1471 US HWY 51
Stoughton WI 53589 USA
info@thevirtualfoundry.com
+1 (608) 509-7146

SECTION 1 - IDENTIFICATION

COMPANY ADDRESS:
The Virtual Foundry, Inc
1471 US HWY 51
Stoughton, WI 53589
USA

EMERGENCY PHONE NUMBER: Information about the product can be obtained at (608) 509-7146 (Monitored 9am - 5pm Central Time USA Monday - Friday).
For all emergency calls, call the relevant emergency number for your country.

PRODUCT NAME: **Magnetite Filamet™**

PRODUCT USE: Manufacture of ceramic parts by extrusion, injection-molding, or 3D printing.

SECTION 2 - HAZARDS IDENTIFICATION SUMMARY

CLASSIFICATION: The dangerous ingredients are fixed in a polymer matrix, therefore the product does not require hazard classification in accordance with GHS criteria.

SIGNAL WORD: Not Applicable

PHYSICAL HAZARDS: Heating above 240°C (464°F) may result in fumes that could irritate eyes, nose, and throat. Ventilation recommended. Handling the product while heated may result in burns.

HAZARD STATEMENTS: Upon treatment (mechanical, thermal, chemical, etc), this substance may release hazardous substances.

OTHER HAZARDS: The product is not intended for applications in which it may come in contact with food or drinking water.

SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS

Material Name	CAS No.	% by Weight
Magnetite	1317-61-9	76.00 – 81.00
Binding Additive*	-	-
Polylactic Acid	9051-89-2	<24.00

*The ingredient name and percentage information is omitted as it is a trade secret.

SECTION 4 - FIRST AID MEASURES

IF SWALLOWED: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Seek medical attention immediately.

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IF ON SKIN OR CLOTHING: Wash hands and contact skin with soap and water. For molten polymer burns, seek medical attention.

IF IN EYES: Rinse with water. Seek medical attention if irritation is persistent.

IF INHALED: Dust may be generated and cause irritation. If processing causes discomfort, move to a well ventilated area and seek medical attention.

MAIN SYMPTOMS: Redness, coughing and/or wheezing. Molten material has the potential of causing skin burns; eye irritation may occur when in direct contact with eyes.

NOTE TO PHYSICIAN: Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABILITY

AUTOIGNITION TEMPERATURE: 388°C

SUITABLE EXTINGUISHING MEDIA: Water, carbon dioxide, or extinguishing powder

UNSUITABLE EXTINGUISHING MEDIA: None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: In case of fire, do not breathe in fumes.

HAZARDOUS COMBUSTION PRODUCTS: Carbon oxides Nitrogen oxides (NOx) Hydrocarbons.

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive.

SENSITIVITY TO STATIC DISCHARGE: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

FIRE FIGHTING INSTRUCTIONS AND FIRE FIGHTING EQUIPMENT: No information available.

ADDITIONAL INFORMATION: Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

PERSONAL PROTECTIVE EQUIPMENT: MSHA/NIOSH approved self-contained breathing apparatus or equivalent.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Standard personal protection equipment. Avoid contact with skin and eyes. Avoid dust formation. Remove all sources of ignition. Sweep up to prevent slipping hazards.

ENVIRONMENTAL PRECAUTIONS: Should not be released into the environment; may be dangerous to birds and small animals. Do not flush into surface water or the sanitary sewer system. Do not allow material to contaminate the groundwater system.

METHODS FOR CLEANING UP: Sweep up or vacuum and put into an approved waste container for disposal.

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SECTION 7 - HANDLING AND STORAGE

HANDLING: Avoid dust formation. Work in a ventilated area. Low hazard for usual handling. Use caution when near molten polymers.

STORAGE: Store in a cool, dry environment; keep away from heat, sparks, and flames. Storage space should not exceed 50 °C (122 °F).

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS

Material Name	CAS No.	% by Weight	ACGIH TLV (Mg/M^3)	OSHA PEL (Mg/M^3)
Magnetite	1317-61-9	76.00 – 81.00	-	-
Binding Additive*	-	-	-	-
Polylactic Acid	9051-89-2	<24.00	-	-

*The ingredient name and percentage information is omitted as it is a trade secret.

TLV: Threshold Limit Value over 8 hours of work.
PEL: Permissible Exposure Limit

ENGINEERING CONTROLS

Engineering Measures: Use local exhaust as needed.

PERSONAL PROTECTIVE EQUIPMENT

Eye protection: Avoid contact with eyes. Wear safety glasses upon treatment (mechanical, thermal, chemical, etc).

Skin protection: Avoid skin contact with molten polymer. Wear appropriate protective clothing to minimize risk of injury to the skin from contact with dust or physical abrasion. Wear long sleeved/impervious clothing if contact is probable and skin is sensitive. Protect contact with skin when processing; while material is hot, wear insulated safety gloves; wash hands after handling. Coveralls should be made from fire resistive materials which tend to not accumulate static charges. They should be designed in such a way as to avoid accumulation of dust in cuffs, pockets, etc.

Respiratory protection: Process in a well-ventilated area; respirator recommended upon treatment (mechanical, thermal, chemical, etc).

