Safety data sheet according to U.S.A. Federal Hazcom 2012 and Canadian Regulation SOR/88-66

SECTION 1. Identification of the substance/mixture and of the company/undertaking.

1.1. Product identifier.

Code.	**HI93748B-0**
Product name.	**Manganese LR Reagent B**

1.2. Relevant identified uses of the substance or mixture and uses advised against.

Intended use.	**Determination of Manganese in Water Samples.**

1.3. Details of the supplier of the safety data sheet.

Name.	**Hanna Instruments S.R.L.**
Full address.	**str. Hanna Nr 1**
District and Country.	**457260 loc. Nusfalau (Salaj)** **Romania** **Tel. (+40) 260607700** **Fax. (+40) 260607700**
e-mail address of the competent person. responsible for the Safety Data Sheet.	**sds@hannainst.com**
Product distribution by:	**Hanna Intruments, Inc - 584 Park East, Woonsochet, Rhode Island, USA 02895 - Technical Service Contact Information: +1-800-426-6287**

1.4. Emergency telephone number.

For urgent inquiries refer to.	**USA Emergency Contact Information: +1-800-424-9300 - CHEMTREC 24 hours/365 days - International Emergency Contact Information: +1-703-527-3887 - CHEMTREC 24hours/365 days**

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement.

Substance or mixture corrosive to metals, category 1	May be corrosive to metals.
Acute toxicity, category 2	Fatal if inhaled.
Acute toxicity, category 3	Toxic if swallowed or in contact with skin.
Specific target organ toxicity - single exposure, category 1	Causes damage to organs.
Specific target organ toxicity - repeated exposure, category 1	Causes damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1A	Causes severe skin burns and eye damage.
Serious eye damage, category 1	Causes serious eye damage.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H290	May be corrosive to metals.
H330	Fatal if inhaled.
H301+H311	Toxic if swallowed or in contact with skin.
H370	Causes damage to organs.

SECTION 2. Hazards identification. ... / >>

H372 Causes damage to organs through prolonged or repeated exposure.
H314 Causes severe skin burns and eye damage.

Precautionary statements:
Prevention:
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
Response:
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
P391 Collect spillage.
Storage:
--
Disposal:
--

2.2. Other hazards.

Environmental classification as for Reg. (EU) 1272/2008 (CLP):

The product is classified as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

Classification and Hazard Statement.
Hazardous to the aquatic environment, acute toxicity, category 1 — Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1 — Very toxic to aquatic life with long lasting effects.

Hazard pictograms:

Signal words: Warning

Hazard statements:
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
--
Response:
--
Storage:
--
Disposal:
--

Additional hazards.
Contact with acids liberates very toxic gas.
Additional hazards.
Contact with acids liberates very toxic gas.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

SECTION 3. Composition/information on ingredients. ... / >>

3.2. Mixtures.

Contains:

Identification.	x = Conc. %.	Classification:
SODIUM HYDROXIDE		
CAS. 1310-73-2	5 ≤ x < 9	Substance or mixture corrosive to metals, category 1 H290, Skin corrosion, category 1A H314
EC. 215-185-5		
INDEX. 011-002-00-6		
Reg. no. 01-2119457892-27		
POTASSIUM CYANIDE		
CAS. 151-50-8	2.5 ≤ x < 5	Substance or mixture corrosive to metals, category 1 H290, Acute toxicity, category 1 H300, Acute toxicity, category 1 H310, Acute toxicity, category 1 H330, Specific target organ toxicity - single exposure, category 1 H370, Specific target organ toxicity - repeated exposure, category 1 H372, Hazardous to the aquatic environment, acute toxicity, category 1 H400 M=10, Hazardous to the aquatic environment, chronic toxicity, category 1 H410 M=10
EC. 205-792-3		
INDEX. 006-007-00-5		
Reg. no. 01-2119486407-29		

* There is a batch to batch variation.

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed.

Specific information on symptoms and effects caused by the product are unknown.
For symptoms and effects caused by the contained substances, see chap. 11.

POTASSIUM CYANIDE
Irritant effects, respiratory paralysis, Shortness of breath, Dizziness, Unconsciousness, Nausea, Vomiting, cardiovascular disorders, death. The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness.
SODIUM HYDROXIDE
Irritation and corrosion, Cough, Shortness of breath, collapse, death. Risk of blindness!.

4.3. Indication of any immediate medical attention and special treatment needed.

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide and chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water.
Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If large quantities of the product are involved in a fire, they can make it considerably worse. Do not breathe combustion products.

SECTION 5. Firefighting measures. ... / >>

POTASSIUM CYANIDE
Not combustible. Ambient fire may liberate hazardous vapours. Fire may cause evolution of: Hydrogen cyanide (hydrocyanic acid).

