



# Material Safety Data Sheet

<b>NFPA</b>  	<b>HMIS</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; border: 1px solid black;">2</td> </tr> <tr> <td style="background-color: #FFC0CB;">Fire Hazard</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	<b>Personal Protective Equipment</b>    See Section 15.
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

<b>Section 1. Chemical Product and Company Identification</b>		<i>Page Number: 1</i>
<b>Common Name/Trade Name</b>	<b>Sodium Nitroferricyanide, dihydrate</b>	
	<b>Catalog Number(s).</b>	S1365
	<b>CAS#</b>	13755-38-9
<b>Manufacturer</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	<b>RTECS</b>	LJ8925000
	<b>TSCA</b>	TSCA 8(b) inventory: No products were found. Exempt from TSCA 8(b) Inventory Listing since it is a hydrate. However, the anhydrous form (CAS no. 14402-89-2) is listed on the TSCA 8(b) Inventory.
<b>Commercial Name(s)</b>	Not available.	
	<b>CI#</b>	Not available.
<b>Synonym</b>	Disodium nitroprusside dihydrate; Nipride dihydrate; Sodium nitroprusside dihydrate; Sodium nitroprussiate dihydrate; Sodium nitrosylpentacyanoferrate (III) dihydrate; Nipride dihydrate; Ferrate(2-), pentakis(cyano-C)nitrosyl-, disodium dihydrate (OC-6-22)-	
<b>Chemical Name</b>	Ferrate(2-),pentacyanonitrosyl-, disodium, dihydrate	
<b>Chemical Family</b>	Not available.	
<b>Chemical Formula</b>	Na <sub>2</sub> [Fe(CN) <sub>5</sub> NO].2H <sub>2</sub> O	
<b>Supplier</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
<b><u>IN CASE OF EMERGENCY</u></b> <b><u>CHEMTREC (24hr) 800-424-9300</u></b>  CALL (310) 516-8000		

<b>Section 2. Composition and Information on Ingredients</b>					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Sodium Nitroferricyanide, dihydrate	13755-38-9				100
<b>Toxicological Data on Ingredients</b>					
<b>Sodium Nitroprusside, Anhydrous (CAS no. 14402-89-2):</b> ORAL (LD50): Acute: 99 mg/kg [Rat]. 61 mg/kg [Mouse].					

**Section 3. Hazards Identification**

<b>Potential Acute Health Effects</b>	Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant). Severe over-exposure can result in death.
<b>Potential Chronic Health Effects</b>	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Serious Inhalation</b>	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. <b>WARNING:</b> It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
<b>Ingestion</b>	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	Non-flammable.
<b>Auto-Ignition Temperature</b>	Not applicable.
<b>Flash Points</b>	Not applicable.
<b>Flammable Limits</b>	Not applicable.
<b>Products of Combustion</b>	Not available.
<b>Fire Hazards in Presence of Various Substances</b>	Not applicable.
<b>Explosion Hazards in Presence of Various Substances</b>	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
<b>Fire Fighting Media and Instructions</b>	Not applicable.
<b>Special Remarks on Fire Hazards</b>	When heated to decomposition or comes in contact with acid or acid fumes it emits toxic fumes of cyanides
<b>Special Remarks on Explosion Hazards</b>	Not available.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
<b>Large Spill</b>	Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep locked up.. Do not ingest. Do not breathe dust. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection</b>	Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits</b>	TWA: 5 (mg (Cn)/m <sup>3</sup> ) from OSHA (PEL) [United States] (as Cyanide)  Consult local authorities for acceptable exposure limits.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Solid. (Crystals solid.)	<b>Odor</b>	Odorless.
<b>Molecular Weight</b>	297.95 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available.	<b>Color</b>	Red.
<b>Boiling Point</b>	Not available.		
<b>Melting Point</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	Density: 1.72 (Water = 1)		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not available.		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	See solubility in water.		
<b>Solubility</b>	Easily soluble in cold water. Solubility in water: 43 g/100 ml water @ 16 deg. C (61 deg. F)		

