

Material Safety Data Sheet

Drierite ®, Indicating, 6 Mesh, For Drying

1. Product and company identification

Product name : Drierite ®, Indicating, 6 Mesh, For Drying
Product code : DX2508
Supplier : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM
Synonym : None.
Material uses : Other non-specified industry: Analytical reagent.
Validation date : 3/18/2009.
In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

2. Hazards identification

Emergency overview : WARNING!
HARMFUL IF SWALLOWED.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: RESPIRATORY TRACT, SKIN, EYES.
POSSIBLE CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER
WARNING: This product contains a chemical known to the State of California to cause cancer.
Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Physical state : Solid. [Granular solid.]

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Inhalation. Ingestion.

Potential acute health effects

Inhalation : Irritating to respiratory system.
Ingestion : Toxic if swallowed.
Skin : Irritating to skin.
Eyes : Irritating to eyes.

Potential chronic health effects

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

Continued on next page

3 . Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
Calcium Sulfate, Anhydrous	7778-18-9	97
Cobalt Dichloride	7646-79-9	3

4 . First aid measures

Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

Flammability of the product	: No specific fire or explosion hazard.
Extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Not suitable	: None known.
Special exposure hazards	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: sulfur oxides halogenated compounds metal oxide/oxides
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<u>Methods for cleaning up</u>	
Spill	: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

- Handling** : Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container, protected from direct sunlight. Keep container tightly closed and sealed until ready for use.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
Calcium Sulfate, Anhydrous	ACGIH TLV (United States, 1/2008). TWA: 10 mg/m ³ 8 hour(s). Form: Inhalable fraction OSHA PEL 1989 (United States, 3/1989). TWA: 15 mg/m ³ 8 hour(s). Form: Total dust TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction NIOSH REL (United States, 6/2008). TWA: 10 mg/m ³ 10 hour(s). Form: Total TWA: 5 mg/m ³ 10 hour(s). Form: Respirable fraction OSHA PEL (United States, 11/2006). TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m ³ 8 hour(s). Form: Total dust
Cobalt Dichloride	ACGIH TLV (United States, 1/2008). TWA: 0.02 mg/m ³ , (as Co) 8 hour(s). Form: Inorganic

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: nitrile rubber
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: lab coat
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Solid. [Granular solid.]
Color	: Blue.
Odor	: Odorless.
pH	: Not available.
Boiling/condensation point	: Not available.
Melting/freezing point	: Not available.
Relative density	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Odor threshold	: Not available.
Evaporation rate	: Not available.
Solubility	: Partially soluble in the following materials: water

10 . Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity

Product/ingredient name
Cobalt Dichloride

Test Route	Species	Result
LD Intraperitoneal	Rat	30 mg/kg
LD50	Rat	17402 ug/kg
Intraperitoneal		
LD50 Intravenous	Rat	4300 ug/kg
LD50 Oral	Rat	418 mg/kg
LD50 Oral	Rat	80 mg/kg
LD50 Oral	Guinea pig	55 mg/kg
LD50 Oral	Mouse	80 mg/kg
LDLo Dermal	Rat	2 g/kg
LDLo Oral	Child	1500 mg/kg
LDLo Dermal	Guinea pig	165 mg/kg
LDLo Oral	Rabbit	1272 mg/kg
LDLo	Rat	20 mg/kg
Subcutaneous		
TDLo	Rat	2.2 mg/kg
Intraperitoneal		
TDLo	Rat	15 mg/kg
Subcutaneous		
TDLo	Rat	32.458 mg/kg
Subcutaneous		
TDLo Unreported	Rat	10 mg/kg

