



Brown Aluminum Oxide

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Date of Issue: 6/19/2023

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Brown Aluminum Oxide

1.2. Intended Use of the Product

Use of the Substance/Mixture: Consult the supplier

1.3. Name, Address, and Telephone of the Responsible Party

Company

K-Deer LA, Inc
9358 Stephens St.
Pico Rivera, CA 90680
562-568-0588
sales@kdeerla.com

1.4. Emergency Telephone Number

Emergency Number : ChemTel LLC
1 (800)255-3924 (North America)
+1 (813)248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Carc. 2 H351

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



GHS08

Signal Word (GHS-US) :

Warning

Hazard Statements (GHS-US) :

H351 - Suspected of causing cancer (Inhalation).

Precautionary Statements (GHS-US) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, and eye protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	%
Aluminum oxide (Al ₂ O ₃)	Aluminum oxide / .alpha.-Alumina / Alumina / Aluminium oxide / Aluminium oxide (Al ₂ O ₃) / .alpha.-Aluminum oxide / Alundum / Dialuminium trioxide / Dialuminum trioxide	(CAS-No.) 1344-28-1	~96
Titanium dioxide	C.I. 77891 / C.I. Pigment White 6 / Titanium oxide (TiO ₂) / Titanium(IV) oxide / C.I. Pigment White 7 / Pigment White 6 / Titanium dioxide nanoparticles / Titanium oxide	(CAS-No.) 13463-67-7	< 2.5
Silica, amorphous	Amorphous silica / Silica / Silica, amorphous, fumed / Silica, colloidal / Silicon dioxide / Silicon dioxide, amorphous / Silicon(IV) oxide / Un-crystalline silica / Pigment White 27 / Silicon dioxide (amorphous) / Silicon dioxide amorphous / Silicon(IV)oxide / Silica amorphous / Fumed silica / SOLUM DIATOMEAE	(CAS-No.) 7631-86-9	< 0.9

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Iron oxide (Fe2O3)	C.I. 77491 / C.I. Pigment Red 101 / Diiron trioxide / Ferric oxide / Iron sesquioxide / Iron(III) oxide / Red Iron Oxide / Rouge / Iron trioxide / Sienna / Pigment Red 101 / Red iron oxide / Red iron oxide pigment / Iron Oxide Red / Diiron(III) trioxide / Iron oxide / Ferric oxide red / Iron oxide, red	(CAS-No.) 1309-37-1	< 0.15
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SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: 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: When symptoms occur: go into open air and ventilate suspected area. Encourage exposed person to cough, spit out, and blow nose to remove dust. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Brush off any particles from skin and wash affected area with soap and water. If skin irritation occurs, obtain medical attention

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. Repeated or prolonged exposure to titanium dioxide dust via inhalation is suspected of causing cancer of the respiratory tract.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Repeated or prolonged exposure to titanium dioxide dust via inhalation is suspected of causing cancer of the respiratory tract.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use fire extinguisher with class B rating.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Aluminum oxides. Iron oxides. Silicon oxides. Titanium oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Avoid generating dust. Do not breathe dust.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

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6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe dust.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Consult the supplier

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Aluminum oxide (Al ₂ O ₃) (1344-28-1)		
USA ACGIH	ACGIH OEL TWA	10 mg/m ³
USA OSHA	OSHA PEL TWA	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Silica, amorphous (7631-86-9)		
USA NIOSH	NIOSH REL TWA	6 mg/m ³
USA IDLH	IDLH	3000 mg/m ³
USA OSHA	OSHA PEL TWA	6 mg/m ³
USA OSHA	OSHA PEL TWA	20 mppcf (80mg/m ³ /%SiO ₂)
Iron oxide (Fe ₂ O ₃) (1309-37-1)		
USA ACGIH	ACGIH OEL TWA	5 mg/m ³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL TWA	5 mg/m ³ (dust and fume)
USA IDLH	IDLH	2500 mg/m ³ (dust and fume)
USA OSHA	OSHA PEL TWA	10 mg/m ³ (fume) 15 mg/m ³ (total dust (Rouge)) 5 mg/m ³ (respirable fraction (Rouge))
Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH OEL TWA	10 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL TWA	2.4 mg/m ³ (CIB 63-fine) 0.3 mg/m ³ (CIB 63-ultrafine, including engineered nanoscale)
USA IDLH	IDLH	5000 mg/m ³
USA OSHA	OSHA PEL TWA	15 mg/m ³ (total dust)

