



MATERIAL SAFETY DATA SHEET

PLA Purifier

1. Product and company identification

1.1. Trade name

PLA Purifier

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

Relevant identified uses

Industrial/Professional use spec: Manufacture of plastics products, including compounding and conversion.

For professional use only.

Uses advised against

No additional information available.

1.3. Company details

Recreus Industries S.L.,
C/EI Envelope, F13-F14. Pol. Ind. Finca Lacy
03600, Elda, (Alicante) - Spain
(0034) 865 777 966
info@recreus.com
www.recreus.com

1.4. Emergency telephone number

No additional information available.

2. Hazards identification

2.1. Classification of the substance or mixture

This product is classified as category 2 according to REACH and Regulation for TiO₂ and Target Organ Toxicity (STOT) after repeated exposures.

Adverse physicochemical, human health and environmental effects: No additional information available.

2.2. Label elements

According to EC directives or the corresponding national regulations there is no labelling obligation for this product.

2.3. Other hazards

No additional information available.

3. Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Talc	(CAS-No.) 14807-96-6	1 - 5	Not classified
Substance with national workplace exposure limit(s) (GB)	(EC-No.) 238-877-9		
Silicon Dioxide, SiO ₂	(CAS-No.) 7631-86-9		
Aluminium Oxide, Al ₂ O ₃	(CAS-No.) 1344-28-1		
Ferrous/Ferric Oxide, FeO/Fe ₂ O ₃	(CAS-No.) 1345-25-1/1309-37-1		
Magnesium Oxide, MgO	(CAS-No.) 1309-48-4		
Calcium Oxide, CaO	(CAS-No.) 1305-78-8		
Titanium Oxide, TiO ₂	(CAS-No.) 13463-67-7		

4. First-aid measures

4.1. Description of first aid measures

- **First-aid general instruction:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- **First-aid measures after inhalation:** Assure fresh air breathing. Allow the victim to rest.
- **First-aid measures after skin contact:** Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse.
- **First-aid measures after eye contact:** Rinse opened eyes for several minutes under running water. Then consult a doctor.
- **First-aid measures after ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after eye contact: Mechanical irritation.

Symptoms/effects after ingestion: No effects known.

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

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

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: Carbon monoxide. Acetaldehyde.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting: Do not enter a fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus and chemically protective clothing.

Other information: After the fire, proceed rapidly with cleaning of surfaces exposed to the fumes in order to limit equipment damage.

6. Measures in case of accidental release

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Sweep up, shovel or vacuum. Can be slippery on hard, smooth walking areas.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

7. Handling and storage

Handling

Adequate ventilation and if necessary, effective exhaust must be provided at the workplace of the fused deposition modeling process.

Provided good ventilation and/or local exhaust systems are used, the Workplace Exposure Limit(s) stated in Chapter 8 should not be exceeded. Dust must be removed by effective exhaust ventilation.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or drink or smoking materials.

Storage

Keep the container tightly closed and dry where there are no acidic substances and/or hazardous products. Storage temperature: < 40 °C.

8. Exposure controls/personal protection

8.1. Control parameters

talc (14807-96-6)

United Kingdom	Local name	Talc
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³ Talc, respirable dust; United Kingdom; Time Weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)

COMPONENT(S) Chemical Name	MSHA/OSHA PEL - TWA	ACGIH TLV-TWA	NIOSH REL
Silicon Dioxide, SiO ₂	(R) 10 mg/m ³ /(% SiO ₂ +2)	(R) 0.025 mg/m ³	(R) 0.05 mg/m ³
Aluminium Oxide, Al ₂ O ₃	(T) 15 mg/m ³ , (R) 5 mg/m ³	(1) (R) 1 mg/m ³	-
Ferrous Oxide, FeO	-	-	-
Ferric Oxide, Fe ₂ O ₃	1(2) 10 mg/m ³	(R) 5 mg/m ³	(3) 5 mg/m ³
Magnesium Oxide, MgO	(4)15mg/3	(I) 10 mg/m ³	-
Calcium Oxide, CaO	5 mg/m ³	2 mg/m ³	2 mg/m ³
Titanium Oxide, TiO ₂	15 mg/m ³	10 mg/m ³	-

(1): Limits based on aluminium metal and insoluble compounds. (2): As iron oxide fume. (3): Dust and fume, as iron (4): As total particulate matter of magnesium oxide fume. (R): Respirable fraction. (T): Total dust. (I): Inhalable fraction.

8.2. Exposure controls

Appropriate engineering controls: Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

Hand protection: Wear protective gloves. PVC or other plastic material or natural rubber gloves.

Eye protection: Where excessive dust may result, wear goggles.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Dust production: dust mask with filter type FP2. In the event of thermal decomposition: gas mask with filter type B.

