

Raise3D Premium PLA Safety Data Sheet

Prepared in accordance with Regulation (EC) No 1907/2006 (REACH), as amended by Regulation (EU) 2020/878, and Regulation (EC) No 1272/2008 (CLP).

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name: Raise3D Premium PLA 3D Printing Filament

Product description: Solid thermoplastic filament for FDM / FFF 3D printing.

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

Relevant identified uses: 3D printing filament for additive manufacturing, prototyping, model making and general engineering printing.

Uses advised against: Uses other than the intended additive manufacturing process; applications requiring separate food-contact, medical, implant or biocompatibility approval unless independently assessed.

1.3 Details of the supplier of the safety data sheet

Supplier:

Raise 3D Technologies, Inc.

Address:

13310 Pike Road, Stafford, TX 77477

Manufacturer address:

Building A1, Huanghai Road, Tongzhou District, Nantong City, Jiangsu Province 226300, China

1.4 Emergency telephone number

E-mail of competent person responsible for the SDS: minde.jin@raise3d.com

Emergency telephone number: +86-021-65337855

Additional emergency information: In case of emergency contact a physician or the local poison information centre. For EU market supply, provide the applicable national emergency advisory number where required.

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Based on available information, the product does not meet the criteria for classification as hazardous according to Regulation (EC) No 1272/2008 (CLP).

Regulation (EC) No 1272/2008 (CLP)	
Hazard classes / categories	Hazard codes
Not classified	Not applicable

2.2 Label elements

Hazard pictograms: None required.

Signal word: None required.

Hazard statements: None required.

Precautionary statements: Not legally required for a non-classified mixture. Good industrial hygiene and adequate ventilation during thermal processing are recommended.

2.3 Other hazards

The product as supplied is a solid filament and is not expected to present significant acute health or environmental hazards under normal handling. During thermal processing, melting or overheating, irritating fumes may be released.

Based on available information, the mixture is not expected to meet the criteria for PBT or vPvB.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Based on available information, no endocrine-disrupting properties are known for the product as supplied.

Substance/Mixture: Mixtures

Main constituents of the mixture are listed below. The product may contain colour-specific pigments and process additives. Based on available information, no ingredient requiring disclosure as a hazardous component under Annex II is present above relevant cut-off values.

Chemical Name	Registration No.	CAS No.	EC No.	Concentration	Classification
Poly(lactic acid) resin	Not available	9051-89-2	Not available	> 90%	Not classified

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 General advice:

If symptoms occur, seek medical advice and show this safety data sheet where possible. Never give anything by mouth to an unconscious person.

4.1.2 If inhaled:

If fumes from overheating or printing are inhaled, move the person to fresh air and keep at rest. Seek medical attention if irritation, coughing or other symptoms persist.

4.1.3 In case of skin contact:

For contact with solid material, wash with soap and water. For contact with molten material, cool the affected area immediately with plenty of water and seek urgent medical attention. Do not remove solidified polymer from the skin.

4.1.4 In case of eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

4.1.5 If swallowed:

Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical advice if discomfort occurs.

4.2 Most important symptoms and effects, both acute and delayed

As supplied, the product is not expected to cause significant adverse effects. Processing fumes may cause temporary eye, nose or throat irritation. Contact with molten material can cause severe thermal burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Thermal burns require immediate medical assessment. No specific antidote is known.

Section 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media**Suitable extinguishing media:**

Water spray, dry chemical powder, foam or carbon dioxide, as appropriate for the surrounding fire.

Unsuitable extinguishing media:

No specific restriction known; use extinguishing media appropriate to the surrounding conditions.

5.2 Special hazards arising from the substance or mixture**Specific hazards during firefighting:**

The product is an organic polymer and will burn if involved in a fire. Thermal decomposition or combustion may generate carbon monoxide, carbon dioxide and other irritating or toxic fumes.

