

Trade Name: Brown Aluminum Oxide

1 IDENTIFICATION

Product Identifier:	Brown Aluminum Oxide, various grades	
Synonyms:	Brown Fused Aluminum Oxide, Brown Alox, Brown Alumina, Mulgrit	
CAS No. / EC No.:	1344-28-1 / 215-691-6	
Recommended Use:	Product is intended for use in ceramics or refractories, or as an abrasive.	
Use(s) Advised Against:	Contact manufacturer if using product outside of recommended use cases.	
Manufacturer/Supplier:	GNPGraystar 37 John Glenn Dr. Amherst, NY 14228 Ph: 716-759-6600	GNPGraystar 9 Simmonsville Road Bluffton, SC 29910 Ph: 843-815-5600

Emergency Telephone No.: CHEMTREC (US): 1-800-424-9300

All other regions contact your local poison control center or local chemical authority.

2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture:

Classification has been determined in accordance with United States OSHA HCS (29 CFR 1910.1200) requirements and any corresponding Globally Harmonized System (GHS) classification parameters.

Additional Information:

LABEL ELEMENTS

GHS Label Elements

Carcinogenicity

Category 2

Pictograms:



Signal Word: Warning

Hazard-determining components of labeling: See Section 3 for more information.

Hazard Statements: H351 Suspected of causing cancer via inhalation.

Precautionary Statements: P102 Keep out of reach of children.
P203 Obtain, read and follow all safety instructions before use.

P280 Wear face protection when inhalation of dust is possible.

P318 If exposed or concerned, get medical advice.

P405 Store locked up.

P501 Dispose of contents in accordance with all local/regional/ national/international regulations. Do not burn or pulverize for disposal.

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HMIS Ratings (scale 0-4):

Health:	*0
Fire:	0
Reactivity:	0
PPE:	t

NFPA Ratings (scale 0-4):

Health:	0
Fire:	0
Reactivity:	0
Specific Hazard:	N/A

Legend

4 - Extreme
3 - Serious
2 - Moderate
1 - Slight
0 - Minimal

* Indicates a long-term health hazard from repeated or prolonged exposures

Long-Term Health Hazard: Titanium Dioxide (TiO₂), CAS# 13463-67-7

Additional Information: Product form is granules or powder. Titanium dioxide is suspected of being carcinogenic to humans based on animal studies, via inhalation of respirable (< 10 µm in diameter) particles. Titanium dioxide is generally not present in this product as free particles and most particles will not be of respirable size. Per-batch data on percentage of respirable titanium dioxide is not, however, readily available and thus the full percentage of titanium dioxide is included in the Section 3 information on product composition.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: Substance

Physical form: Granules

Identifier	Chemical Name/Description	GHS Hazard(s)	Wt. %
CAS No.: 1344-28-1 EC No.: 215-691-6	Aluminum Oxide, Al ₂ O ₃	N/A	> 95
CAS No.: 13463-67-7 EC No.: 236-675-5	Titanium Dioxide, TiO ₂	Carcinogenicity, Cat. 2	< 4

Traces of other mineral components may be present as contaminants. Trace mineral contaminants may be hazardous on their own but present in concentrations below reporting and hazard classification levels. Classified hazard categories for this product are based on repeated and/or long-term exposures to respirable particles of the product.

4 FIRST AID MEASURES

General Information:

No special measures required.

After inhalation:

Supply fresh air; get medical advice if symptoms occur. Provide oxygen treatment if affected person has difficulty breathing.

After contact with eyes:

Not considered to be an eye irritant. Irrigate with large quantities of water for at least 10 minutes. Remove contact lenses if present and easy to do so. Seek medical help if persistent irritation or tissue damage occur.

After skin contact:

Wash with plenty of soap and water. Skin irritation or sensitization is not anticipated to be a common symptom of exposure. If skin symptoms occur and persist, get medical help.

After swallowing:

Rinse mouth with water and seek medical advice. Material is not intended for ingestion: preparation and consumption of food or drink should not be allowed in work areas.

Key symptoms and effects, both acute and delayed:

Coughing or other difficulty breathing may occur after severe or prolonged inhalation of product dusts. Pain, difficulty breathing, or

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Indication(s) of need for immediate medical help:

other symptoms may be felt after long-term exposures. Product dusts may cause cancer via long-term inhalation exposure.

Seek immediate medical help if any of the above key symptoms occur. Cancer may lead to fatigue/exhaustion or unintentional changes in body weight: seek immediate medical advice if these symptoms occur.

5 FIREFIGHTING MEASURES

Flash point: N/A

UEL: N/A

LEL: N/A

Auto-ignition temperature:

Not applicable to this product.

Flammability:

Not flammable or combustible. Product will not burn.