Other information: Do not eat, drink or smoke during use.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid

Colour: Natural

Odour: Odorless

Odour Threshold: No data available

PH: Not applicable

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: Not applicable

Flash point: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Flammability (solid, gas): Dust may form flammable and explosive mixture with air

Vapour pressure: Not applicable

Relative vapour density at 20 °C: Not applicable

Relative density: 1.42

Solubility: Water: Insoluble

Log Pow: No data available

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

Explosive properties: Dust may form flammable and explosive mixture with air

Oxidising properties: No data available

Explosive limits: No data available

9.2. Other information

No additional information available

10. Stability and reactivity

10.1. Reactivity

No additional information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Moisture. Avoid temperatures above 60°C.

10.5. Incompatible materials

Strong oxidants as fluor.

10.6. Hazardous decomposition products

Carbon monoxide. Acetaldehyde. Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity (oral): Not classified.
- Acute toxicity (dermal): Not classified.
- Acute toxicity (inhalation): Not classified.
- Skin corrosion/irritation: Not classified.
- pH: Not applicable.
- Additional information: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Not classified.
- pH: Not applicable.
- Additional information: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Not classified.
- Additional information: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Not classified.
- Additional information: Based on available data, the classification criteria are not met.
- Carcinogenicity: Not classified.
- Additional information: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Not classified.
- Additional information: Based on available data, the classification criteria are not met.
- Aspiration hazard: Not classified.
- Additional information: Based on available data, the classification criteria are not met.
- Potential adverse human health effects and symptoms: This product is a mixture. Health hazard information is based on its components. Based on available data, the classification criteria are not met.

Additional information: According to our experience and information the product has no harmful effects on health if properly handled.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

This product contains natural mineral components in low concentrations. Inhalation of respirable dust may aggravate existing diseases of the respiratory system and/or dysfunctions. Exposure to dust may aggravate existing skin and eye conditions. Smoking and obstructive/restrictive lung disease may also exacerbate the effects of excessive exposure to this product. Toxicological information for each component is listed below:

Silicon dioxide: Crystalline silica does not exceed $\pm 0,5$ % of the total silicon dioxide composition in the bulk product.

Aluminium oxide: inhalation, ingestion, eye / skin contact.

Acute effect: Inhalation or ingestion of high concentrations of this substance may cause gastrointestinal and/or upper respiratory problems. Eye and skin irritation.

Chronic effect/carcinogenicity: is not classifiable. Occasionally workers chronically exposed to dusts or fumes containing aluminium have occasionally developed severe pulmonary reactions including fibrosis, emphysema and pneumothorax. Long-term exposure may have effects on the central nervous system.

Ferrous/Ferric oxide: inhalation, ingestion, eye / skin contact.

Acute effect: Inhalation or ingestion of high concentrations of this substance may cause stupor, shock, acidosis, haematemesis, bloody diarrhoea or coma.

Chronic effect/carcinogenicity: is not classifiable.

Calcium oxide: inhalation, ingestion, eye / skin contact.

Acute effect: direct tissue contact in high concentrations can cause burns and severe irritation due to its high reactivity and alkalinity.

Chronic effect/carcinogenicity: is not classifiable.

Magnesium oxide: inhalation, ingestion, eye / skin contact.

Chronic effect/carcinogenicity: is not classifiable.

Titanium dioxide: inhalation.

Acute effect: classified as inert.

Chronic effect/carcinogenicity: classified as Group 2B, possibly carcinogenic to humans by IARC and as class 2 by REACH.

12. Ecological information

12.1. Toxicity

Acute aquatic toxicity: Not classified.

Chronic aquatic toxicity: Not classified.

12.2. Persistence and degradability

Persistence and degradability: Not established.

12.3. Bioaccumulative potential

Bioaccumulative potential: Not established.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

Additional information: Avoid release to the environment.

13. Disposal considerations

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point to set the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and can be fully segregated according to type.

14. Transport information

Not regulated.

15. Regulatory information

SARA Title III: Section 311 and 312: Immediate Health Hazard and Health Delay TSCA: All components of the product are listed on the EPA TSCA chemical inventory.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations, 40 CFR §302.4.

EPCRA (Emergency Planning and Community Right-to-Know): Crystalline silica (quartz) is not an extremely hazardous substance under the Emergency Planning and Community Right-to-Know Act regulations,

40 CFR Part 355, Appendices A and B it is not a toxic chemical subject to the requirements of Section 313.

Directive 2012/18/EU (SEVESO III).

National regulations No additional information available.

16. Other information

Data sources: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information: None.

Disclaimer

Is under responsibility of the 3d printer parts manufacturer or end user the compliance of the plastic object, for the specific use, with the overall migration limit, the specific migration limit and other restrictions. Do not hesitate to contact our technical service for explanations, advising and for any other need.