

World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00367

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Chlorine Dioxide Reagent 2
Catalog Number: 2070142

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00367
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: Practically non-toxic. No effects anticipated.
Date of MSDS Preparation:
Day: 19
Month: December
Year: 2014

2. COMPOSITION / INFORMATION ON INGREDIENTS

Picric Acid

CAS No.: 88-89-1
TSCA CAS Number: 88-89-1
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: Oral rat LD50 = 200 mg/kg, Oral rabbit LDLo = 120 mg/kg
LC50: None reported
TLV: 0.1 mg/m³
PEL: 0.1 mg/m³ (Skin)
Hazard: Harmful if swallowed Allergen Causes irritation. Explosive.

Sodium Hydroxide

CAS No.: 1310-73-2
TSCA CAS Number: 1310-73-2
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: Oral rat LDLo = 500 mg/kg
LC50: None reported
TLV: Not established
PEL: 2 mg/m³
Hazard: Causes severe burns. Ecological hazard

Octylphenoxypropylmethoxyethanol

CAS No.: 9036-19-5
TSCA CAS Number: 9036-19-5
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: Oral rat LD50 = 1800 mg/kg
LC50: Inhalation rat LC50 > 21.5 mg/l
TLV: Not established

PEL: Not established
Hazard: Causes severe eye irritation.

Chlorophenol Red

CAS No.: 4430-20-0
TSCA CAS Number: 4430-20-0
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: May cause irritation.

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: > 99.0
Percent Range Units: weight / weight
LD50: LD50 oral rat = >89,800 mg/kg
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Formaldehyde

CAS No.: 50-00-0
TSCA CAS Number: 50-00-0
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: Oral Rat LD50 = 100 mg/kg; Oral Mouse LD50 = 42 mg/kg
LC50: Inhalation Rat LC50 = 250 ppm/4 hr
TLV: 0.3 ppm
PEL: 0.75 ppm
Hazard: Carcinogen. Causes burns. May cause allergic reaction.

Methyl Alcohol

CAS No.: 67-56-1 67-56-1
TSCA CAS Number: 67-56-1
Percent Range: < 0.1
Percent Range Units: weight / weight
LD50: Oral Rat LD50 = 5628 mg/kg; Oral Human LD50 = 300 mg/kg
LC50: Inhalation Rat LC50 = 64000 ppm/4 hr; Inhalation Human LC50 = 10 mg/L/4 hr/Extrapolated from primate data
TLV: 200 ppm
PEL: 200 ppm
Hazard: Cumulative poison. Toxic. Cannot be made non-toxic. Flammable. Causes irritation. Experimental mutagen. Experimental teratogen. May cause harm to the unborn child. May impair fertility

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Dark purple liquid
Odor: Mild hydrocarbon
MAY CAUSE EYE AND SKIN IRRITATION

HMIS:

Health: 0
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 0

Flammability: 0
Reactivity: 0
Symbol: Not applicable
Potential Health Effects:
Eye Contact: No effects are anticipated
Skin Contact: No effects are anticipated
Skin Absorption: No effects anticipated
Target Organs: Not applicable
Ingestion: None reported
Target Organs: None reported
Inhalation: No effects anticipated
Target Organs: Not applicable
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions
Chronic Effects: No effects anticipated
Cancer / Reproductive Toxicity Information:
This product does NOT contain any OSHA listed carcinogens.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing, wash before reuse, and do not allow out of workplace.
Ingestion (First Aid): Rinse mouth with plenty of water. Give large quantities of water. Call physician immediately. If you feel unwell, contact a physician. If concerned contact a physician. Do not induce vomiting.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. If you feel unwell, contact a physician. If concerned contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. Material will not burn.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: This product will not burn or explode. May react violently with: strong acids strong bases alkali metals
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Stop spilled material from being released to the environment. Absorb spilled liquid with non-reactive sorbent material. Releases of this material may contaminate the environment.
Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. If permitted by regulation, Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Otherwise, Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: None

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use. Store in a cool, dry, well-ventilated place. Protect from: heat extreme temperatures freezing Keep away from: acids / acid fumes. bases alkali metals

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: nitrile gloves

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Wash thoroughly after handling. Protect from: heat freezing Keep away from: acids/acid fumes bases alkali metals

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Dark purple liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Mild hydrocarbon

pH: 9.0

Vapor Pressure: ~ 17.5 mm Hg (~ 2.27 kPa) at 20 °C (68 °F)

Vapor Density (air = 1): 0.62

Boiling Point: ~ 100 °C (~ 212 °F)

Melting Point: ~ 0 °C (~ 32 °F)

Specific Gravity/ Relative Density (water = 1; air =1): 0.99

Evaporation Rate (water = 1): 0.62

Volatile Organic Compounds Content: Not applicable

Partition Coefficient (n-octanol / water): Not applicable

Solubility:

Water: Soluble

Acid: Soluble

Other: Soluble in most polar organic solvents.

Metal Corrosivity:

Steel: Not determined

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Heat Evaporation Freezing. Contact with acid or acid fumes Incompatibles

Reactivity / Incompatibility: May react violently in contact with: alkali metals strong acids strong bases

Hazardous Decomposition: None reported

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data: None reported
Ingredient Toxicological Data: Formaldehyde: Oral Rat LD50 = 100 mg/kg; Dermal Rabbit 270 mg/kg; Inhalation Rat LC50 = 250 ppm/4 hr; Methanol: Oral Human LD50 = 300 mg/kg; Dermal Human LD50 = 1000 mg/kg; Inhalation Rat LC50 = 10 mg/L/4 hr

12. ECOLOGICAL INFORMATION

Product Ecological Information: No information available for this product.
Ingredient Ecological Information: None reported
CEPA Statement: Water, Chlorophenol Red: Persistent. Not bioaccumulative. Not inherently toxic to aquatic organisms. CEPA Statement: Sodium Hydroxide, Methyl Alcohol: Not persistent. Not bioaccumulative. Not inherently toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: None
Special Instructions (Disposal): If permitted by regulation, Open cold water tap completely, slowly pour the material to the drain. Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.
Empty Containers: Working in a well-ventilated area, Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Dispose of empty container as normal trash.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
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DOT Hazard Class: NA
DOT Subsidiary Risk: NA
DOT ID Number: NA
DOT Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
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ICAO Hazard Class: NA
ICAO Subsidiary Risk: NA
ICAO ID Number: NA
ICAO Packing Group: NA
I.M.O.:
I.M.O. Proper Shipping Name: Not Currently Regulated
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I.M.O. Hazard Class: NA
I.M.O. Subsidiary Risk: NA
I.M.O. ID Number: NA
I.M.O. Packing Group: NA

Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product does not meet the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): This product is not hazardous under 29 CFR.1910.1200 and therefore is not covered by Title III under SARA.

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

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302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Sodium Hydroxide 1000 lbs.

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Sodium Hydroxide - RQ = 1000 lbs. (454 kgs.)

RCRA: Contains no RCRA regulated substances.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Determination of chlorine dioxide

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991.

Revision Summary: Substantially Revised MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Legend:

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|---------------------|---------------------|
| NA - Not Applicable | w/w - weight/weight |
| ND - Not Determined | w/v - weight/volume |
| NV - Not Available | v/v - volume/volume |

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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