

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

MSDS No: M00127

# 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

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

**MSDS Number:** M00127

**Chemical Name:** Not applicable

**CAS Number:** Not applicable

**Additional CAS No. (for hydrated forms):** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Mixture

**Intended Use:** Laboratory Use Reagent for ammonia test

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Acute Toxicity: Acute Tox. 4-Orl Skin Corrosion/Irritation: Skin Irrit. 2 Serious Eye Damage/Eye Irritation: Eye Dam. 1 Specific Target Organ Toxicity - Single Exposure: STOT SE 3

**GHS Label Elements:**

DANGER



**Hazard statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Not applicable

**Precautionary statements:** Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wear protective gloves / protective clothing / eye protection / face protection. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**HMIS:**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

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

**NFPA:**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 2, Subdivision A - Very toxic materials (other toxic effects)

**WHMIS Symbols:** Other Toxic Effects

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### *Hazardous Components according to GHS:*

##### Sodium Salicylate

*CAS Number:* 54-21-7

*Chemical Formula:* C<sub>7</sub>H<sub>5</sub>O<sub>3</sub>Na

*GHS Classification:* Acute Tox. Or1 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT Single 3, H335

*Percent Range (Trade Secret):* 40.0 - 50.0

*Percent Range Units:* weight / weight

*PEL:* 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

*TLV:* 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

*WHMIS Symbols:* Other Toxic Effects

##### Sodium Nitroferriocyanide

*CAS Number:* 14402-89-2

*Chemical Formula:* Na<sub>2</sub>Fe(CN)<sub>5</sub>NO

*GHS Classification:* Acute Tox. Or1. 3, H301

*Percent Range (Trade Secret):* < 1.0

*Percent Range Units:* weight / weight

*PEL:* 5 mg/m<sup>3</sup> as CN<sup>-</sup>

*TLV:* 5 mg/m<sup>3</sup> as CN<sup>-</sup>

*WHMIS Symbols:* Acute Poison

##### m - Nitrophenol

*CAS Number:* 554-84-7

*Chemical Formula:* C<sub>6</sub>H<sub>5</sub>NO<sub>3</sub>

*GHS Classification:* Acute Tox. 4-Or1, H302; Eye Dam. 1, H318; Skin Irrit. 2, H315

*Percent Range (Trade Secret):* < 0.5

*Percent Range Units:* weight / weight

*PEL:* 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

*TLV:* 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

*WHMIS Symbols:* Acute Poison

#### *Hazardous Components according to GHS: No*

##### Sodium Citrate

*CAS Number:* 68-04-2

*Chemical Formula:* C<sub>6</sub>H<sub>5</sub>O<sub>7</sub>Na<sub>3</sub> · 2H<sub>2</sub>O

*GHS Classification:* Not applicable

*Percent Range (Trade Secret):* 40.0 - 50.0

*Percent Range Units:* weight / weight

*PEL:* 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

*TLV:* 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

*WHMIS Symbols:* Not applicable

##### Sodium Tartrate

*CAS Number:* 868-18-8

*Chemical Formula:* Na<sub>2</sub>C<sub>4</sub>H<sub>4</sub>O<sub>6</sub> · 2H<sub>2</sub>O

*GHS Classification:* Acute Tox. 5-Or1, H303

*Percent Range (Trade Secret):* 10.0 - 20.0

*Percent Range Units:* weight / weight

*PEL:* 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

*TLV:* 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

*WHMIS Symbols:* Not applicable

---

### 4. FIRST AID MEASURES

**General Information:** Have a cyanide first aid kit available. Emergency response to cyanide exposure should be planned and practiced prior to work with cyanides. In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

**Advice to doctor:** Treat symptomatically. If indicated use a cyanide antidote such as sodium thiosulfate and sodium nitrate.

**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.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. Call physician. Always have on hand a cyanide first aid kit. Break an amyl nitrite pearl in cloth and hold lightly under nose for 15 seconds.

**Ingestion (First Aid):** Never give anything by mouth to an unconscious person. Call physician immediately.

---

## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.

**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.

**Extinguishing Media:** Dry chemical. Carbon dioxide. Alcohol foam. Water.

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** This product will not burn or explode.

**Hazardous Combustion Products:** May emit acrid smoke and fumes.

---

## 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. If permitted by regulation, 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. Otherwise, Pick up spill for disposal and place in a closed container. Dispose of in accordance with local, state and federal regulations or laws.