Carcinogenicity

Classification

Product/ingredient name
Cobalt Dichloride

ACGIH
A3

IARC
2B

EPA
-

NIOSH
-

NTP
-

OSHA
-

Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

11 . Toxicological information

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Calcium Sulfate, Anhydrous	Acute LC50 2980 mg/L	Fish	96 hours
	Acute LC50 >1970 mg/L	Fish	96 hours
	Acute LC50 2980000 ug/L	Fish - Bluegill - Lepomis macrochirus	96 hours
	Fresh water		
	Acute LC50 >1970000 ug/L	Fish - Fathead minnow - Pimephales promelas - 1 to 7 days	96 hours
	Fresh water		
	Acute LC50 >1970000 ug/L	Daphnia - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	Fresh water		
	Acute LC50 >1910000 ug/L	Daphnia - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	Fresh water		
	Acute LC50 >56000000 ug/L	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours
	Fresh water		
	Acute EC50 167000 to 199000 ug/L	Crustaceans - Amphipod - Crangonyx pseudogracilis - Adult - 4 mm - 0.2 mg	48 hours
	Fresh water		
	Acute EC50 15500 to 18800 ug/L	Crustaceans - Cyclopoid copepod - Cyclops abyssorum prealpinus - Adult - 0.62 mm	48 hours
	Fresh water		
	Acute EC50 4000 to 8000 ug/L	Crustaceans - Calanoid copepod - Eudiaptomus padanus padanus - Adult - 0.43 mm	48 hours
	Fresh water		
	Acute EC50 1620 ug/L	Daphnia - Water flea - Daphnia magna - 12 hours	48 hours
	Fresh water		
	Acute EC50 1490 to 2480 ug/L	Daphnia - Water flea - Daphnia magna	48 hours
	Fresh water		
	Acute EC50 1110 ug/L	Daphnia - Water flea - Daphnia magna - 12 hours	48 hours
	Fresh water		
	Acute LC50 454000 to 681000 ug/L	Fish - Shanny - Blennius pholis - Adult	96 hours
	Marine water		
	Acute LC50 5500 ug/L	Daphnia - Water flea - Daphnia magna	48 hours
	Fresh water		
	Acute LC50 275000 ug/L	Fish - Mummichog - Fundulus heteroclitus	96 hours
	Marine water		
	Acute LC50 332.98 to 340.1 mg/L	Fish - Cyprinus carpio - FRY - 3 cm - 0.3 g	96 hours
	Fresh water		
	Acute LC50 1520 to 2280 ug/L	Daphnia - Water flea - Daphnia magna	48 hours
	Fresh water		
	Acute LC50 102000 ug/L	Fish - Giant gourami - Colisa fasciata - Adult - 4.56 g	96 hours
	Fresh water		
	Acute LC50 1406 to 3474 ug/L	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - FRY - 29 to 32 mm	96 hours
	Fresh water		
	Acute LC50 1320 to 1630 ug/L	Daphnia - Water flea - Daphnia hyalina - Adult -	48 hours
	Fresh water		

12 . Ecological information

Acute LC50 22000 ug/L
Fresh water

Fish - Fathead minnow - 96 hours
Pimephales promelas -
Juvenile (Fledgling,
Hatchling, Weanling) - 0.2 to
0.5 g

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Toxic material
Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Calcium Sulfate, Anhydrous; Cobalt Dichloride
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Calcium Sulfate, Anhydrous: Immediate (acute) health hazard, Delayed (chronic) health hazard;
Cobalt Dichloride : Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: Cobalt Dichloride	7646-79-9	3

15 . Regulatory information

Supplier notification : Cobalt Dichloride 7646-79-9 3

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Connecticut Carcinogen Reporting : None of the components are listed.

Connecticut Hazardous Material Survey : None of the components are listed.

Florida substances : None of the components are listed.

Illinois Chemical Safety Act : None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act : None of the components are listed.

Louisiana Spill : None of the components are listed.

Louisiana Reporting : None of the components are listed.

Massachusetts Spill : None of the components are listed.

Massachusetts Substances : The following components are listed: Calcium Sulfate, Anhydrous

Minnesota Hazardous Substances : None of the components are listed.

Michigan Critical Material : None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act : None of the components are listed.

New Jersey Spill : None of the components are listed.

New Jersey Hazardous Substances : The following components are listed: Cobalt Dichloride

New York Toxic Chemical Release Reporting : None of the components are listed.

New York Acutely Hazardous Substances : None of the components are listed.

Pennsylvania RTK Hazardous Substances : The following components are listed: Calcium Sulfate, Anhydrous; Cobalt Dichloride

Rhode Island Hazardous Substances : None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
Cobalt Dichloride	Yes.	No.	No.	No.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Cobalt
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

CEPA DSL / CEPA NDSL : All components are listed or exempted.

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.

EU regulations

15 . Regulatory information

Hazard symbol or symbols :



Risk phrases

: R22- Harmful if swallowed.

Safety phrases

: S2- Keep out of the reach of children.

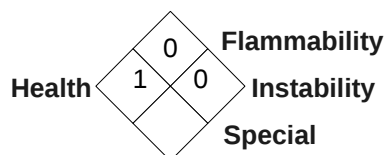
S46- If swallowed, seek medical advice immediately and show this container or label.

International regulations

International lists

: **Australia inventory (AICS):** All components are listed or exempted.**China inventory (IECSC):** All components are listed or exempted.**Japan inventory (ENCS):** All components are listed or exempted.**Japan inventory (ISHL):** Not determined.**Korea inventory (KECI):** All components are listed or exempted.**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.**Philippines inventory (PICCS):** All components are listed or exempted.

16 . Other information

National Fire Protection
Association (U.S.A.) :

Notice to reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.