



SAFETY DATA SHEET ALORODE

1. Identification

Product identifier

Product name ALORODE

Product number 4750

Recommended use of the chemical and restrictions on use

Application Industrial Use

Details of the supplier of the safety data sheet

Supplier SIFCO Applied Surface Concepts
5708 E. Schaaf Road
Independence, Ohio 44131
U.S.A.
Tel.: +1 216-524-0099
Fax: +1 216-524-6331
E-Mail: info@sifcoasc.com

Emergency telephone number

Emergency telephone CHEMTREC (United States) (800) 424-9300; CHEMTREC (International) +1 703-527-3887

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Acute Tox. 3 - H331 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Muta. 1B - H340 Carc. 1A - H350 Repr. 2 - H361f STOT RE 1 - H372

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Pictogram



Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary statements	P260 Do not breathe vapor/ spray.
	P264 Wash contaminated skin thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
	P284 [In case of inadequate ventilation] wear respiratory protection.
	P302+P352 If on skin: Wash with plenty of water.
	P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P403+P233 Store in a well-ventilated place. Keep container tightly closed.
	P501 Dispose of contents/ container in accordance with national regulations.
P301+P310 If swallowed: Immediately call a poison center/ doctor.	

Contains 6.3%, CHROMIUM TRIOXIDE

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

SULPHAMIC ACID	5-10%
CAS number: 5329-14-6	
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Aquatic Chronic 3 - H412	
MAGNESIUM SULPHATE	5-10%
CAS number: 10034-99-8	
Classification	
Not Classified	
SULPHURIC ACID 6.3%	5-10%
CAS number: 7664-93-9	
Classification	
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	

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CHROMIUM TRIOXIDE	1-5%
CAS number: 1333-82-0	
M factor (Acute) = 10	M factor (Chronic) = 10
Classification Ox. Sol. 1 - H271 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 2 - H330 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Muta. 1B - H340 Carc. 1A - H350 Repr. 2 - H361f STOT SE 3 - H335 STOT RE 1 - H372 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Get medical attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes and get medical attention.
Eye contact	Remove affected person from source of contamination. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

Most important symptoms and effects, both acute and delayed

Inhalation	Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory system irritation. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.
Skin contact	May cause serious chemical burns to the skin. May cause an allergic skin reaction.
Eye contact	Causes severe burns. May cause serious eye damage.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Special hazards arising from the substance or mixture

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Specific hazards Toxic and corrosive gases or vapors.

Advice for firefighters

Protective actions during firefighting Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapors. Provide adequate general and local exhaust ventilation.

Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses. Collect and dispose of spillage as indicated in Section 13. Wash thoroughly after dealing with a spillage.

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapors and spray/mists. Provide adequate general and local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight.

Storage class Toxic storage. Corrosive storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

SULPHURIC ACID 6.3%

Long-term exposure limit (8-hour TWA): ACGIH 0.2 mg/m³ thoracic fraction

Long-term exposure limit (8-hour TWA): OSHA 1 mg/m³

A2

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A2 = Suspected Human Carcinogen.

Exposure controls

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Protective equipment



Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection

Tight-fitting safety glasses.

Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. It is recommended that gloves are made of the following material: Nitrile rubber.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Red.
Odor	No characteristic odor.
pH	pH (concentrated solution): 0-1
Relative density	1.148-1.152 @ 20°C
Other information	Not available.

10. Stability and reactivity

Reactivity	Reacts with alkalis and generates heat.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Not determined.
Conditions to avoid	Reacts with alkalis and generates heat. Avoid contact with strong reducing agents.
Materials to avoid	Strong alkalis. Strong reducing agents.
Hazardous decomposition products	None at ambient temperatures.

11. Toxicological information

Information on toxicological effects

ALORODE**Acute toxicity - oral**

ATE oral (mg/kg) 2,380.95

Acute toxicity - dermal

ATE dermal (mg/kg) 7,142.86

Acute toxicity - inhalation

ATE inhalation (gases ppm) 2,380.95

ATE inhalation (vapours mg/l) 11.9

ATE inhalation (dusts/mists mg/l) 1.19

Inhalation

Vapors may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Suspected to increase risk of cancer. May cause sensitisation by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Toxic if inhaled.

Ingestion

May cause chemical burns in mouth, esophagus and stomach. May cause severe internal injury.

Skin Contact

Causes burns. May cause an allergic skin reaction. May cause sensitisation by skin contact.

Eye contact

Causes burns. Risk of serious damage to eyes.

Acute and chronic health hazards

This chemical can be hazardous when inhaled and/or touched. Known or suspected carcinogen for humans.

