

Material Safety Data Sheet

Version 5.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Drierite™

Product Number : 238988

Brand : Sigma-Aldrich

Supplier : Sigma-Aldrich
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USA

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Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

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

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Carcinogen, Target Organ Effect, Toxic by ingestion, Respiratory sensitiser, Skin sensitiser, Mutagen

Target Organs

Thyroid, Heart, Male reproductive system., Blood, Kidney, Pancreas.

GHS Classification

Respiratory sensitization (Category 1)

Skin sensitization (Category 1)

Acute aquatic toxicity (Category 2)

Chronic aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H317

May cause an allergic skin reaction.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H411

Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273

Avoid release to the environment.

P280

Wear protective gloves.

P342 + P311

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:

2

Chronic Health Hazard:

*

Flammability:

0

Physical hazards: 0
NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 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 Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Calcium sulfate

Formula : CaO_4S

Molecular Weight : 136.14 g/mol

Component		Classification	Concentration
Calcium sulfate			
CAS-No.	7778-18-9		90 - 100 %
EC-No.	231-900-3		
Cobalt dichloride			
CAS-No.	7646-79-9	Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H317, H334, H341, H350i, H360F, H410	1 - 5 %
EC-No.	231-589-4		
Index-No.	027-004-00-5		

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

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. Consult a physician.

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 fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Hydrogen chloride gas, Cobalt/cobalt oxides, Calcium oxide

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. 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 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	15 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	15 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Nasal symptoms			
		TWA	5 mg/m3	USA. NIOSH Recommended Exposure Limits
	Gypsum is the dihydrate form & Plaster of Paris is the hemihydrate form.			
		TWA	10 mg/m3	USA. NIOSH Recommended Exposure Limits
	Gypsum is the dihydrate form & Plaster of Paris is the hemihydrate form.			
Cobalt dichloride	7646-79-9	TWA	0.02 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Pulmonary function Asthma Myocardial effects Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans varies			

Personal protective equipment

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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.

Eye protection

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

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	no data available

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	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor 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

no data available

Materials to avoid

Oxidizing agents, Alkali metals, Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Hydrogen chloride gas, Cobalt/cobalt oxides, Calcium oxide

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Oral LD50**

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

Eyes: no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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	Toxic if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Blood disorders, Nausea, Vomiting, Diarrhoea

Synergistic effects

no data available

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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

Not dangerous goods

IMDG

UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt dichloride)
Marine Pollutant: Marine pollutant

IATA

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

OSHA Hazards

Carcinogen, Target Organ Effect, Toxic by ingestion, Respiratory sensitiser, Skin sensitiser, Mutagen

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Cobalt dichloride	7646-79-9	1987-01-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Calcium sulfate	7778-18-9	1994-04-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Calcium sulfate	7778-18-9	1994-04-01
Cobalt dichloride	7646-79-9	1987-01-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Calcium sulfate	7778-18-9	1994-04-01
Cobalt dichloride	7646-79-9	1987-01-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases mentioned in Section 3

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H410	Very toxic to aquatic life with long lasting effects.
Muta.	Germ cell mutagenicity
Repr.	Reproductive toxicity
Resp. Sens.	Respiratory sensitization
Skin Sens.	Skin sensitization

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