5.3. Advice for firefighters.
GENERAL INFORMATION
In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.
Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.
The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.
Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.
Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. Precautions for safe handling.
Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.
Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed.
Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).
Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).
	TLV-ACGIH	ACGIH 2016

SECTION 8. Exposure controls/personal protection. ... / >>

SODIUM HYDROXIDE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-			2 (C)		
OSHA	USA	2				
CAL/OSHA	USA	2				
NIOSH	USA			2 (C)		

POTASSIUM CYANIDE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-			5 (C)	4.7 (C)	SKIN.
OSHA	USA	5				SKIN.
OSHA	USA	5				SKIN.
CAL/OSHA	USA	5				SKIN.
CAL/OSHA	USA	5				SKIN.
NIOSH	USA			5 (C)	4.7 (C)	

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

SODIUM HYDROXIDE
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms OSHA ID-121.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.
HAND PROTECTION
Protect hands with category III work gloves (OSHA 29 CFR 1910.138).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (OSHA 29 CFR 1910.133).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84 and OSHA 29 CFR 1910.134.
ENVIRONMENTAL EXPOSURE CONTROLS.
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid
Colour	colourless
Odour	characteristic
Odour threshold.	Not available.
pH.	12.7
Melting point / freezing point.	Not available.
Initial boiling point.	Not available.
Boiling range.	Not available.

SECTION 9. Physical and chemical properties. ... / >>

Flash point.	>	93 °C.	(199,4 °F)
Evaporation rate		Not available.	
Flammability (solid, gas)		Not available.	
Lower inflammability limit.		Not available.	
Upper inflammability limit.		Not available.	
Lower explosive limit.		Not available.	
Upper explosive limit.		Not available.	
Vapour pressure.		Not available.	
Vapour density		Not available.	
Relative density.		1.110	
Solubility		soluble in water	
Partition coefficient: n-octanol/water		Not available.	
Auto-ignition temperature.		Not available.	
Decomposition temperature.		Not available.	
Viscosity		Not available.	
Explosive properties		Not available.	
Oxidising properties		Not available.	

9.2. Other information.

Total solids (250°C / 482°F)	9,16 %

SECTION 10. Stability and reactivity.

10.1. Reactivity.
Information not available.

10.2. Chemical stability.

SODIUM HYDROXIDE
Hygroscopic.

10.3. Possibility of hazardous reactions.

Contact with string acids causes the development of toxic gases.

SODIUM HYDROXIDE
Risk of explosion/exothermic reaction with: Acetone, Nitriles, phosphides, halogens, halogen-halogen compounds, chlorinated solvents, Ethylene oxide, Hydrazine hydrate, hydroxylamine, anhydrides, Peroxides, Acrolein, Acid chlorides, Acids, sulphuric acid, silver salt, hydrogen peroxide, organic nitro compounds, Water, Metals, Light metals. Possible formation of: Hydrogen. Violent reactions possible with: ammonium compounds, organic combustible substances, phenols. Generates dangerous gases or fumes in contact with: persulfates, Sodium borohydride, Oxides of phosphorus.

POTASSIUM CYANIDE
Exothermic reaction with: Fluorine, magnesium. Risk of explosion with: chlorates, nitrites, nitrates, Strong oxidizing agents, permanganates, anhydrides, mercury(II) nitrate, nitrogen trichloride. A risk of explosion and/or of toxic gas formation exists with the following substances: Water, Acids, Hydrogen fluoride, Carbon dioxide (CO_2).

10.4. Conditions to avoid.

SODIUM HYDROXIDE
Exposure to the air, moisture and sources of heat.

10.5. Incompatible materials.

SODIUM HYDROXIDE
Strong acids, ammonia, zinc, lead, aluminium, water and flammable liquids.

POTASSIUM CYANIDE
Aluminium, Zinc, Tin.

10.6. Hazardous decomposition products.
Information not available.

SECTION 11. Toxicological information.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects.

POTASSIUM CYANIDE
Acute inhalation toxicity, Acute toxicity estimate: 0.051 mg/l; dust/mist, Expert judgement, Symptoms: mucosal irritations, absorption - Acute dermal toxicity, absorption - Eye irritation, rabbit, Result: Eye irritation.
SODIUM HYDROXIDE
Acute oral toxicity, Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach - Acute inhalation toxicity, Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract - Skin irritation, Rabbit, Result: Causes severe burns - Eye irritation, Rabbit, Result: Irreversible effects on the eye, Causes serious eye damage. Risk of blindness! - Sensitisation, Patch test: human, Result: Does not cause skin sensitisation - Germ cell mutagenicity, Genotoxicity in vitro, Mutagenicity (mammal cell test): micronucleus, Result: negative, (Lit.) Ames test, Result: negative.

ACUTE TOXICITY.

LC50 (Inhalation - vapours) of the mixture:	Not classified (no significant component).
LC50 (Inhalation - mists / powders) of the mixture:	0,100 mg/l
LD50 (Oral) of the mixture:	100,000 mg/kg
LD50 (Dermal) of the mixture:	286,000 mg/kg

POTASSIUM CYANIDE

LD50 (Oral).	5 mg/kg Rat
LD50 (Dermal).	14.3 mg/kg Rabbit
LC50 (Inhalation).	63 ppm/1h Rat

SODIUM HYDROXIDE

LD50 (Oral).	1350 mg/kg Rat
LD50 (Dermal).	1350 mg/kg Rat

SKIN CORROSION / IRRITATION.
Corrosive for the skin.