**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.

**DOT Emergency Response Guide Number:** Not applicable

---

## 7. HANDLING AND 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 / PERSONAL PROTECTION

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

### **Personal Protective Equipment:**

**Eye Protection:** chemical splash goggles

**Skin Protection:** lab coat nitrile 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.

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Tan powder

**Physical State:** Solid

**Molecular Weight:** Not applicable

**Odor:** Odorless

**Odor Threshold:** Not applicable

**pH:** 7.84 (5% solution)

**Metal Corrosivity:**

**Corrosivity Classification:** Not classified as corrosive to metals according to GHS criteria.

**Steel:** Not applicable

**Aluminum:** Not applicable

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

**Viscosity:** Not applicable

**Solubility:**

**Water:** Soluble.

**Acid:** Soluble.

**Other:** Not determined.

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

**Coefficient of Water / Oil:** Not applicable

**Melting Point:** 97 °C (206.6 °F)

**Decomposition Temperature:** Not determined

**Boiling Point:** Not applicable

**Vapor Pressure:** Not applicable

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

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** None.

**Flammable Properties:** Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria. 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.

**Explosive Properties:**

Not classified according to GHS criteria.

**Oxidizing Properties:**

Not classified according to GHS criteria.

**Reactivity Properties:**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

**Gas under Pressure:**

Not classified according to GHS criteria.

---

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Mechanical Impact:** None reported

**Static Discharge:** None reported.

**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

**Conditions to Avoid:** Heating to decomposition. Extreme temperatures

---

## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available for mixture.

**Toxicologically Synergistic Products:** Exposure to and/or consumption of alcohol may increase toxic effects of this product.

**Acute Toxicity:** Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Route Data Given Below  
Oral Rat LD50 = 1722 mg/kg

**Specific Target Organ Toxicity - Single Exposure (STOT-SE):** Target Organs Respiratory Tract

**Specific Target Organ Toxicity - Repeat Exposure (STOT-RE):** Based on classification principles, the classification criteria are not met.

**Skin Corrosion/Irritation:** Irritating to skin.

**Eye Damage:** Corrosive to eyes.

**Sensitization:** Based on classification principles, the classification criteria are not met.

**CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction):** Based on classification principles, the classification criteria are not met.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

**Symptoms/Effects:**

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

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

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

**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.

**Medical Conditions Aggravated:** Allergies or sensitivity to aspirin or salicylates. Chronic disorders of the skin, respiratory tract, eyes, nervous system or cardiovascular system.

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product. No bioaccumulation potential Based on classification principles, not classified as hazardous to the environment.

Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1

**Ingredient Ecological Information:** m-Nitrophenol: 48 hr Oryzias latipes LC50 = 1.3 mg/L; 24 hr Daphnia magna EC50 = 10 - 35 mg/L

CEPA categorization for ingredients are as follows:

m-Nitrophenol, Sodium Citrate, Sodium Tartrate, Sodium Salicylate: Not persistent, bioaccumulative or inherently toxic to aquatic organisms.

Sodium Nitroferrocyanide: Persistent and inherently toxic to aquatic organisms (PIT).

---

## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Dilute to 3 to 5 times the volume with cold water. Flush system with plenty of water. If permitted by regulation, Open cold water tap completely, slowly pour the material to the drain. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

**Empty Containers:** 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.

**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. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**UN Number/PIN:** NA

**Packing Group:** NA

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**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

**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.

**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).

**CAS Number:** Not applicable

**Canadian Inventory Status:** All ingredients of this product are DSL/NDSL Listed.

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**Australian Inventory (AICS) Status:** All ingredients are listed.

**New Zealand Inventory (NZIoC) Status:** All components either listed or exempt.

**Korean Inventory (KECI) Status:** All components of this product are either listed, listed as the anhydrous compound or exempt.

**Japan (ENCS) Inventory Status:** All components either listed or exempt.

*China (PRC) Inventory (MEP) Status:* All components either listed or exempt.

---

## 16. OTHER INFORMATION

**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).

**Complete Text of H phrases referred to in Section 3:** H302 Harmful if swallowed. H319 Causes serious eye irritation.  
**Revision Summary:** . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

**Date of MSDS Preparation:**

**Day:** 31

**Month:** March

**Year:** 2014

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

**CCOHS Evaluation Note:** This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

---

**Legend:**

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

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.**

**HACH COMPANY ©2015**