

Safety Data Sheet



Revision Date: 9/15/2014

SDS #: SDS-10210-01

HisDetector™ Nickel-HRP

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

HisDetector™ Nickel-HRP

Product Code

24-01-01

Kit Components:

HisDetector™ Nickel-HRP 24-01-02

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755

Fax #: 1-301-948-0169

Web: www.kpl.com

Email: kplmsds@seracare.com

Emergency Telephone Numbers:

| | | |
|--|-------------------------------|----------------------------------|
| AUSTRALIA – POISONS INFORMATION CENTER | Telephone: 13 11 26 | Hours: 24 hours |
| CANADIAN TRANSPORT EMERGENCY CENTER | Telephone: (1) 613 996 6666 | Hours: 24 hours/day, 7 days/week |
| UK – THE NATIONAL FOCUS | Telephone: (44) 029 2041 6388 | Hours: 09:00-17:00 GMT |
| USA- NATIONAL RESPONSE CENTER | Telephone: (1) 800 424 8802 | Hours: 24 hours/day, 7 days/week |

CHEMTREC:

CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

Safety Data Sheet



Revision Date: 6/19/2015

SDS # SDS-10237-02

HisDetector™ Nickel-HRP

1. PRODUCT AND COMPANY IDENTIFICATION

| Product Description: | Product Code |
|--|--------------|
| HisDetector™ Nickel-HRP Diluent Buffer | 24-02-00 |
| HisDetector™ Nickel-HRP | 24-01-02 |

Hazardous Reagent
HisDetector™ Nickel-HRP

Hazardous Reagent Product code
Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
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Web: www.kpl.com
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2. HAZARD IDENTIFICATION

Hazard Type Health and Environmental Hazard
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification Acute toxicity, Category 3, dermal *; H311
Skin sensitisation, Category 1; H317
Acute toxicity, Category 3, inhalation; H331
Carcinogen; H351

Hazard Statement H311: Toxic in contact with skin
H317: May cause an allergic skin reaction.
H331: Toxic if inhaled
H351: May cause cancer by inhalation.

Precautionary Statement P201: Obtain special instructions before use.
P261: Avoid breathin mist/ vapours/ spray.
P273: Avoid release to the environment.
P280: Wear protective gloves.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P313: IF exposed or concerned: Get medical advice/attention.

Symbols of DangerGHS08
GHS07
GHS09
Danger**Data for 100% Hazardous Chemical**

| | |
|---------------------|--|
| ROUTES OF EXPOSURE: | The substance can be absorbed into the body by inhalation, through the skin and by ingestion. |
| INHALATION RISK: | Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed. |
| SHORT-TERM EXPOSURE | The substance is irritating to the eyes, skin and respiratory tract. |
| LONG-TERM EXPOSURE: | Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. Repeated or prolonged inhalation of of the aerosol may cause effects on the lungs. The substance may have effects on the nasal sinuses. This may result in inflammation and ulceration. This substance is carcinogenic to humans. |

| |
|---|
| The product is a Mixture. It May Cause the following symptoms. |
|---|

EYE: Redness.

SKIN: Redness.

INHALATION: Cough. Sore throat.

INGESTION: Abdominal pain. Dizziness. Headache. Nausea. Vomiting.

Data for 100% Glycerol: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly on spraying.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Component</u> | <u>CHEMICAL</u> | <u>% Weight</u> | <u>CAS #:</u> |
|-------------------------|-----------------------------|-----------------|---------------|
| HisDetector™ Nickel-HRP | Glycerol | 40% | 56-81-5 |
| | Nickel Sulphate Hexahydrate | <0.1% | 10101-97-0 |
| | Triethylamine | <0.1% | 121-44-8 |
| | | | |

Classification

Acute toxicity, Category 3, dermal *; H311
 Skin sensitisation, Category 1; H317
 Acute toxicity, Category 3, inhalation; H331
 Carcinogen; H351

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

| | |
|------------------------------|--|
| Ingestion First Aid: | Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention . |
| Inhalation First Aid: | Fresh air, rest. Refer for medical attention. |
| Skin First Aid: | Remove contaminated clothes. Rinse skin with plenty of water or shower. |
| Eye First Aid: | First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention. |

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

| | | |
|---|--|--|
| Fire Acute Hazard: Not combustible. Gives off irritating or toxic fumes (or gases) in a fire. | Fire Prevention: Not Available | Fire Fighting: In case of fire in the surroundings, use appropriate extinguishing media. |
| Explosion Acute Hazard: | | |
| Not Available | Not Available | Not Available |
| CHEMICAL DANGERS: Decomposes at 848°C. This produces toxic fumes of sulfur trioxide and nickel monoxide. The solution in water is a weak acid. | | |
| PHYSICAL DANGERS: Not Available | | |

Data for 100% Glycerol: In case of fire: keep drums, etc., cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|--|
| Personal Precautions | Avoid contact with skin and clothing. |
| Environmental Precautions | Not Applicable |
| Method of Containment | Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. |
| Methods of Clean-up | Clean-up with copious amounts of water. |
| Other Information | Not Applicable |