5.3 Advice for fire fighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus and full protective equipment if exposed to combustion products.

Further information:

Cool exposed containers with water spray. Avoid inhalation of smoke and decomposition fumes.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Avoid creating slip hazards. For hot or molten material, allow to cool before collection. Ensure adequate ventilation if the release involves heated material or fumes.

6.1.2 For emergency responders:

Wear suitable personal protective equipment and avoid skin and eye contact. Refer to Section 8 for personal protection details.

6.2 Environmental precautions

Prevent the material from entering drains, sewers or waterways. Avoid release of plastic fragments into the environment.

6.3 Methods and materials for containment and cleaning up

Collect mechanically by hand, sweeping or vacuum cleaning and place in suitable containers for reuse or disposal. For molten material, allow to cool before removal.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling:

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing fumes generated during printing, extrusion or overheating. Provide adequate ventilation, especially at printers, nozzles and enclosed process areas.

Advice on general occupational hygiene:

Do not eat, drink or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Advice on protection against fire and explosion:

Keep away from ignition sources and incompatible chemicals. Minimise dust generation if the product is cut, ground or mechanically abraded.

Dust explosion class:

No specific data are available for the product as supplied; finely divided dust generated by further processing may present a dust-explosion hazard.

7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage areas and containers:**

Store in a cool, dry and well-ventilated place. Protect from moisture, excessive heat and direct sunlight.

Further information on storage conditions:

Keep packaging tightly closed when not in use. Containers which are opened should be carefully resealed.

Advice on common storage:

Keep away from strong oxidising agents and from strong acids or bases. Keep away from food, drink and animal feeding stuffs.

Storage temperature:

0 °C to 40 °C

7.3 Specific end use(s)

FDM / FFF additive manufacturing filament for 3D printing.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters****8.1.1 Occupational exposure limits:**

No specific occupational exposure limit is established for the product as supplied. During thermal processing, airborne contaminants should be controlled in accordance with applicable workplace exposure limits for process emissions.

8.1.2 Additional exposure limits under the conditions of use:

No additional product-specific exposure limits are known. Maintain good ventilation during printing and other thermal operations.

8.1.3 DNEL/DMEL and PNEC-values:

DNEL/DMEL and PNEC values are not available for the mixture as a whole.

8.2 Biological limit values

No biological exposure limits are known for the ingredient(s).

8.3 Appropriate engineering controls:

Use general room ventilation. Provide local exhaust ventilation at printers or process points where fumes may be generated, especially during high-temperature operation.

8.4 Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses are recommended during normal handling. Use goggles or face protection when handling molten material or where splashing is possible.

Hand protection: No special hand protection is normally required for solid filament. Use heat-resistant gloves when handling hot nozzles, hot printed parts or molten material.

Body protection: Normal work clothing. Wear protective clothing where molten material or hot surfaces may be encountered.

Respiratory protection: Not normally required under normal handling with adequate ventilation. If ventilation is insufficient during thermal processing, use suitable respiratory protection.

Thermal hazards: Contact with molten polymer or hot printed parts may cause burns; use suitable thermal protective equipment when necessary.

8.5 General hygiene considerations:

Wash hands, forearms and face thoroughly after handling, before eating, smoking and using the lavatory and at the end of the working period.

8.6 Environmental exposure controls:

Avoid uncontrolled release to the environment and dispose of waste in accordance with applicable regulations.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on physical and chemical properties

Appearance: Solid filament.

Colour: Various colours, depending on grade.

Odour: Odourless to slight characteristic odour.

Odour threshold: Not applicable / not determined for a solid mixture.

pH: Not applicable; insoluble solid.

Melting point/range (°C): Approx. 175 °C (typical polymer softening / melting behaviour).

Softening point: No specific data available.

Boiling point/range (°C): Not applicable; the polymer decomposes before boiling.

Flash point (°C): Not applicable for solid filament.

Evaporation rate: Not applicable.

