

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Detergents Reagent
Catalog Number: 105932

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: M00831
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: Causes burns.
Date of MSDS Preparation:
Day: 02
Month: December
Year: 2008

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chloroform, ACS

CAS No.: 67-66-3
TSCA CAS Number: 67-66-3
Percent Range: 0.1 - 1.0
Percent Range Units: volume / volume
LD50: Oral rat LD₅₀ = 695 mg/kg; Oral mouse LD₅₀ = 36 mg/kg.
LC50: Inhalation rat LC₅₀ = 47,702 mg/m³/4hrs.
TLV: TWA = 10 ppm (49 mg/m³)
PEL: C: 50 ppm (C: 240 mg/m³)
Hazard: Toxic. Vapors harmful. Experimental carcinogen.

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: 75.0 - 85.0
Percent Range Units: volume / volume
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other component

CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0

Percent Range Units: weight / volume

LD50: Not applicable

LC50: Not applicable

TLV: Not established

PEL: Not established

Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

Sodium Arsenite

CAS No.: 7784-46-5

TSCA CAS Number: 7784-46-5

Percent Range: 0.01 - 0.1

Percent Range Units: weight / volume

LD50: Oral rat LD₅₀ = 41 mg/kg

LC50: None reported

TLV: 0.01 mg (As) /m³

PEL: 0.01 mg (As) /m³

Hazard: Highly toxic. Carcinogen.

Sodium Phosphate, Monobasic

CAS No.: 7558-80-7

TSCA CAS Number: 7558-80-7

Percent Range: 5.0 - 15.0

Percent Range Units: weight / volume

LD50: Oral rat LD₅₀ = 8290 mg/kg

LC50: None reported

TLV: Not established

PEL: Not established

Hazard: May cause eye irritation.

Sodium Sulfate

CAS No.: 7757-82-6

TSCA CAS Number: 7757-82-6

Percent Range: 1.0 - 10.0

Percent Range Units: weight / volume

LD50: Oral mouse LD₅₀ = 5989 mg/kg

LC50: None reported

TLV: Not established

PEL: Not established

Hazard: May cause irritation.

Phosphoric Acid

CAS No.: 7664-38-2

TSCA CAS Number: 7664-38-2

Percent Range: 1.0 - 10.0

Percent Range Units: volume / volume

LD50: Oral rat LD₅₀ = 1530 mg/kg

LC50: None reported

TLV: 1 mg/m³

PEL: 1 mg/m³

Hazard: Causes severe burns.

Sodium Bisulfite

CAS No.: 7631-90-5
TSCA CAS Number: 7631-90-5
Percent Range: 1.0 - 10.0
Percent Range Units: weight / volume
LD50: Oral rat LD₅₀ = 2000 mg/kg.
LC50: None reported
TLV: 5 mg/m³
PEL: 5 mg/m³
Hazard: Causes irritation. Allergen

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Blue liquid
Odor: Not determined
CAUSES BURNS
CONTAINS MATERIAL WHICH CAN CAUSE CANCER

HMIS:

Health: 4
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 3
Flammability: 0
Reactivity: 0
Symbol: Not applicable

Potential Health Effects:

Eye Contact: Causes eye burns.
Skin Contact: Causes burns.
Skin Absorption: Will be absorbed through the skin. Effects similar to those of ingestion
Target Organs: Central nervous system Kidneys Liver
Ingestion: May cause: abdominal pain nausea vomiting collapse central nervous system depression kidney damage liver damage
Target Organs: Central nervous system Kidneys Liver

Inhalation: May cause: central nervous system depression kidney damage liver damage

Target Organs: Kidneys Liver Central nervous system

Medical Conditions Aggravated: Persons with impaired liver, kidney or respiratory function may be more susceptible to the effects of Phosphoric Acid. Pre-existing: Eye conditions Skin conditions Allergies or sensitivity to arsenic

Chronic Effects: Chronic overexposure may cause dermatitis chronic irritation or inflammation of the lungs

Cancer / Reproductive Toxicity Information:

An ingredient of this product is an OSHA listed carcinogen.

Chloroform

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen IARC Group 2B: Experimental Carcinogen

Inorganic Arsenic Chloroform

An ingredient of this mixture is: NTP Listed Group 2A: Suspected Carcinogen NTP Listed Group 2B: Experimental Carcinogen

Inorganic Arsenic Chloroform

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen, an experimental teratogen.

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 plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. Call physician immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Not Flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, corrosive and toxic gases may be generated by thermal decomposition.

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: Contact with metals gives off hydrogen gas which is flammable

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. Evacuate area and fight fire from a safe distance.

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: Releases of this material may contaminate the environment. Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.

Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Dispose of material in an E.P.A. approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation. Deny access to unnecessary and unprotected personnel. Remain up-wind from spilled material.