**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Excess heat, dust generation, incompatible materials
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents, acids.
<b>Corrosivity</b>	Not available.
<b>Special Remarks on Reactivity</b>	Not available.
<b>Special Remarks on Corrosivity</b>	Not available.
<b>Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>Routes of Entry</b>	Absorbed through skin. Dermal contact. Inhalation. Ingestion.
<b>Toxicity to Animals</b>	Acute oral toxicity (LD50): 61 mg/kg [Mouse]. 99 mg/kg [Rat]
<b>Chronic Effects on Humans</b>	Not available.
<b>Other Toxic Effects on Humans</b>	Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).
<b>Special Remarks on Toxicity to Animals</b>	Sodium Nitroprusside, dihydrate Lowest Published Lethal Dose: LDL[Rat] - Route: Oral; Dose: 20 mg/kg LDL[Rabbit] - Route: Oral; Dose: 40 mg/kg
<b>Special Remarks on Chronic Effects on Humans</b>	May cause adverse reproductive effects based on animal test data. May affect genetic material (mutagenic)
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects: Skin: May cause skin irritation. It can be absorbed through the skin and cause systemic poisoning with symptoms similar to that of ingestion Eyes: May cause eye irritation. Inhalation: It may cause respiratory tract irritation and systemic poisoning with symptoms similar that of ingestion. Ingestion: Harmful if swallowed. It may cause nausea, vomiting, sweating, chest pain, abdominal pain, colic, diarrhea. A bitter almond odor may be noted on the breath or vomitus. It may also affect respiration (respiratory stimulation, cyanosis, respiratory paralysis), behavior/central nervous system (excitement, hallucinations, distorted perceptions, somnolence, tremor, delirium, anxiety, restlessness, vertigo, agitation, confusion, muscular weakness, dizziness, coma, convulsions, collapse), cardiovascular system (vasodilation, fall of blood pressure, slowing of pulse rate, palpitation), blood (changes in serum composition, methemoglobinemia), urinary system, brain (increased cranial pressure), and thyroid (hypothyroidism). It may cause metabolic acidosis. Ingestion of larger amounts may cause a sudden loss of consciousness and death from respiratory arrest. Smaller doses will prolong the above symptoms for 1 to 2 hours. Chronic Potential Health Effects: Repeated or prolonged exposure through ingestion, skin absorption, or inhalation may cause symptoms similar to "iodism" or bromide intoxication. Symptoms may include skin rashes, fatigue, nausea, salivation, vomiting, diarrhea, weight loss/loss of appetite, fever, rapid heart beat, tremor, delirium, stupor, insomnia, memory loss, delusion, irritability, depression, disorientation, slurred speech, seizure muscle weakness, agitation, delusion, lethargy, agitation, hallucinations, paranoia, aggressiveness, confusion and other symptoms similar to that of acute ingestion. Those with a history of central nervous system, thyroid (hypothyroidism), skin, heart or lung disease may be more susceptible to the effects of this substance.


**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation</b>	The products of degradation are less toxic than the product itself.
<b>Special Remarks on the Products of Biodegradation</b>	Not available.

**Section 13. Disposal Considerations**

<b>Waste Disposal</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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**Section 14. Transport Information**

<b>DOT Classification</b>	CLASS 6.1: Poisonous material.
<b>Identification</b>	UNNA: 1588 : Cyanide, inorganic, solid, n.o.s. (sodium nitroferricyanide) PG: III
<b>Special Provisions for Transport</b>	Marine Pollutant
<b>DOT (Pictograms)</b>	


**Section 15. Other Regulatory Information and Pictograms**

<b>Federal and State Regulations</b>	No products were found.	
<b>California Proposition 65 Warnings</b>	California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.	
<b>Other Regulations</b>	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances. Canada: Not listed on Canadian Domestic Substance List (DSL) or Canadian Non- Domestic Substance List (NDSL). China: Listed on National Inventory. Japan: Not listed on National Inventory (ENCS). Korea: Not listed on National Inventory (KECI). Philippines: Not listed on National Inventory (PICCS). Australia: Listed on AICS.	
<b>Other Classifications</b>	<b>WHMIS (Canada)</b>	CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
	<b>DSCL (EEC)</b>	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S38- In case of insufficient ventilation, wear suitable respiratory equipment. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**HMIS (U.S.A.)**

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	E

**National Fire Protection Association (U.S.A.)**

Health  Flammability  
 Reactivity  
 Specific hazard

**WHMIS (Canada) (Pictograms)**



**DSCL (Europe) (Pictograms)**



**TDG (Canada) (Pictograms)**



**ADR (Europe) (Pictograms)**



**Protective Equipment**



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Safety glasses.

**Section 16. Other Information**

**MSDS Code** S4250

**References** Not available.

**Other Special Considerations** Not available.

Validated by Sonia Owen on 10/12/2012.

Verified by Sonia Owen.  
 Printed 10/12/2012.

**CALL (310) 516-8000**

**Notice to Reader**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*