

SAFETY DATA SHEET

Version 4.12
 Revision Date 12/02/2015
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Drierite™

Product Number : 238945

Brand : Sigma-Aldrich

Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.
 2149 Winston Park Drive
 OAKVILLE ON L6H 6J8
 CANADA

Manufacturer : Sigma-Aldrich Corporation
 3050 Spruce St.
 St. Louis, Missouri 63103
 USA

Telephone : +1 9058299500

Fax : +1 9058299292

Emergency Phone # (For both supplier and manufacturer) : +1-703-527-3887 (CHEMTREC)

Preparation Information : Sigma-Aldrich Corporation
 Product Safety - Americas Region
 1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification

Not controlled.

Not a hazardous substance or mixture.

HMIS Classification

Health hazard: 0

Flammability: 0

Physical hazards: 0

Potential Health Effects

Inhalation : May be harmful if inhaled. May cause respiratory tract irritation.

Skin : May be harmful if absorbed through skin. May cause skin irritation.

Eyes : May cause eye irritation.

Ingestion : May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Calcium sulfate

Formula : CaO₄S

Molecular weight : 136.14 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Calcium sulfate			
7778-18-9	231-900-3	-	<=100%

4. FIRST AID MEASURES

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIREFIGHTING MEASURES**Conditions of flammability**

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Calcium oxide

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Avoid dust formation. Avoid breathing vapours, mist or gas.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Calcium sulfate	7778-18-9	TWA	10.000000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWAEV	5 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
Remarks	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWAEV	5.000000	Québec. Regulation respecting occupational health

			mg/m3	and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWA	10.000000 mg/m3	Canada. British Columbia OEL
	The 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m3 for the respirable fraction.			
		TWAEV	10.000000 mg/m3	Canada. Ontario OELs
		TWAEV	10 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWAEV	10.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWA	10.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	10.000000 mg/m3	Canada. Ontario OELs
		TWA	10.000000 mg/m3	Canada. British Columbia OEL
		TWA	10.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	5.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWAEV	10.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWA	10.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
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		TWA	10.000000	USA. ACGIH Threshold Limit Values (TLV)

			mg/m ³	
		TWA	10.000000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	10 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form granules

Colour beige

Safety data

pH No data available

Melting point/freezing point No data available

Boiling point No data available

Flash point Not applicable

Ignition temperature No data available

Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	2.960 g/cm ³
Water solubility	2.4 g/l at 20 °C (68 °F) - OECD Test Guideline 105
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Avoid moisture.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Calcium oxide

Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - Rat - female - > 1,581 mg/kg

Inhalation LC50

LC50 Inhalation - Rat - male and female - 4 h - > 3.26 mg/l

Dermal LD50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin - Rabbit - No skin irritation - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - Rabbit - No eye irritation - OECD Test Guideline 405

Respiratory or skin sensitisation

Buehler Test - Guinea pig - OECD Test Guideline 406 - Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Genotoxicity in vitro - in vitro assay - S. typhimurium - with and without metabolic activation - negative

Genotoxicity in vivo - Mouse - male - Feed - negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

No data available

Additional Information

Repeated dose toxicity - Rat - male - Gavage - No observed adverse effect level - 79 mg/kg - Lowest observed adverse effect level - 237 mg/kg
RTECS: WS6920000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Lepomis macrochirus - 2,980 mg/l - 96 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**WHMIS Classification**

Not controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION**Further information**

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