Extinguishing media:

Use any suitable media for the environment in which the fire or conflagration is taking place. Be mindful of any surrounding flammable/combustible materials. High volume water jet not preferred due to potential to spread fire.

Hazardous decomposition products:

Metal oxide smoke may be produced if product material is adjacent to or within an active conflagration.

Firefighting instructions:

Firefighters and other involved individuals should wear self-contained breathing apparatuses and be aware of any flammable/combustible substances involved in the fire.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

No special measures required. Per general best practices: wear protective clothing, ensure adequate ventilation, avoid dust formation, use respiratory protective devices when anticipating fumes or dusts, and avoid contact with the eyes and skin where possible. For large spills, take precautions against dust inhalation exposure via respirator or other inhalation protection device.

Environmental precautions:

Prevent from entering drains or water courses. Do not allow to enter soil.

Methods and material for containment and cleanup:

Avoid formation of dust. Pick up mechanically. Ensure adequate ventilation. Store in suitable receptacles for recovery or disposal. Verify compliance with local regulations for waste disposal.

Other information:

See Section 7 for additional information on safe handling.
See Section 8 for additional information on personal protective equipment.
See Section 13 for additional information on disposal.

7 HANDLING AND STORAGE

Precautions for safe handling:

Prevent dust formation. Any deposit of dust that cannot be prevented should be removed regularly. Do not dry clean dust-covered objects and floors: wash thoroughly with plenty of water. Use only in well-ventilated areas.

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Information about protection against explosions and fires:

No special measures required.

Requirements for storerooms and receptacles:

Storage should occur in cool, dry, well-ventilated areas.

Information regarding storage in common storage facility:

No special measures required.

Further information about storage conditions:

No additional information available.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Applicable component occupational exposure limits requiring monitoring at the workplace:

Nuisance Dusts

OSHA PEL, TWA (8-hr): 15 mg/m³ (total), 5 mg/m³ (respirable)

California: CAL/OSHA PEL, TWA (8-hr): 10 mg/m³ (total), 5 mg/m³ (respirable)

Aluminum Oxide, Al₂O₃ (CAS# 1344-28-1)

OSHA PEL, TWA (8-hr): 15 mg/m³ (total), 5 mg/m³ (respirable)

ACGIH TLV, TWA (8-hr): 1 mg/m³ (respirable particulate matter)

California: CAL/OSHA PEL, TWA (8-hr): 10 mg/m³ (total), 5 mg/m³ (respirable)

Titanium Dioxide (TiO₂), CAS# 13463-67-7

OSHA PEL, TWA (8-hr): 15 mg/m³ (total)

ACGIH TLV, TWA (8-hr): Nanoscale: 0.2 mg/m³ (respirable particulate matter)

Finescale: 2.5 mg/m³ (respirable particulate matter)

California: CAL/OSHA PEL, TWA (8-hr): 10 mg/m³ (total), 5 mg/m³ (respirable)

Additional limit information:

No additional information available at time of document creation.

Engineering controls:

Ensure good ventilation/exhaustion in the workplace.

Risk management:

No special measures required.

PERSONAL PROTECTIVE EQUIPMENT

Breathing equipment:

Use suitable respiratory protective devices when airborne dusts present, i.e. N95 dust mask.

Hand protection:

Wear protective gloves to ensure against mechanical hazards.

Eye protection:

Wear safety glasses or goggles to protect against eye exposure.

Body protection:

Wear general protective work clothing.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Granulate or Powder

Trade Name: Brown Aluminum Oxide

Color:	Brown
Odor:	None
Odor threshold:	No data available.
pH:	No data available.
Melting/Freezing point:	3,722°F (2,050°C)
Initial boiling point:	No data available.
Boiling point range:	No data available.
Flash point:	Not applicable.
Flammability:	Product is not flammable/combustible and will not burn.
Upper explosive limit:	Not applicable.
Lower explosive limit:	No applicable.
Auto-ignition temperature:	Not applicable.
Evaporation rate:	Not applicable.
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Relative density:	3.00 - 4.00, Water = 1.00 at 68°F (20°C)
Water solubility:	Insoluble in water.
Partition coefficient:	No data available.
Kinematic viscosity:	No data available.
Particle characteristics:	Granule or Powder size: various

10 STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided:	No decomposition anticipated under standard use, transport and storage conditions. May separate into individual components under extreme heat.
Hazardous reaction potential:	No hazardous reactions anticipated.
Incompatible materials:	Reacts with strong acids, oxidizing agents, and strong bases.
Hazardous decomposition products:	May produce metal oxide smoke in the event of fire.
Other Information:	No additional information available at time of document authoring.