Flammability limit - lower (%): Not applicable.

Flammability (solid, gas): Combustible solid under sufficient ignition source.

Ignition temperature (°C): Not determined.

Upper/lower explosive limits: Not applicable for solid filament; fine dust may form explosive mixtures with air.

Vapour pressure (20°C): Not applicable; negligible at ambient temperature.

Vapour density: Not applicable.

Relative density: Approx. 1.20 g/cm³.

Bulk density (kg/m³): Not applicable for filament as supplied.

Water solubility (g/l): Insoluble or negligibly soluble.

n-Octanol/Water (log Po/w): Not available for the mixture.

Auto-ignition temperature: Not determined.

Decomposition temperature: Not determined; decomposition may occur on overheating.

Viscosity, dynamic (mPa.s): Not applicable.

Explosive properties: Not explosive; finely divided dust may present a dust-explosion hazard.

Oxidising properties: Not oxidising.

9.2 Other information

Fat solubility (solvent-oil to be specified): Not relevant for the product as supplied.

Surface tension: Not applicable.

Dissociation constant in water (pKa): Not applicable.

Oxidation-reduction potential: Not applicable.

Particle characteristics: Not applicable for filament as supplied; continuous solid strand, not a powder.

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No dangerous reactivity is known under normal recommended conditions of storage and use.

10.2 Chemical stability:

Stable under normal ambient conditions and recommended storage conditions.

10.3 Possibility of hazardous reactions:

Hazardous polymerisation does not occur. No dangerous reactions are known under normal conditions of use.

10.4 Conditions to avoid:

Avoid excessive heat, ignition sources, prolonged overheating, open flames and generation of fine dust.

10.5 Incompatible materials:

Strong oxidising agents; strong acids and strong bases.

10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide, aldehydes, organic acids and other irritating decomposition fumes may be formed during combustion or overheating.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Based on available information and the known composition, the product as supplied is not classified for toxicological hazards under Regulation (EC) No 1272/2008.

Acute toxicity: Not classified.

Oral toxicity: No data indicating classification.

Dermal toxicity: No data indicating classification.

Inhalation toxicity: No data indicating classification.

Skin corrosion/irritation: Not classified under normal conditions of use. Molten material may cause thermal burns.

Serious eye damage/irritation: Not classified under normal conditions of use. Dust or fumes generated during processing may cause temporary irritation.

Respiratory or skin sensitization: Not classified based on available information.

Germ cell mutagenicity: Not classified based on available information.

Carcinogenicity: Not classified based on available information.

Reproductive toxicity: Not classified based on available information.

STOT - single exposure: Not classified; overheating fumes may cause temporary respiratory irritation.

STOT - repeated exposure: Not classified based on available information.

Aspiration hazard: Not classified; not relevant for solid filament as supplied.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

The substance/mixture has no endocrine disrupting properties.

11.2.2 Other information

No additional information available

Section 12: ECOLOGICAL INFORMATION

Endocrine disrupting properties: Based on available information, no endocrine-disrupting properties are known for the product as supplied. Other information: The primary foreseeable health effect is thermal injury from contact with molten polymer or hot printed parts.

12.1 Toxicity

Acute (short-term) toxicity:

Fish: No specific data available for the mixture.

Crustacea: No specific data available for the mixture.

Algae/aquatic plants: No specific data available for the mixture.

Chronic (long-term) toxicity:

Fish: No specific data available for the mixture.

Crustacea: No specific data available for the mixture.

Algae/aquatic plants: No specific data available for the mixture.

12.2 Persistence and degradability

No specific test data are available for the mixture. Environmental degradation of polymeric material depends strongly on exposure conditions and should not be assumed under normal environmental release conditions.

12.3 Bioaccumulative potential

Bioaccumulation is not expected to be significant for the polymer due to its high molecular weight and low water solubility.

