Raise3D Premium PETG Safety Data Sheet

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Identification of the material

Raise3D Premium PETG 3D Printing Filament

1.2 Identified uses

Used primarily for extrusion-based 3D printing processes

1.3 Supplier information

Supplier:

Raise 3D Technologies, Inc.

Address:

43 Tesla, Irvine, CA 92618

Emergency phone number: In case of toxicological emergency, contact your doctor.

Section 2: HAZARDS IDENTIFICATION

2.1 GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.2 Label elements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.3 Other hazards

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. See section 7 for more information. See section 8 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical Name	CAS No.	Weight (%)	Exposure Limits
1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer	25038-91-9	> 90%	None

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 Inhalation

Move to fresh air. Call a physician immediately if irritation persists.

4.1.2 Skin contact

Remove contaminated clothing and shoes. Get medical attention if skin symptoms occurred. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Wash contaminated clothing and shoes before reuse.

4.1.3 Eye contact

Get medical attention if eye symptoms occurred. In case of contact with molten substance, immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

4.1.4 Ingestion

Get medical attention if swallowed amount of substance.

4.2 Most important symptoms and effects, both acute and delayed

Burns resulted from contacting or handling heated/molten materials.

4.3 Indication of any immediate medical attention and special treatment needed

Call emergency medical service. Get medical advice/attention if you needed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. If burned by contact with molten material, cool quickly as possible with water, and then go to see a physician for treatment of burn.

Section 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

Suitable extinguishing media: CO_2, water, sand.

5.2 Special hazards arising from the substance or mixture

Thermal decomposition products: Not available. Hazardous combustion products: CO_2, CO. Unusual fire and explosion hazards: No explosion hazard.

5.3 Advice for fire fighters

Wear positive pressure self-contained breathing apparatus (SCBA). - Structural fire fighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if you can do it without risk. Isolate exposed area. Keep unauthorized personnel away. Use certificated protective equipment. Ventilate the leaked area.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas.

Section 7: HANDING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with molten material. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.

7.2 Conditions for safe storage

Keep container closed. Store container in a well dry/cool place. Keep away from waterways and sewers. Keep away from any source of ignition.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Specific exposure limits have not been established or are not applicable unless listed below.

Regulation in Korean: Not applicable
US (NIOSH/OSHA AGGIH):
- NIOSH- TWA: Not applicable
- OHSA- TWA: Not applicable
- ACGIH- TWA: Not applicable
EU Regulation: Not applicable
Biological Exposure Index: Not applicable

Biological limit values: No biological exposure limits noted for the ingredient(s)
Recommended monitoring procedures: Not available
Derived no-effect level (DNEL): Not available
Predicted no effect concentrations (PNECs): Not available

8.2 Engineering controls

Provide local exhaust ventilation system or other engineering controls to keep the airborne below their respective threshold limit value. Check legal suitability of exposure level.

8.3 Personal protective equipment

Respiratory Protection:

Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye Protection:

An eye wash unit and safety shower station should be available nearby work place. Wear safety glasses to protect eyes from scattering toxic substance.

Skin Protection:

It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burns.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: Filament, Solid
Color: different according to coloration
Odor: Slight odor
Odor threshold: Not available
pH: Not applicable

Melting point/freezing point: Not applicable
Boiling point: Not applicable
Flash point: Not applicable
Evaporation rate: Not applicable
Flammability: Not available
Upper/lower flammability or explosive limits: Not available
Vapor pressure: Negligible (20 °C)
Vapor density: Not applicable
Relative density: 1.25 g/ml (25 °C)
Solubility: No available
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: 454˚C
Decomposition temperature: Onset of decomposition > 350 ˚C
Viscosity: Not applicable

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable at normal conditions.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flames, etc.

10.5 Incompatible materials

Not available.

10.6 Hazardous decomposition products

Carbon oxides

Section 11: TOXICOLOGICAL INFORMATION

11.1 Likely routes of exposure

Inhalation: Dust irritates the respiratory system, and may cause coughing and difficulties in breathing.

Skin contact: Molten material will produce thermal burns.

Eye contact: Molten material will produce thermal burns.

Ingestion: May cause discomfort if swallowed.

11.2 Symptoms

Dust may irritate throat and respiratory system and cause coughing. Direct contact with eyes may cause temporary irritation.

11.3 Information on toxicological effects

Acute toxicity: Not available.

Skin corrosion/irritation: Molten material will produce thermal burns.

Serious eye damage/eye irritation: Molten material will produce thermal burns.

Respiratory sensitization: Not available.

Skin sensitization: Not available.

Germ cell mutagenicity: Not available.

Carcinogenicity: IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008, US EPA: not listed.

Reproductive toxicity: Not available.

Specific target organ toxicity - single exposure: Not available.

Specific target organ toxicity - repeated exposure: Not available.

Aspiration hazard: Not available.

Mixture versus substance information: Not applicable.

Other information: Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

Not available.

12.5 Other adverse effects

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer if needed.

Section 14: TRANSPORT INFORMATION

ADR: Not regulated as dangerous goods.
RID: Not regulated as dangerous goods.
AND: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
This substance/mixture is not intended to be transported in bulk.

Section 15: REGULATORY INFORMATION

15.1 International Inventories

TSCA: Complies
DSL/NDSL: Complies
EINECS/ELINCS: Complies
ENCS: Complies
IECSC: Complies
KECL: Complies
PICCS: Complies
AICS: Complies

15.2 Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified
Chemical Substances ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.3 US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard: No
Chronic Health Hazard: No
Fire hazard: No
Sudden release of pressure hazard: No
Reactive Hazard: No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

15.4 US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number: Not applicable

Section 16: OTHER INFORMATION

Revision information

Date of this revision: December 18, 2018

Declare to reader

The information above is believed to be accurate and represents the best information currently available to us.

However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.

This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.