

Material Safety Data Sheet

Date Printed: 19/MAY/2005

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Version 1.0

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	SODIUM CACODYLATE TRIHYDRATE (FW 214)
Product Number	C0250
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
CACODYLIC ACID, SODIUM SALT, TRIHYDRATE	6131-99-3	204-708-2	033-002-00-5
Formula	$C_2H_6AsNaO_2 \cdot 3H_2O$		
Molecular Weight	214 AMU		
Synonyms	Dimethylarsenic acid sodium salt trihydrate *		
	Dimethylarsinic acid sodium salt trihydrate *		
	Hydroxydimethylarsine oxide sodium salt trihydrat *		
	Sodium dimethylarsinic acid trihydrate		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by

separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Store with desiccant.

SPECIAL REQUIREMENTS: Moisture sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
	MSHA Standard-air	TWA	0.5 mg/m3
USA	OSHA.	PEL TWA	0.5 mg/m3
Remarks: CONSTRUC: 8H			
USA	OSHA.	PEL TWA	0.5 mg/m3
Remarks: FED CONT: 8H			
USA	OSHA.	PEL TWA	0.5 mg/m3
Remarks: GEN INDU:8H			

USA	OSHA.	PEL TWA	0.5 mg/m3
Remarks: SHIPYARD:8H			

EXPOSURE LIMITS - AUSTRALIA			
Source	Type	Value	
OEL	TWA	0.05 mg/m3	
Remarks: Carcinogen.			
Remarks: ARSENIC			

EXPOSURE LIMITS - BELGIUM			
Source	Type	Value	
OEL	TWA	0.2 mg/m3	
Remarks: Carcinogen.			
Remarks: ARSENIC			

EXPOSURE LIMITS - FINLAND			
Source	Type	Value	
Remarks: Carcinogen.			

EXPOSURE LIMITS - FRANCE			
Source	Type	Value	
OEL	TWA	0.2 mg/m3	
		VME (TWA)	
Remarks: ARSENIC			

EXPOSURE LIMITS - GREECE			
Source	Type	Value	
Remarks: Carcinogen.			

EXPOSURE LIMITS - HUNGARY			
Source	Type	Value	
OEL	TWA	0.2 mg/m3	
		VME (TWA)	
Remarks: ARSENIC			

EXPOSURE LIMITS - NORWAY			
Source	Type	Value	
OEL	TWA	0.01 mg/m3	
Remarks: ARSENIC			

EXPOSURE LIMITS - POLAND			
Source	Type	Value	
OEL	TWA	0.3 mg/m3	
Remarks: MAC (TWA)			
Remarks: ARSENIC			

EXPOSURE LIMITS - SWEDEN			
Source	Type	Value	
OEL	TWA	0.03 mg/m3	
Remarks: NGV (TWA)			
Remarks: Carcinogen.			
Remarks: ARSENIC			

EXPOSURE LIMITS - SWITZERLAND			
Source	Type	Value	
OEL	TWA	0.1 mg/m3	
Remarks: MAK(TWA)			
Remarks: Carcinogen.			
Remarks: ARSENIC			

EXPOSURE LIMITS - UNITED KINGDOM			
Source	Type	Value	

OEL
Remarks: Carcinogen.

TWA

0.1 mg/m3

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves. Handle with gloves in hood.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: White Form: Fine crystals	
Property	Value	At Temperature or Pressure
pH	8.7	Concentration: 50 g/l
BP/BP Range	N/A	
MP/MP Range	77 - 80 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 0.1 g/ml H2O, 20°C complete, colorless	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Strong oxidizing agents, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Arsenic oxides, Sodium/sodium oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: CH7890000

ACUTE TOXICITY

LD50
Skin
Rabbit
> 2,000 mg/kg
LC50
Inhalation
Rat
4,900 mg/m3
4 H
LD50
Oral
Rat
2,000 mg/kg

IRRITATION DATA

Skin
Rabbit
Remarks: No irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE

Other symptoms of exposure can include dry mouth, metallic taste, drowsiness, loss of appetite, tremors, convulsions, respiratory arrest, and garlic odor to breath and perspiration. Prolonged exposure to arsenic compounds can cause exfoliation and pigmentation of skin, herpes, inflammation of nerves, and nasal septum ulceration.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Toxic if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: Toxic if swallowed.

TARGET ORGAN INFORMATION

Kidneys. G.I. System. Heart. Brain. Skin. Bone marrow. Nerves.
Liver.

CONDITIONS AGGRAVATED BY EXPOSURE

Cacodylic acid may be partially reduced to inorganic arsenic in the body. Exposure to arsenic compounds can cause burning and dryness of the oral and nasal cavities, muscle spasms, irritation of the gastrointestinal tract, nausea, vomiting and diarrhea which can progress to shock and death.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Hamster
Dose: 20 MG/KG
Route of Application: Intravenous
Exposure Time: (8D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48 h

Value: 53.5 mg/l

Test Type: LC50 Fish

Species: *Lepomis macrochirus* (Bluegill)

Time: 96 h

Value: 17 mg/l

Test Type: LC50 Fish

Species: *Onchorhynchus mykiss* (Rainbow trout)

Time: 96 h

Value: > 100 mg/l

13 - Disposal Considerations

SUBSTANCE DISPOSAL

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. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1688

Class: 6.1

PG: II

Proper Shipping Name: Sodium cacodylate

IMDG

UN#: 1688

Class: 6.1

PG: II

Proper Shipping Name: Sodium cacodylate

Marine Pollutant: No

Severe Marine Pollutant: No

IATA

UN#: 1688

Class: 6.1

PG: II

Proper Shipping Name: Sodium cacodylate

Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 033-002-00-5

NOTA: A, 1

INDICATION OF DANGER: T N

Toxic. Dangerous for the environment.

R-PHRASES: 23/25 50/53

Toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 20/21 28 45 60 61

When using do not eat, drink, or smoke. After contact with skin, wash immediately with plenty of water. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data

16 - Other Information

WARRANTY

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 Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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