SERIOUS EYE DAMAGE / IRRITATION.
Causes serious eye damage.

RESPIRATORY OR SKIN SENSITISATION.
Does not meet the classification criteria for this hazard class.

GERM CELL MUTAGENICITY.
Does not meet the classification criteria for this hazard class.

CARCINOGENICITY.
Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY.
Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE.
Causes damage to organs.

STOT - REPEATED EXPOSURE.
Causes damage to organs.

ASPIRATION HAZARD.
Does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information.

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity.

POTASSIUM CYANIDE	
LC50 - for Fish.	0.025 mg/l/96h
EC50 - for Crustacea.	0.05 mg/l/48h Daphnia pulex
EC50 - for Algae / Aquatic Plants.	0.05 mg/l/72h
Chronic NOEC for Fish.	0.0011 mg/l Lepomis macrochirus
SODIUM HYDROXIDE	
LC50 - for Fish.	45.4 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea.	40.38 mg/l/48h Daphnia

12.2. Persistence and degradability.

POTASSIUM CYANIDE	
Solubility in water.	> 10000 mg/l
Biodegradability: Information not available.	
SODIUM HYDROXIDE	
Solubility in water.	> 10000 mg/l
Biodegradability: Information not available.	

12.3. Bioaccumulative potential.

POTASSIUM CYANIDE	
BCF.	3.162

12.4. Mobility in soil.

POTASSIUM CYANIDE	
Partition coefficient: soil/water.	0.3825

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

POTASSIUM CYANIDE

Additional ecological information, Biological effects: Hazard for drinking water supplies. Forms toxic mixtures in water, dilution measures notwithstanding. Reacts with water to form toxic decomposition products. Discharge into the environment must be avoided.

SODIUM HYDROXIDE

Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Neutralisation possible in waste water treatment plants. Discharge into the environment must be avoided.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to dangerous goods transport regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

14.1. UN number.

ADR / RID, IMDG, IATA: 2922

SECTION 14. Transport information. ... / >>

14.2. UN proper shipping name.

ADR / RID: CORROSIVE LIQUID, TOXIC, N.O.S. (SODIUM HYDROXIDE, POTASSIUM CYANIDE) MIXTURE
IMDG: CORROSIVE LIQUID, TOXIC, N.O.S. (SODIUM HYDROXIDE, POTASSIUM CYANIDE) MIXTURE
IATA: CORROSIVE LIQUID, TOXIC, N.O.S. (SODIUM HYDROXIDE, POTASSIUM CYANIDE) MIXTURE

14.3. Transport hazard class(es).

ADR / RID: Class: 8 Label: 8 (6.1)

IMDG: Class: 8 Label: 8 (6.1)

IATA: Class: 8 Label: 8 (6.1)

14.4. Packing group.

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards.

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 86 Special Provision: -	Limited Quantities: 1 L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special Instructions:	A3, A803	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code.

Information not relevant.

SECTION 15. Regulatory information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

U.S. Federal Regulations.

TSCA:
All components are listed on TSCA Inventory.

Clean Air Act Section 112(b):
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

Clean Air Act Section 602 Class I Substances:
No component(s) listed.

Clean Air Act Section 602 Class II Substances:
No component(s) listed.

Clean Water Act – Priority Pollutants:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

SECTION 15. Regulatory information. ... / >>

Clean Water Act – Toxic Pollutants:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

DEA List I Chemicals (Precursor Chemicals):
No component(s) listed.

DEA List II Chemicals (Essential Chemicals):
No component(s) listed.

EPA List of Lists:
313 Category Code:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

EPCRA 302 EHS TPQ:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

EPCRA 304 EHS RQ:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

CERCLA RQ:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))
1310-73-2 SODIUM HYDROXIDE

EPCRA 313 TRI:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

RCRA Code:
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

CAA 112 (r) RMP TQ:
No component(s) listed.

State Regulations.

Massachussetts:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

Minnesota:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

New Jersey:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

New York:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

Pennsylvania:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

California:
1310-73-2 SODIUM HYDROXIDE
151-50-8 POTASSIUM CYANIDE (Cyanides, Cyanides (inorganic salts))

Proposition 65:
This product does not contain any substances know to the State of California to cause cancer, reproductive harm or birth defects.

International Regulations.
Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None.

Substances subject to the Rotterdam Convention:
None.

Substances subject to the Stockholm Convention:

SECTION 15. Regulatory information. ... / >>

None.

Candadian WHMIS.
Information not available.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
STOT SE 1	Specific target organ toxicity - single exposure, category 1
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301+H311	Toxic if swallowed or in contact with skin.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

LEGEND:
- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

SECTION 16. Other information. ... / >>

GENERAL BIBLIOGRAPHY:
- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Comunication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachussetts 105 CMR Department of public health 670.000: "Right to Know"
- Minensota Chapter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.