Disposal considerations

Material is non-hazardous and biodegradable.

Spillage of Release	Collect for disposal. Use appropriate personal protective equipment during cleanup.
Waste disposal	Bury in a landfill in compliance with all federal, state and local regulations.

SECTION 14: Transport information

Not regulated as hazardous

SECTION 15: Regulatory information

NFPA 704 Classification

Flammability	1
Health	1
Instability Reactivity	0
Special Notices	none

SECTION 16: Other information

Notice regarding medical applications restrictions

The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.

The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult the Company for Further Information.

