

Safety Data Sheet



Trade Name: CR-500A Ceramic Powder

SECTION 1. IDENTIFICATION

Product Name: CR-500A Ceramic Powder

Chemical Name: Aluminum Oxide

Other means of identification:
Ceramic Powder

Recommended use of the chemical and restrictions on use:

Recommended use: Chemical intermediate for urethane polymer production

Recommended restrictions: Uses other than as recommended above

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Company Contact Email: info@urethanesciences.com

Emergency Phone: ChemTrec (24 Hours): 1-800-424-9300
(Outside of USA 202-366-4488)

SECTION 2: HAZARD(S) IDENTIFICATION

Physical hazards

None identified under OSHA GHS §1910.1200.

Health hazards

None identified under OSHA GHS §1910.1200.

Environmental hazards

None identified under OSHA GHS §1910.1200.

GHS Signal word: None

GHS Hazard statement(s): None

GHS Hazard symbol(s): None

Precautionary statement(s):

Prevention:

Employ good industrial hygiene practice
Wash hands thoroughly after handling

Response:

If swallowed: Rinse mouth with water (only if the person is conscious). Drink plenty of water.
If on skin: Wash with plenty of soap and water
If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

Keep in a dry place
Store away from incompatible materials.

Disposal:

Dispose of contents/containers to an approved disposal site in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise Classified (HNOC): None known

SECTION 3: Composition/Information on ingredients

Mixture: Chemical intermediate for urethane polymer production

CHEMICAL NAME	CAS #	Concentration (weight %)
Aluminum Oxide	1344-28-1	>99%

SECTION 4: FIRST AID MEASURES

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:

When in doubt or if symptoms are observed, get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact: Wash with plenty of soap and water.

Eye contact: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

Most important symptoms/effects, acute and delayed: Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.

Indication of immediate medical attention and special treatment needed: Treatment should be symptomatic and supportive.

SECTION 5: FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media: Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO₂)

Unsuitable extinguishing media: No data available

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Hazardous combustion products: None known.

Special protective equipment and precautions for fire-fighters:

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Do not breathe fumes.

Special Protective Equipment: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). If protective equipment is not available or not used, fight fire from a protected location of safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid dust formation. Keep unauthorized personnel away.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Notify authorities if liquid enters sewers or public waters. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Use care to minimize generation of airborne dust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Minimize dust generation and accumulation. Provide local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice

Conditions for safe storage, including any incompatibles: Store away from incompatible materials. Keep container tightly closed and dry.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Aluminum oxide:

ACGIH

TWA: 10 mg/m³

OSHA

TWA: 15 mg/m³ total dust

TWA: 5 mg/m³ respirable fraction (vacated)

TWA: 10 mg/m³ total dust (vacated)

TWA: 5 mg/m³ respirable fraction

NIOSH

Not established

DNEL/DMEL and PNEC values DNEL/DMEL and PNEC values:

Worker - inhalative, long-term - systemic 3 mg/m³

Consumer - oral, long-term - systemic 6.22 mg/kg bw/d

Predicted No Effect Concentration (PNEC)

Sewage treatment plant 20 mg/l

Exposure controls

Engineering controls: Do not handle until all safety precautions have been read and understood Ensure adequate ventilation, especially in confined areas Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits In case of insufficient ventilation, wear suitable respiratory equipment

Individual protection measures

Eye/face protection: Chemical goggles or safety glasses.

Skin protection: Wear suitable protective clothing

Hand protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Wear suitable gloves tested to EN 374.

Other protection: Follow general hygiene considerations recognized as common good workplace practices The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Recommended filter type: (FFP2) (FFP3)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state:	Powder
Color:	White
Odor:	Odorless
Odor threshold:	Not available

pH:	Not Available
Melting point/freezing point:	2000 deg C (3632 deg F) (1013 hPa)
Initial boiling point and boiling range:	2980 deg C (5396 deg F) (1013 hPa)
Flash point:	Not applicable. Product is inorganic. Solid
Evaporation rate:	Not applicable. Melting point > 300 C
Flammability (solid, gas):	May form combustible dust concentrations in air
Upper/lower flammability or explosive limits	
Flammability limit – lower (%):	Not available
Flammability limit – upper (%):	Not available
Explosive limit – lower (%):	Not available
Explosive limit – upper (%):	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Relative density:	4 (20 deg C)
Solubility (ies):	Insoluble in Water
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (dynamic):	Not applicable, Solid
% Volatile:	Not Volatile

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Stable under normal ambient conditions and anticipated conditions of use.
Possibility of hazardous reactions:	None under normal processing
Conditions to avoid:	Incompatible Materials. Decomposes at 200 deg C. Al ₂ O ₃ , Water
Incompatible materials:	Strong acids.
Hazardous decomposition products:	None known.

SECTION 11: TOXICOLOGICAL INFORMATION

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

Inhalation Do not breathe dust

Skin Avoid prolonged or repeated contact with skin. Contact with dust can cause mechanical irritation or drying of the skin

Eyes Avoid contact with eyes. Dust contact with the eyes can lead to mechanical irritation

Ingestion Ingestion is not a likely route of exposure

Aspiration hazard Not an expected route of exposure.

Information on toxicological effects

Aluminum oxide:

Oral LD50 > 2000 mg/kg Rat

Inhalation LC50 > 2.3 mg/l 4-hr Aerosol : Rat

Serious eye damage/eye irritation

Non-irritant : Rabbit

Skin Corrosion/Irritation Non-irritant : Rabbit

Mutagenicity In vitro mutagenicity test : In vivo mutagenicity tests: Based on available data, the classification criteria are not met

Reproductive Effects No indication of effects on fertility. No indication of effects on developmental toxicity.

Target Organ Effects Lungs

Specific target organ toxicity - Single exposure No information available

Specific target organ toxicity- Repeated exposure

Repeated dose toxicity Inhalation 28-d Rat NOAEL (No observed adverse effect level) 70 mg(Al)/m3

Repeated dose toxicity 1- Year Rat NOAEL (No observed adverse effect level)>=30 mg Al/kg bw

Acute Toxicity Based on available data, the classification criteria are not met

Mutagenicity Based on available data, the classification criteria are not met

Reproductive Effects This product does not contain any known or suspected reproductive hazards.

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

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

Very low solubility. Not considered to be harmful to aquatic life.

Aluminum Oxide WGK Classification (VwVwS) 1346. WGK: nwg

Persistence and degradability

Biodegradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Bioaccumulation: Not likely to bioaccumulate

Mobility in soil

None

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

Contaminated Packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse container.

Waste codes: Waste codes should be assigned by the user based on the application for which the product was used

Aluminum oxide WGK Classification (VwVwS) 1346. WGK: nwg

SECTION 14: Transport Information

US Department of Transportation Classification (49CFR)

Not regulated for transport

Maritime transport IMDG

Not regulated for transport.

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

No further relevant information available.

Air transport ICAO-TI and IATA-DGR

Not regulated for transport

Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.

No data available

SECTION 15: REGULATORY INFORMATION

USA:

United States Federal Regulations: This SDS complies with the OSHA, 29 CFR 1910.1200.

Combustible dust

Toxic Substances Control Act (TSCA) – All components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substance List, 40 CFR 302.4:

No components listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories:

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard – No

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): None listed

Section 311 hazardous chemical: None listed

SARA Section 313 (Specific toxic chemical listings): None listed

STATE REGULATIONS:

CR-500A

This SDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986): None listed

Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Aluminum Oxide CASRN: 1344-28-1

SECTION 16: OTHER INFORMATION

Revision Date: October 1, 2020

DISCLAIMER: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any legal liability for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. 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.