$The following \ list \ contains \ the \ Material \ Safety \ Data \ Sheets \ you \ requested. \ Please \ scoll \ down \ to \ view \ the \ requested \\ MSDS(s).$

Product	MSDS	Distributor	Format	Language	Quantity
2653299	N/A	Hach Company	OSHA	English	1

Total Enclosures: 1

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

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonia Salicylate Reagent

Catalog Number: 2653299

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

MSDS Number: M00127 Chemical Name: Not applicable CAS No.: Not applicable

Chemical Formula: Not applicable **Chemical Family:** Not applicable

Hazard: May cause irritation. Harmful if swallowed

Date of MSDS Preparation:

Day: 06
Month: August
Year: 2012

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

MSDS No: M00127

Tear: 2012

2. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Salicylate

CAS No.: 54-21-7

TSCA CAS Number: 54-21-7 **Percent Range:** 40.0 - 50.0

Percent Range Units: weight / weight

LD50: Oral rat $LD_{50} = 1200 \text{ mg/kg}$; Oral mouse $LD_{50} = 540 \text{ mg/kg}$; Oral rabbit $LD_{50} = 1700 \text{ mg/kg}$.

LC50: None reported.

TLV: Respirable particles: 3 mg/m³; Inhalable particles: 10 mg/m³

PEL: Total dust: 15 mg/m³; Respirable fraction: 5 mg/m³

Hazard: May cause irritation. Experimental teratogen. Experimental mutagen. May be embryotoxic.

Sodium Nitroferricyanide

CAS No.: 14402-89-2

TSCA CAS Number: 14402-89-2

Percent Range: < 1.0

Percent Range Units: weight / weight **LD50:** Oral rat LD₅₀ = 99 mg/kg (anhydrous).

LC50: None reported. *TLV:* 5 mg/m³ as CN⁻ *PEL:* 5 mg/m³ as CN⁻

Hazard: Toxic. May be harmful if inhaled or swallowed

m - Nitrophenol

CAS No.: 554-84-7

TSCA CAS Number: 554-84-7

Percent Range: < 0.5

Percent Range Units: weight / weight

LD50: Oral rat $LD_{50} = 328 \text{ mg/kg}$; Oral mouse $LD_{50} = 1070 \text{ mg/kg}$.

LC50: None reported. *TLV:* Not established.

PEL: Not established.

Hazard: Toxic. Causes severe eye irritation. Causes irritation.

Sodium Citrate

CAS No.: 68-04-2

TSCA CAS Number: 68-04-2 **Percent Range:** 40.0 - 50.0

Percent Range Units: weight / weight

LD50: Oral rat LD50 >8 g/Kg

LC50: None reported TLV: Not established PEL: Not established Hazard: May cause irritation.

Sodium Tartrate

CAS No.: 868-18-8

TSCA CAS Number: 868-18-8 **Percent Range:** 10.0 - 20.0

Percent Range Units: weight / weight **LD50:** Oral rabbit LD50 = 5290 mg/kg

LC50: None reportedTLV: Not establishedPEL: Not establishedHazard: May cause irritation.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Tan powder

Odor: None

HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION

CONTACT WITH ACIDS FORMS TOXIC FUMES

HMIS:

Health: 3
Flammability: 1
Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 3 Flammability: 1 Reactivity: 0

Symbol: Not applicable Potential Health Effects:

Eye Contact: May cause irritiation Skin Contact: May cause irritiation

Skin Absorption: Harmful if absorbed through the skin Effects similar to those of ingestion Sodium nitroferricyanide produces a delayed cyanide poisoning reaction.

Target Organs: Central nervous system Blood

Ingestion: Sodium nitroferricyanide produces a delayed cyanide poisoning reaction. May cause: headache nausea vomiting central nervous system effects

Target Organs: Central nervous system Blood

Inhalation: Sodium nitroferricyanide produces a delayed cyanide poisoning reaction. May cause: headache nausea, vomiting central nervous system effects

Target Organs: Central nervous system Blood

Medical Conditions Aggravated: Allergies or sensitivity to aspirin or salicylates.

Chronic Effects: Chronic overexposure may cause confusion diarrhea fatigue weakness death Salicylates may cause ringing in the ears (tinnitus), abnormal bleeding, gastric ulceration, mental deterioration, skin eruption, temporary vision loss, and other optical effects.

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

Ingestion (First Aid): 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: During a fire, this product decomposes to form toxic gases.

Flash Point: Not applicable Method: Not applicable Flammability Limits:

Lower Explosion Limits: Not applicable Upper Explosion Limits: Not applicable Autoignition Temperature: Not determined.

Hazardous Combustion Products: May emit acrid smoke and fumes. *Fire / Explosion Hazards:* This product will not burn or explode.

Static Discharge: None reported. Mechanical Impact: None reported

Extinguishing Media: Dry chemical. Carbon dioxide Alcohol foam.

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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Containment Technique: Releases of this material may contaminate the environment. Stop spilled material from being released to the environment.

Clean-up Technique: Avoid contact with spilled material. Sweep up material. Dilute with a large excess of water. Flush the spilled material to the drain with a large excess of water. 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: a pound or more of loose powder is spilled. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Mixture contains a component which is regulated as hazardous waste in the U.S..

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 clothing Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 10° and 25°C. Keep away from: acids / acid fumes. oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Use a fume hood to avoid exposure to dust, mist or vapor.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: lab coat disposable latex gloves In the EU, the selected gloves must satisfy the specifications of EU

Directive 89/686/EEC and standard EN 374 derived from it.

Inhalation Protection: laboratory fume hood

Precautionary Measures: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Use with adequate

ventilation. Keep away from: acids/acid fumes oxidizers

TLV: Not established. PEL: Not established.

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Tan powder Physical State: Solid

Molecular Weight: Not applicable

Odor: None

pH: 7.84 (5% solution)

Vapor Pressure: Not applicable Vapor Density (air = 1): Not applicable

Boiling Point: Not applicable **Melting Point:** 97°C (206.6°F)

Specific Gravity/ Relative Density (water = 1; air =1): 1.689

Evaporation Rate (water = 1): Not applicable Volatile Organic Compounds Content: None.

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

Solubility:

Water: Soluble. *Acid:* Soluble.

Other: Not determined.

Metal Corrosivity:
Steel: Not applicable
Aluminum: Not applicable

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Heating to decomposition. Extreme temperatures

Reactivity / Incompatibility: Incompatible with: acids iodine iron salts lead acetate organic materials oxidizers Silver

Nitrate sodium phosphate

Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: cyanide nitrogen oxides

sodium oxides

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: Sodium Salicylate: Oral rat LD₅₀ = 1200 mg/kg; Sodium Citrate: Oral rat LD₅₀ > 8 g/kg;

Sodium Tartrate: Oral rabbit $LD_{50} = 5290 \text{ mg/kg}$; Sodium Nitroferricyanide: Oral rat $LD_{50} = 99 \text{ mg/kg}$.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available

Ingredient Ecological Information: Sodium salicylate: Pimephales promelas 96 hr. LC50 = 1370 mg/l; sodium citrate: crustea 48h EC50 = 736 mg/l.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: None

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. Flush system with plenty of water.

Empty Containers: Rinse three times with an appropriate solvent. 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 meets 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): 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.

Sodium Nitroferricyanide.

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

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

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): Not applicable

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).

16. OTHER INFORMATION

Intended Use: Laboratory Use Reagent for ammonia test

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. In-house information. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Cassaret and Doull's Toxicology, 3rd Ed. New York: Macmillan Publishing Co., Inc., 1986. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

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

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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