

# Raise3D Industrial PA12 CF+ Safety Data Sheet

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Trade name:

Raise3D Industrial PA12 CF+ 3D Printing Filament

### 1.2 Use of the product:

3D Printing Filament

### 1.3 Manufacturer information

#### Supplier:

Raise 3D Technologies, Inc.

#### Address:

43 Tesla, Irvine, CA 92618

#### Manufacturer address:

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

*In case of toxicological emergency, contact your doctor first.*

*Emergency phone number: +86-021-65337855*

Contact person (E-mail): Dr. Jin (minde.jin@raise3d.com)

## Section 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture classification (REGULATION (EC) No 1272/2008)

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

REGULATION (EC) No 1272/2008	
Polyamide Resin	Hazard codes
N/A	N/A

### 2.2 Label elements

**Hazard Pictograms:** No hazard pictogram is used.

**Signal Word(S):** No signal word is used.

**Hazard Statement:** Not applicable.

**Precautionary statement:** Not applicable.



## 2.3 Other hazards

Not available.

## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture

**Ingredient(s):**

Chemical Name	Registration No.	Cas No.	EC No.	Concentration	Classification
Polyamide polymer	N/A	24936-74-1	231-595-7	>=70%	Not Classified
Chopped Carbon Fiber	N/A	7440-44-0	231-153-3	5 - 30%	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 you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

#### 4.1.2 If inhaled:

None expected to require first aid measures. If breathed in, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical attention.

#### 4.1.3 In case of skin contact:

None expected to require first aid measures. Wash thoroughly with soap and water. Get medical attention in the unlikely event that irritation persists.

#### 4.1.4 In case of eye contact:

None expected to require first aid measures. Flush with running water for at least 15 minutes. If irritation persists get medical attention.

#### 4.1.5 If swallowed:

Immediate first aid is not likely to be required. A physician or poison control center can be contacted for advice.



## 4.2 Most important symptoms and effects, both acute and delayed

The product is not classified as harmful to human health effect.

## 4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

## Section 5: FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media:

Use extinguishers suitable for surrounding fire.

#### Unsuitable extinguishing media:

Not available.

### 5.2 Special hazards arising from the substance or mixture

#### Specific hazards during firefighting:

No specific fire or explosion hazard. In case of fire, the following can be released: carbon monoxide, carbon dioxide.

### 5.3 Advice for fire fighters

#### Special protective equipment for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

#### Further information:

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.

## Section 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel:

Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### 6.1.2 For emergency responders:

Avoid skin and eye contact. Refer to section 8 of SDS for personal protection details.



## 6.2 Environmental precautions

Avoid disposing into drainage/sewer system or directly into the aquatic environment.

## 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers. Clean up affected area.

## 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 Handling

#### Advice on safe handling:

Ensure good ventilation/exhaustion at the workplace. Wash thoroughly after handling.

#### Advice on general occupational hygiene:

Do not eat, drink and 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:

Normal measures for preventive fire protection.

#### Dust explosion class:

No data available.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Requirements for storage areas and containers:

Store spool in a dry, cool and ventilated place.

#### Further information on storage conditions:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

#### Advice on common storage:

Keep away from oxidizing agents and strongly acid or alkaline materials. Keep away from food, drink and animal feeding stuffs.



**Storage temperature:**

> 0 °C and <= 40 °C

**Other data:**

No decomposition if stored and applied as directed.

## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 Control parameters:****8.1.1 Occupational exposure limits:****US. OSHA Table Z-3 (29 CFR 1910.1000)**

component	Type	Value	Form
Chopped Carbon Fiber (CAS 7440-44-0)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

component	Type	Value	Form
Chopped Carbon Fiber (CAS 7440-44-0)	TWA	2.5 mg/m <sup>3</sup>	Respirable fraction.

**8.1.2 Additional exposure limits under the conditions of use:**

Not available.

**8.1.3 DNEL/DMEL and PNEC-Values:**

Not available.

**8.2 Biological limit values**

No biological exposure limits noted for the ingredient(s).

**8.3 Appropriate engineering controls:**

Use adequate ventilation to keep airborne concentrations low.

