

SECTION 1: Identification

1.1. Product identifier

Product form : Substance
Substance name : Levigated Alumina
Product code : 40-6435-080

1.2. Recommended use and restrictions on use

Recommended use : Laboratory chemicals
Restrictions on use : None known

1.3. Supplier

Buehler
41 Waukegan Rd
Lake Bluff, IL 60044
T 1-847-295-6500
custserv@buehler.com

1.4. Emergency telephone number

Emergency number : Global Access Code: 334545; Americas" +1 760 476 3962; Middle East/Africa: +1 760 476 3959;
Asia Pacific +1 760 476 3960; Europe +1 760 476 3961

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Not classified.

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Levigated Alumina

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Name	Chemical name/Synonyms	Product identifier	wt%	Classification (GHS CA)
Aluminum oxide (Al ₂ O ₃)	Aluminum oxide / .alpha.-Alumina / Alumina / Aluminium oxide / Aluminium oxide (Al ₂ O ₃) / .alpha.-Aluminum oxide / Alundum / ALUMINA / Dialuminium trioxide / Dialuminum trioxide	CAS-No.: 1344-28-1	≥ 98.7	Not classified.
Calcium oxide	Lime / Quicklime / CALCIUM OXIDE / Quicklime (CaO) / Calcium oxide (CaO)	CAS-No.: 1305-78-8	< 0.3	Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335 HHNOC 1
Iron oxide (Fe ₂ O ₃)	C.I. 77491 / C.I. Pigment Red 101 / Diiron trioxide / Ferric oxide / Iron sesquioxide / Iron(III) oxide / Red Iron Oxide / Rouge / CI 77491 / Iron trioxide / Sienna / Pigment Red 101 / Red iron oxide / Red iron oxide pigment / Iron Oxide Red / Diiron(III) trioxide / Iron oxide	CAS-No.: 1309-37-1	< 0.2	Not classified.

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

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

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4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : Not determined.

5.3. Specific hazards arising from the hazardous product

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Aluminum oxide (Al₂O₃) (1344-28-1)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
Canada (Quebec) - Occupational Exposure Limits	
VEMP (OEL TWA)	10 mg/m ³ (containing no Asbestos and <1% Crystalline silica-total dust)
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline silica)
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
OEL STEL	20 mg/m ³
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
OEL STEL	20 mg/m ³
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
OEL STEL	20 mg/m ³
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA	30 mppcf (Al ₂ O ₃) 10 mg/m ³ (Al ₂ O ₃)
OEL STEL	20 mg/m ³ (Al ₂ O ₃)
Calcium oxide (1305-78-8)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Quebec) - Occupational Exposure Limits	
VEMP (OEL TWA)	2 mg/m ³
Canada (British Columbia) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Manitoba) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
OEL STEL	4 mg/m ³

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Calcium oxide (1305-78-8)	
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
OEL STEL	4 mg/m ³
Canada (Ontario) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
OEL STEL	4 mg/m ³
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
OEL STEL	4 mg/m ³
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 mg/m ³
Iron oxide (Fe₂O₃) (1309-37-1)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable)
Canada (Quebec) - Occupational Exposure Limits	
VEMP (OEL TWA)	5 mg/m ³ (dust and fume) 10 mg/m ³ (containing no Asbestos and <1% Crystalline silica, regulated under Rouge-total dust)
Canada (British Columbia) - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (regulated under Rouge-total particulate (Rouge)) 3 mg/m ³ (regulated under Rouge: particulate matter containing no Asbestos and <1% Crystalline silica-respirable particulate (Rouge)) 5 mg/m ³ (dust and fume)
OEL STEL	10 mg/m ³ (fume)
Canada (Manitoba) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable particulate matter)
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline silica, dust and fume) 10 mg/m ³ (regulated under Rouge-particulate matter containing no Asbestos and <1% Crystalline silica)
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable particulate matter)
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable particulate matter)

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Iron oxide (Fe₂O₃) (1309-37-1)	
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)
OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)
OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Canada (Ontario) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable)
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (respirable particulate matter)
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (dust and fume) 10 mg/m ³ (regulated under Rouge)
OEL STEL	10 mg/m ³ (dust and fume) 20 mg/m ³ (regulated under Rouge)
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (fume) 30 mppcf (regulated under Rouge) 10 mg/m ³ (regulated under Rouge)
OEL STEL	10 mg/m ³ (fume) 20 mg/m ³ (regulated under Rouge)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m ³ (respirable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid.
Colour	: White
Odour	: Odourless
Odour threshold	: No data available
pH	: 8 – 9.5
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: > 2000 °C
Freezing point	: Not applicable
Boiling point	: > 2900 °C
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 3.9
Solubility	: Insoluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: Strong oxidizing agents.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

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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 (Al₂O₃) (1344-28-1)

LD50 oral rat	> 5000 mg/kg
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Iron oxide (Fe₂O₃) (1309-37-1)

LD50 oral rat	> 10000 mg/kg
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Skin corrosion/irritation : Not classified.
pH: 8 – 9.5
Serious eye damage/irritation : Not classified.
pH: 8 – 9.5
Respiratory or skin sensitization : Not classified.
Germ cell mutagenicity : Not classified.
Carcinogenicity : Not classified.
Reproductive toxicity : Not classified.
STOT-single exposure : Not classified.

Calcium oxide (1305-78-8)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified.
Aspiration hazard : Not classified.

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Viscosity, kinematic	Not applicable
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified.
Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Calcium oxide (1305-78-8)

LC50 - Fish [1]	1070 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])
BCF - Fish [1]	(no bioaccumulation)

Iron oxide (Fe₂O₃) (1309-37-1)

LC50 - Fish [1]	100000 mg/l (Exposure time: 96 h - Species: Danio rerio [static])
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12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

Calcium oxide (1305-78-8)

BCF - Fish [1]	(no bioaccumulation)
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with TDG / DOT / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (TDG)	: Not applicable
Proper Shipping Name (DOT)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

14.3. Transport hazard class(es)

TDG
Transport hazard class(es) (TDG) : Not applicable

DOT
Transport hazard class(es) (DOT) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (TDG)	: Not applicable
Packing group (DOT)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

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14.6. Special precautions for user

TDG

No data available

DOT

No data available

IMDG

No data available

IATA

No data available

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

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

Aluminum oxide (Al₂O₃) (1344-28-1)

Listed on the Canadian DSL (Domestic Substances List)

Calcium oxide (1305-78-8)

Listed on the Canadian DSL (Domestic Substances List)

Iron oxide (Fe₂O₃) (1309-37-1)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Aluminum oxide (Al₂O₃) (1344-28-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Calcium oxide (1305-78-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)

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Iron oxide (Fe₂O₃) (1309-37-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
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Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16: Other information

Issue date : 06/21/2022
Revision date : 06/21/2022

Full text of H-statements:

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Safety Data Sheet (SDS), Canada

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