Route of entry

Ingestion Inhalation Skin and/or eye contact

Toxicological information on ingredients.**SULPHAMIC ACID****Acute toxicity - oral**Acute toxicity oral (LD₅₀ mg/kg) 3,160.0

Species Rat

ATE oral (mg/kg) 3,160.0

SULPHURIC ACID 6.3%**Acute toxicity - oral**Acute toxicity oral (LD₅₀ mg/kg) 2,140.0

Species Rat

ATE oral (mg/kg) 2,140.0

CHROMIUM TRIOXIDE**Acute toxicity - oral**

ATE oral (mg/kg) 100.0

Acute toxicity - dermal

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ATE dermal (mg/kg) 300.0

12. Ecological Information

Ecotoxicity Dangerous for the environment. May cause long-term adverse effects in the aquatic environment.

Toxicity No data available.

Ecological information on ingredients.

SULPHAMIC ACID

Acute toxicity - fish LC₅₀, 70.3 hour: mg/l, Pimephales promelas (Fat-head Minnow)

MAGNESIUM SULPHATE

Acute toxicity - fish LC₅₀, 96 hour: 2610-3080 mg/l, Freshwater fish
LC₅₀, 24 hour: 19000 mg/l, Freshwater fish

Acute toxicity - microorganisms Algae
EC₅₀, 2700 : 72 mg/l,

SULPHURIC ACID 6.3%

Acute toxicity - fish LC₅₀, 96 hours: 42 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, : 29 mg/l, Daphnia magna

CHROMIUM TRIOXIDE

Acute aquatic toxicity

LE(C)₅₀ 0.01 < L(E)C₅₀ ≤ 0.1

M factor (Acute) 10

Acute toxicity - fish LC₅₀, 96 hours: 40 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.31 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 1.0 mg/l, Algae

Chronic aquatic toxicity

M factor (Chronic) 10

Persistence and degradability

Persistence and degradability No data available.

Bioaccumulative potential

Bio-Accumulative Potential The product does not contain any substances expected to be bioaccumulating.

Mobility in soil

Mobility The product is soluble in water.

Other adverse effects

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Other adverse effects Not determined.

13. Disposal considerations

Waste treatment methods

General information Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

14. Transport information

UN Number

UN No. (TDG) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

UN No. (DOT) 1760

UN proper shipping name

Proper shipping name (TDG) CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID, CHROMIUM TRIOXIDE)

Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID, CHROMIUM TRIOXIDE)

Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID, CHROMIUM TRIOXIDE)

Proper shipping name (DOT) CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID, CHROMIUM TRIOXIDE)

Transport hazard class(es)

TDG class 8

TDG label(s) 8

IMDG Class 8

ICAO class/division 8

Transport labels



Packing group

TDG Packing Group III

IMDG packing group III

ICAO packing group III

DOT packing group III

Environmental hazards

Environmentally Hazardous Substance



Special precautions for user

EmS F-A, S-B

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Transport in bulk according to No information required.
Annex II of MARPOL 73/78
and the IBC Code

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

Sulphuric Acid 1000 lbs

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Sulphuric Acid
Final CERCLA RQ: 1000 lbs

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

Sulphuric Acid
EPCRA RQ: 1000 lbs

SARA 313 Emission Reporting

Chromium Trioxide
Sulphuric Acid

CAA Accidental Release Prevention

Chromium Trioxide

SARA (311/312) Hazard Categories

Acute
Chronic

OSHA Highly Hazardous Chemicals

Exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Chromium Trioxide

California Directors List of Hazardous Substances

Sulphuric Acid

Inventories

US - TSCA

All ingredients are present.

16. Other information

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Classification abbreviations and acronyms	Acute Tox. = Acute toxicity Carc. = Carcinogenicity Eye Dam. = Serious eye damage Eye Irrit. = Eye irritation Flam. Liq. = Flammable liquid Muta. = Germ cell mutagenicity Repr. = Reproductive toxicity Resp. Sens. = Respiratory sensitisation Skin Corr. = Skin corrosion Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation STOT RE = Specific target organ toxicity-repeated exposure STOT SE = Specific target organ toxicity-single exposure
Revision date	7/13/2017
Revision	2
Hazard statements in full	H271 May cause fire or explosion; strong oxidizer. H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H330 Fatal if inhaled. H331 Toxic if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H340 May cause genetic defects. H350 May cause cancer. H361f Suspected of damaging fertility. H372 Causes damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
NFPA - instability hazard	Normally stable. (0)
NFPA - health hazard	Extremely hazardous, serious injury. (3)
NFPA - flammability hazard	Will not burn. (0)

The Information in this data sheet is believed to be correct but neither we nor our employees or agents give any warranty or make any representation to the accuracy thereof and accept no liability for any loss, injury or damage which may result in it's use. The sole purpose of this data sheet is to provide guidance on the safe handling and use of the products to which it relates. It does not form part of any product specification nor part of any contract. It is not practical for the guidance and information in this data sheet to cover every conceivable application of a product and as we may not be aware of the use to which the products covered by this data sheet are to be put it remains the responsibility of the user to conduct it's own tests and to satisfy itself as to the suitability of the product.