8.2. Exposure Controls

Appropriate Engineering Controls

: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing Hand Protection

: Chemically resistant materials and fabrics.
: Wear protective gloves.

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Eye and Face Protection	: Chemical safety goggles.
Skin and Body Protection	: Wear suitable protective clothing.
Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
Other Information	: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Course to medium sizes: Brown Finer sizes: Tan
Odor	: Odorless
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: 4892 °C (8837.6 °F)
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Density	: ≥ 1.67 g/cc
Solubility	: Water: insoluble
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** As the product is supplied, a dust explosion from handling the product is not likely to occur. However, enrichment with fine dust causes risk of dust explosion.
- 10.4. Conditions to Avoid:** Avoid formation of concentrated dusts suspended in air.
- 10.5. Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. Hazardous Decomposition Products:** Thermal decomposition may produce: Oxides of aluminum. Oxides of iron. Oxides of titanium. Silicon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

Aluminum oxide (Al ₂ O ₃) (1344-28-1)	
LD50 Oral Rat	> 15900 mg/kg
LC50 Inhalation Rat	> 2.3 mg/l/4h
Silica, amorphous (7631-86-9)	
LD50 Oral Rat	7900 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg (No deaths)
Iron oxide (Fe ₂ O ₃) (1309-37-1)	
LD50 Oral Rat	> 10000 mg/kg
Titanium dioxide (13463-67-7)	
LD50 Oral Rat	> 10000 mg/kg

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Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer (Inhalation).

Silica, amorphous (7631-86-9)	
IARC group	3
Iron oxide (Fe₂O₃) (1309-37-1)	
IARC group	3
Titanium dioxide (13463-67-7)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. Repeated or prolonged exposure to titanium dioxide dust via inhalation is suspected of causing cancer of the respiratory tract.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Repeated or prolonged exposure to titanium dioxide dust via inhalation is suspected of causing cancer of the respiratory tract.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

Aluminum oxide (Al₂O₃) (1344-28-1)	
LC50 Fish	> 100 mg/l
EC50 Crustacea	> 100 mg/l
ErC50 Algae	> 100 mg/l
NOEC (Acute)	> 50 mg/l
Silica, amorphous (7631-86-9)	
LC50 Fish	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Crustacea	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)
Iron oxide (Fe₂O₃) (1309-37-1)	
LC50 Fish	100000 mg/l (Exposure time: 96 h - Species: Danio rerio [static])

12.2. Persistence and Degradability

Brown Aluminum Oxide	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Brown Aluminum Oxide	
Bioaccumulative Potential	Not established.
Silica, amorphous (7631-86-9)	
BCF Fish	(no bioaccumulation expected)

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

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SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

- 14.1. **In Accordance with DOT** Not regulated for transport
- 14.2. **In Accordance with IMDG** Not regulated for transport
- 14.3. **In Accordance with IATA** Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Brown Aluminum Oxide	
SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity
Aluminum oxide (Al₂O₃) (1344-28-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 % (fibrous forms)
Silica, amorphous (7631-86-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Iron oxide (Fe₂O₃) (1309-37-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Titanium dioxide (13463-67-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Aluminum oxide (Al₂O₃) (1344-28-1)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Silica, amorphous (7631-86-9)
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
Iron oxide (Fe₂O₃) (1309-37-1)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
Titanium dioxide (13463-67-7)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 06/19/2023
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Carc. 2	Carcinogenicity Category 2
H351	Suspected of causing cancer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)