Hand protection: While material is hot, wear insulated safety gloves; wash hands after handling.

Hygiene measures: Provide regular cleaning of equipment, work area and clothing. Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink, or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. Do not breathe dust. Use personal protective equipment as required.

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Special hazard: Workers should be protected from the possibility of contact with the molten material during fabrication.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Filament, Pellets
Color:	Dark gray, blackish
Odor:	Slight
Odor Threshold:	No information available.
pH:	Not applicable
Melting/Freezing Point:	150-180°C (302- 356°F)
Boiling Point:	No information available.
Flash Point:	No information available.
Evaporation Rate:	No information available.
Flammability:	No information available.
Flammability Limits:	No information available.
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Relative Density:	No information available.
Water Solubility:	Negligible (<0.1%), Insoluble in cold and hot water
Solubility in other solvents:	Partially miscible in DCM and THF
Chemical Stability:	No information available.
Partition Coefficient:	No information available.
Auto-Ignition Temperature:	388°C (730°F)
Decomposition Temperature:	250°C (482°F)
Viscosity:	No information available.

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SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY: Not reactive under normal conditions.

INCOMPATIBILITY: Strongoxidizers, reducing agents, and bases.

CHEMICAL STABILITY: Stable under recommended storage conditions.

HAZARDOUS POLYMERIZATION: Will not undergo hazardous polymerization.

CONDITIONS & MATERIALS TO AVOID: Avoid open flames. Do not heat to temperatures above 250°C (482°F). Do not keep polymers molten for excessive periods of time.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning produces noxious and toxic fumes, Carbon Monoxide (CO), Carbon Dioxide (CO_2). May cause toxic gasses or vapors.

SECTION 11 - TOXICOLOGICAL INFORMATION

Principal routes of exposure: Skin contact.

PRODUCT INFORMATION:

Toxicity: None established.

Carcinogenic effects: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Target organ effects: Eyes, Respiratory system.

Ingestion: May cause gastrointestinal discomfort if consumed in large amounts. Not an expected route of exposure.

Inhalation: Inhalation of dust in high concentration may cause irritation of the respiratory system.

Eye Contact: Dust contact with the eyes can lead to mechanical irritation.

Symptoms related to the physical, chemical, and toxicological characteristics: Redness. Coughing and/or wheezing.

Delayed, immediate, and chronic effects from short and long term exposure: May cause skin irritation and/or dermatitis.

Irritation: Product dust may be irritating to eyes, skin, and respiratory system.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Pellets may be eaten by wildlife and should be swept up and placed in closed containers.

Persistence and degradability: Not readily biodegradable.

Bioaccumulation: Not expected to bioconcentrate or bioaccumulate.

Other adverse effects: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

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SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose in compliance with Federal, State, and local disposal laws for nonhazardous waste. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used containers. Contact the manufacturer with questions.

CONTAMINATED PACKAGING: Dispose in compliance with Federal, State, and local disposal laws for nonhazardous waste. Packaging may be reused.

SECTION 14 - TRANSPORT INFORMATION

DOT: Not regulated.
MEX: Not regulated.
ICAO: Not regulated.
IATA: Not regulated.
IMDG: Not regulated.
UN NUMBER: N/A.

Transportation In Bulk: Not Applicable.

Special Precautions For Transport: None.

SECTION 15 - REGULATORY INFORMATION

Regulatory requirements are subject to change and may differ between locations. It is the User's responsibility to ensure that all activities comply with all federal, state or provincial, and local laws and regulations. The following specific information is made for the purpose of complying with numerous national, federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

DOT: This product is not regulated by USDOT as a Hazardous Material (49 CFR 172.101). No UN code assigned. No placard required for transportation.
SARA (TITLE III): Not Listed.
SARA (SECTION 313): Not Listed.
CALIFORNIA PROP. 65: Not Listed.
TSCA: Listed.

CLEAN AIR ACT, TITLE VI (1990): This product does not contain, nor was it manufactured using ozone depleting chemicals.

Inventory Status:
TSCA (USA): Listed*
DSL (Canada): Listed*
EINECS (Europe): Listed*
AICS (Australia): Listed*
ENCS (Japan): Listed*
IECSC (People's Republic of China): Listed*
KECL (Korea): Listed*
TCSI (Taiwan): Listed*

*"Listed" indicates that all components of this product comply with the inventory requirements administered by the governing country.

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SECTION 16 - OTHER INFORMATION, INCLUDING THE DATE OF PREPARATION OF THE LAST REVISION

LABEL REQUIREMENTS: Not expected to produce significant adverse health effects when the recommended instructions for use are followed.

NFPA HAZARD RATINGS	HEALTH	1
	FLAMMABILITY	1
	PHYSICAL HAZARD	0
	INSTABILITY	-
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

HMIS HAZARD RATINGS	HEALTH	0
	FLAMMABILITY	1
	PHYSICAL HAZARD	0
	PERSONAL PROTECTION	X
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

DISCLAIMER: The information provided in this SDS is based on available data from reliable sources and is correct to the best of The Virtual Foundry, Inc's knowledge. The Virtual Foundry, Inc makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

REVISED DATE: November 2026