**8.4 Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** No special requirements.

**Hand protection:** No special requirements.

**Body protection:** No special requirements.

**Respiratory protection:** No special requirements.

**Thermal hazards:** Wear suitable protective clothing to prevent heat.



### 8.5 General hygiene considerations:

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

### 8.6 Environmental exposure controls:

Avoid discharge into the environment. Dispose of rinse water in accordance with local and national regulations.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

**Appearance:** Solid.

**Colour:** Black.

**Odour:** Odorless.

**Odour threshold:** Not available.

**pH:** Not available.

**Melting point/range (°C):** 200°C.

**Boiling point/range (°C):** Not available.

**Flash point (°C):** Not available.

**Evaporation rate:** Not available.

**Flammability limit - lower (%):** Not available.

**Flammability (solid, gas):** Not available.

**Ignition temperature (°C):** Not available.

**Upper/lower explosive limits:** Not available.

**Vapour pressure (20°C):** Not available.

**Vapour density:** Not available.

**Relative Density:** 1.02.

**Bulk density (kg/m<sup>3</sup>):** Not available.

**Water solubility (g/l):** Insoluble.

**n-Octanol/Water (log Po/w):** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Viscosity, dynamic (mPa.s):** Not available.

**Explosive properties:** Not available.

**Oxidising properties:** Not available.



**9.2. Other information:**

**Fat solubility(solvent– oil to be specified) etc:** Not available.

**Surface tension:** Not available.

**Dissociation constant in water( pKa):** Not available.

**Oxidation-reduction Potential:** Not available.

**Section 10: STABILITY AND REACTIVITY****10.1 Reactivity:**

The substance is stable under normal storage and handling conditions.

**10.2 Chemical stability:**

Stable at room temperature in closed containers under normal storage and handling conditions.

**10.3 Possibility of hazardous reactions:**

No dangerous reactions known.

**10.4 Conditions to avoid:**

Incompatible materials.

**10.5 Incompatible materials:**

**Materials to avoid:** Strong oxidizing agents.

**10.6 Hazardous decomposition products**

Carbon oxides.

**Section 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity:**

**ATEmix(oral):** Not available.

**ATEmix(Dermal):** Not available.

**ATEmix(inhalation):** Not available.

**LD50(Oral, Rat):** Not available.

**LD50(Dermal, Rabbit):** Not available.

**LC50(Inhalation, Rat):** Not available.

**Skin corrosion/Irritation:** Not classified.

**Serious eye damage/irritation:** Not classified.

**Respiratory or skin sensitization:** Not classified.



**Germ cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive toxicity:** Not classified.

**STOT- single exposure:** Not classified.

**STOT-repeated exposure:** Not classified.

**Aspiration hazard:** Not classified.

## Section 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Acute (short-term) toxicity:**

**LC50(96h, Fish):** Not available.

**LC50(48h, Crustacea):** Not available.

**EC50(72h, Algae/aquatic plants):** Not available.

**Chronic (long-term) toxicity:NOEC(Fish):** Not available.

**NOEC(Crustacea):** Not available.

**EC50(Algae/aquatic plants):** Not available.

### 12.2 Persistence and degradability

No data is available on the degradability.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Other adverse effects

No data available.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Disposal method

#### Disposal:

The material should be disposed of by incineration in a chemical incinerator in compliance with national





and regional requirements.

### Contaminated packaging:

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## Section 14: TRANSPORT INFORMATION

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name	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	See section 2.2	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of Marpol and the IBC Code	Not regulated	Not	Not regulated	Not regulated

## Section 15: REGULATORY INFORMATION

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

#### Relevant information regarding authorization:

Not applicable.

#### Relevant information regarding restriction:

Not applicable.

#### Other EU regulations:

Employment restrictions concerning young person must be observed.

For use only by technically qualified individuals.



**Other National regulations:**

Not applicable.

**15.2 Chemical safety assessment**      YES       NO

**Section 16: OTHER INFORMATION****Revision information**

**Date of this revision:** October 20, 2022.

**16.1 Indication of changes:**

Version 1.0 Amended by (EU) 2015/830.

**16.2 Abbreviations and acronyms:**

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

**RID:** Regulation for rail International transportation of Dangerous goods.

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

**IMDG:** Code international maritime dangerous goods code.

**ICAO-TI:** International Civil Aviation Organization The International Civil Aviation Covenant.

**IATA:** International Air Transport Association.

**LC50:** Median lethal concentration.

**EC50:** The effective concentration of substance that causes 50% of the maximum response.

**NOEC:** No Observed Effect Concentration.

**DNEL:** Derived no-effect level.

**PNEC:** Predicted no-effect concentration.

**16.3 Key literature references and sources for data**

ECHA Registered substances data.

**16.4 Training instructions**

Not applicable.

**16.5 Further information**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.



**16.6 Declare to reader**

Information is referenced from other manufacturers.

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

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.