12.4 Mobility in soil

Low mobility is expected because the product is a water-insoluble solid. If released, the material may remain as solid fragments in soil or sediment.

12.5 Results of PBT and vPvB assessment

Based on available information, the mixture is not expected to meet the criteria for PBT or vPvB.

12.6 Endocrine disrupting properties

Based on available information, no endocrine-disrupting properties relevant to the environment are known for the product as supplied.

12.7 Other adverse effects

No further relevant information available

Section 13: DISPOSAL CONSIDERATIONS

Avoid uncontrolled release to the environment. As a plastic material, discarded fragments may contribute to physical litter if not properly managed.

13.1 Waste treatment methods

Disposal method

Disposal:

Dispose of waste in accordance with local, regional, national and international regulations. Where possible, recover or recycle unused material. Incineration or disposal via authorised waste management companies may be suitable.

Contaminated packaging:

Contaminated packaging should be emptied as far as practicable and then recycled or disposed of in accordance with applicable regulations.

Section 14: TRANSPORT INFORMATION

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number or ID number	Not regulated	Not regulated	Not regulated	Not regulated
UN proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard class(es)	Not regulated	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No	No
Special precautions for user	Protect from moisture and physical damage. Avoid excessive heat.	Protect from moisture and physical damage. Avoid excessive heat.	Protect from moisture and physical damage. Avoid excessive heat.	Protect from moisture and physical damage. Avoid excessive heat.
Maritime transport in bulk according to IMO instruments	Not applicable	Not applicable	Not applicable	Not applicable

Section 15: REGULATORY INFORMATION

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

Relevant information regarding authorization:

No specific information on authorisation under REACH Annex XIV is available for the mixture as supplied.

Relevant information regarding restriction:

No specific restriction under REACH Annex XVII is known to apply to the product as supplied, without prejudice to any restrictions applying to individual substances or intended uses.

Other EU regulations:

This safety data sheet has been prepared in accordance with Regulation (EC) No 1907/2006 (REACH), as amended by Regulation (EU) 2020/878, and Regulation (EC) No 1272/2008 (CLP).

The product is not classified as hazardous under CLP based on available information. For products placed on the Italian market, the SDS should be supplied in Italian.

Other National regulations:

Users must comply with applicable national occupational safety, environmental, waste and transport regulations.

15.2 Chemical safety assessment: A chemical safety assessment has not been carried out for the mixture.

Section 16: OTHER INFORMATION

Revision information

Date of this revision: April 26, 2026.

16.1 Indication of changes:

Updated to the REACH Annex II format as amended by Regulation (EU) 2020/878; revised Section 1, Section 2.3, Section 8, Section 9, Section 11.2, Section 12.6 / 12.7, Section 15 and Section 16.

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

IMDG: International Maritime Dangerous Goods Code.

ICAO-TI: International Civil Aviation Organization Technical Instructions.

IATA: International Air Transport Association.

LC50: Median lethal concentration.

EC50: Concentration producing 50% of the maximum effect.

NOEC: No observed effect concentration.

DNEL: Derived no-effect level.

PNEC: Predicted no-effect concentration.

16.3 Key literature references and sources for data

Supplier information, raw material information and current regulatory framework available at the date of revision.

16.4 Training instructions

Operators should be trained in safe handling of heated polymer, good ventilation practice and waste management.

16.5 Further information

This information is based on the present state of our knowledge and is intended to describe the product for health, safety and environmental requirements only.

16.6 Disclaimer

This safety data sheet has been compiled for the product described herein and should be used only for that product.

The information is believed to be accurate at the revision date; however, no warranty is expressed or implied regarding completeness or suitability for a particular purpose.

This safety data sheet complies with Regulation (EC) No 1907/2006 as amended, including Regulation (EU) 2020/878. Classification and label elements are stated in accordance with Regulation (EC) No 1272/2008.

The user remains responsible for ensuring that all activities comply with applicable laws and regulations.