11 TOXICOLOGICAL INFORMATION

Component LC₅₀/LD₅₀ values relevant for classification: None	
Probable routes of exposure:	Dust inhalation, accidental ingestion, direct skin/eye contact
Effects on skin:	No relevant effects known
Effects on eye:	Slight irritation may occur with direct eye contact.
Inhalation effects:	Repeated or long-term inhalation of dusts may cause pulmonary disease.
Ingestion effects:	No relevant effects known
Sensitization effects:	No relevant effects known
Subacute/chronic toxicity:	Long-term exposure to free respirable titanium dioxide is suspected of causing cancer and tumor development in humans.

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Carcinogenicity:

NTP Listing Status: Not listed

IARC Listing Status: Titanium dioxide - Listed as Category 2B (possibly carcinogenic to humans)

OSHA Listing Status: Titanium dioxide - Listed as a carcinogen

Cell mutagenicity: No data available.

Reproductive effects: No data available.

12 ECOLOGICAL INFORMATION

Aquatic toxicity: Product not determined to be toxic to the aquatic environment.

Persistence and degradability: Inorganic product, not eliminable from water by biological means.

Results of PBT assessment: No data available

Results of vPvB assessment: No data available

LogK_{ow} , BCF values: No data available

Bioaccumulative potential: No significant accumulation in organisms.

Mobility in soil: No relevant information available at time of document authoring.

Other adverse effects: No relevant information available at time of document authoring.

Additional information: No relevant information available at time of document authoring.

13 DISPOSAL CONSIDERATION

Waste treatment methods:

Do not dispose of product via sewage system or other liquid waste streams. Product not typically designable as household or general waste. Contact your local hazardous waste disposal authority to determine necessary steps for disposal in your locality.

Contaminated packaging:

Contaminated packaging should be scrubbed clean prior to disposal if possible. Else follow all applicable local, state, and federal regulations for container disposal.

Additional information:

Refer to Section 8 for exposure controls, personal protective equipment

14 TRANSPORT INFORMATION

DOT (US) Not regulated for transport

IMDG/IMO Not regulated for transport

IATA Not regulated for transport

General Information: No additional information.

15 REGULATORY INFORMATION

SARA 355 Components: Not listed

SARA 313 Components: Not listed

TSCA listing status: Listed

Determinations of carcinogenic status:

California Prop. 65: Titanium dioxide (CAS No. 13463-67-7) is known to the state of California to cause cancer when present as airborne, unbound particles of respirable size.

EPA: No component listed

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IARC: Titanium dioxide - Listed as Category 2B (possibly carcinogenic to humans)

ACGIH: Titanium dioxide - Listed as Category A3 (confirmed animal carcinogen with unknown relevance to humans)

NIOSH: Titanium dioxide - Listed as a potential occupational carcinogen
Minnesota: Titanium Dioxide

Other state right-to-know listings:
New Jersey: Aluminum Oxide, Titanium Dioxide
New York City: Aluminum Oxide, Titanium Dioxide
Rhode Island: Aluminum Oxide, Titanium Dioxide

Information pertaining to Canadian regulations:

Canadian Domestic Substances List: All product components are listed.

Other regulations, limitations, and prohibitive regulations: This product has been classified in accordance with hazard criteria of the Hazardous Products Regulations, SOR/2015-17.

16 OTHER INFORMATION

All information provided is based on GNPGraystar's present knowledge and understanding of this product and any applicable regulations and data. Any information provided does not constitute a guarantee for specific product features nor does it establish a legally valid contractual relationship.

Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
DOT (US)	Department of Transportation (United States)
EPA	Environmental Protection Agency (United States)
HMIS	Hazardous Materials Identification System (United States)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG/IMO	International Maritime Dangerous Goods/International Maritime Organization
NFPA	National Fire Protection Association (United States)
NIOSH	National Institute for Occupational Safety and Health (United States)
NTP	National Toxicology Program (United States)
OSHA	Occupational Safety and Health Administration (United States)
PEL	Permissible Exposure Limit
SARA	Superfund Amendment and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time-Weighted Average

NOTICE: This safety data sheet complements technical data sheets but does not replace them. The information contained within is based on our present knowledge of the product on the document revision date. All information provided is done so in good faith. Product users should be warned

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about the risks associated with using the product for a different purpose than that for which it was intended as stated within this safety data sheet and any associated technical data sheets.

GNPGraystar does not provide advice or indicate qualification for giving advice for uses outside of stated intended use cases. Statements regarding applicable regulations are provided to help users meet their regulatory obligations when using this product. Statements are not exhaustive of all potential regulatory parameters a user may be bound by and does not exempt users from ensuring their own compliance with applicable regulations regarding handling, use, and storage of the product, for which they are solely responsible.

Date of Preparation: May 3, 2023