Special Instructions (for accidental release): Product is regulated as RCRA hazardous waste. Mixture contains a component which is regulated as a hazardous air pollutant. Mixture contains a component which is regulated as a water pollutant.

304 EHS RQ (40 CFR 355): Chloroform - RQ 10 lbs. Sodium Arsenite - RQ 1 lbs

D.O.T. Emergency Response Guide Number: 154

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep away from: metals oxidizers Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Maintain adequate ventilation to keep vapor level below TWA for chemicals in this product. Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: disposable latex gloves lab coat

Inhalation Protection: laboratory fume hood

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Use with adequate ventilation. Protect from: heat Keep away from: metals oxidizers

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Blue liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Not determined

pH: 1.2

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: ~100°C; 212°F

Melting Point: Not determined

Specific Gravity (water = 1): 1.142

Evaporation Rate (water = 1): 0.52

Volatile Organic Compounds Content: Not determined

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

Solubility:

Water: Miscible

Acid: Miscible

Other: Not determined

Metal Corrosivity:

Steel: Not determined

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Extreme temperatures Heating to decomposition.

Reactivity / Incompatibility: Incompatible with: oxidizers metals
Hazardous Decomposition: Contact with metals may release flammable hydrogen gas. Heating to decomposition releases toxic and/or corrosive fumes of: phosphorus oxides arsenic compounds carbon monoxide carbon dioxide
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported

LC50: None reported

Dermal Toxicity Data: Sodium Arsenite: Skin rat LD50 = 150 mg/kg; Chloroform: Skin rabbit LD50 > 20 g/kg

Skin and Eye Irritation Data: None reported

Mutation Data: Sodium Arsenite: Micronucleus test - human lymphocytes @ 3 µmol/L; Oncogenic transformation: human fibroblast @ 1 µmol/L; DNA damage: human lung @ 1 µmol/L; Chloroform: Sister chromatid exchange in human lymphocytes @ 10 mmol/L

Reproductive Effects Data: Sodium Arsenite: Oral mouse TDLo = 40 mg/kg (embryo death); Oral hamster TDLo = 25 mg/kg (fetotoxicity); Chloroform: Oral rat TDLo(female) = 1260 mg/kg (Fetotoxicity- Muscularskeletal abnormalities)

Ingredient Toxicological Data: Phosphoric Acid Oral rat LD50 = 1530 mg/kg; Sodium Phosphate, Monobasic Oral rat LD50 = 8290 mg/kg; Sodium Sulfate Oral rat LD50 = 5989 mg/kg; Sodium Bisulfate Oral rat LD50 = 1600 mg/kg; Sodium Arsenite Oral rat LD50 = 41 mg/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: --

No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D002, D004, D022

Special Instructions (Disposal): Dispose of material in an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste. 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: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(Phosphoric Acid/Sodium Bisulphate Solution)

DOT Hazard Class: 8

DOT Subsidiary Risk: NA

DOT ID Number: UN3264

DOT Packing Group: II

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(Phosphoric Acid/Sodium Bisulphate Solution)

ICAO Hazard Class: 8

ICAO Subsidiary Risk: NA

ICAO ID Number: UN3264

ICAO Packing Group: II

I.M.O.:

I.M.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(Phosphoric Acid/Sodium Bisulphate Solution)

I.M.O. Hazard Class: 8

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: UN3264

I.M.O. Packing Group: II

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 meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200) This product contains Inorganic arsenic and is regulated under 29CFR Subpart Z 1910.1018.

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

Phosphoric Acid, Sodium Arsenite, Chloroform

302 (EHS) TPQ (40 CFR 355): Sodium Arsenite 500 lbs. Chloroform 10,000 lbs.

304 CERCLA RQ (40 CFR 302.4): Phosphoric acid 5000 lbs. Sodium Arsenite 1 lb. Chloroform 10 lbs.

304 EHS RQ (40 CFR 355): Chloroform - RQ 10 lbs. Sodium Arsenite - RQ 1 lbs

Clean Water Act (40 CFR 116.4): Phosphoric acid - RQ 5000 lbs. Chloroform - RQ 10 lbs. Sodium Arsenite - RQ = 1 lb.

RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: WARNING - This product contains a chemical known to the State of California to cause cancer.

Identification of Prop. 65 Ingredient(s): Sodium Arsenite, Chloroform

California Perchlorate Rule CCR Title 22 Chap 33:

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 detergents

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards. Cincinnati: Department of Health and Human Services, 1981. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Edition. Volume 2. New York: A Wiley-Interscience Publication, 1981. Technical Judgment. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. CCINFO MSDS/FTSS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Vendor Information.

Revision Summary: Updates in Section(s) 14,

Legend:

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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