Data for 100% Hazardous Chemical

| | |
|--------------------------|--|
| Spillage Disposal | Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. Carefully collect remainder. Then store and dispose. |
|--------------------------|--|

7. HANDLING AND STORAGE

| | |
|------------------|---|
| Handling: | Wear appropriate PPE. |
| Storage: | Store at 2-8°C. refrigerated. Separated from strong oxidants. |

Data for 100% Hazardous Chemical

| | |
|----------------|---------------|
| Storage | Not Available |
|----------------|---------------|

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

| | |
|-------------------|---|
| INHALATION | Use ventilation (not if powder), local exhaust or breathing protection. |
| EYE | Wear safety spectacles, face shield or eye protection in combination with breathing protection if powder. |
| SKIN | Protective gloves. Protective clothing. |
| INGESTION | Do not eat, drink, or smoke during work. |

Engineering Controls Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|-----------------------|------------------------------------|--------------------------|
| Appearance | Colorless or Pale Yellow Solution. | |
| Physical State | Liquid | pH: Not Available |

Data for 100% Hazardous Chemical

Decomposes at
840°C Density: 3.7
g/cm³ Solubility in
water, g/100ml at 0°C:
29.3

10. STABILITY AND REACTIVITY

| | |
|---|---|
| Chemical Stability | Stable under normal condition |
| Incompatibility Materials to Avoid | Strong oxidizing agents and strong bases |
| Hazardous Decomposition Products | Carbon Monoxide, Carbon Dioxide, sulphur trioxide, nickel oxide , tetraethyl hydrazine, butane, methane, nitrogen, nitrous gases. |
| Hazardous Polymerization | Will not occur |

Data for 100% Hazardous Chemical

| | |
|--------------------------|--|
| CHEMICAL DANGERS: | Decomposes at 848°C. This produces toxic fumes of sulfur trioxide and nickel monoxide. The solution in water is a weak acid. |
| PHYSICAL DANGERS: | Not Available |

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

| | |
|------------------------|--|
| LD50 Oral | Data for 100% Glycerol: LD50 oral rat: 12600 mg/kg Reference: Federation Proceedings, Federation of American Societies for Experimental Biology. Vol. 4, Pg. 142, 1945. Data for 100% Triethylamine: LD50 oral rat Value: 460 mg/kg Reference: AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 4, Pg. 119, 1951. Data for 100% Nickel Sulfate: LD50 oral rat Value: 264 mg/kg Reference: Acute Toxicity Data. Journal of the American College of Toxicology, Part B. Vol. 1, Pg. 685, 1992. |
| LD50 Dermal | Data for 100% Triethylamine: LD50 dermal Species: Rabbit Value: 415 mg/kg Reference: AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 4, Pg. 119, 1951. Data for 100% Glycerol: LD50 dermal rat/rabbit: > 10000 mg/kg Species: Rabbit Reference: BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets. Vol. 9-4/1970 |
| LC50 Inhalation | Not Available |

Chronic Toxicity

| | |
|------------------------------|--|
| Carcinogenicity | Data for 100% Nickel Sulfate: Carcinogenicity, Category 1A; H350i May cause cancer by inhalation |
| Irritation | H311: Toxic in contact with skin |
| Corrosivity | Not Available |
| Sensitization | Skin sensitisation, Category 1; H317 |
| Neurological Effects | Not Available |
| Mutagenic Effects | Data for 100% Nickel Sulphate Hexahydrate: Possible risk of irreversible effects |
| Reproductive Effects | Data for 100% Nickel Sulphate Hexahydrate: May cause harm to the unborn child |
| Developmental Effects | Not Available |
| Target Organ Effects | Respiratory Tract, Skin, Gastrointestinal Tract. |
| Other adverse effects | Not Available |

12. ECOLOGICAL MEASURES

| | |
|--|---|
| Ecotoxicity | Data for 100% Nickel Sulfate Ecotoxic in the aquatic environment: LC50 Fish (96 hours) Minimum: 1,28 mg/l Maximum: 71,5 mg/l Median: 14,7 mg/l Study number: 34 Reference for median: Khangarot, B.S. 1981. Lethal Effects of Zinc and Nickel on Freshwater Teleosts. Acta Hydrochim.Hydrobiol. 9(3):297-302; Anderson, D.R. 1981. The Combined Effects of Nickel, Chlorine and Temperature on the Mortality of Rainbow Trout, Salmo gairdneri. Ph.D.Thesis, University of Washington, Seattle, WA :202 p. Data for 100% Nickel Sulfate: LC50 Crustaceans (48 hours) Minimum: 0,697 mg/l Maximum: 255 mg/l Median: 2,72 mg/l Study number: 21 Reference for median: Lind, D., K. Alto, and S. Chatterton 1978. Regional Copper-Nickel Study. Draft Report, Minnesota Environmental Quality Board St.Paul, MN :54 Data for 100% Nickel Sulfate: EC50 Algae (72 or 96 hours) Test duration: 72 hours Minimum: 6,03 mg/l Maximum: 6,03 mg/l Median: 6,03 mg/l Study number: 1 Reference for median: Azeez, P.A., and D.K. Banerjee 1991. Nickel Uptake and Toxicity in Cyanobacteria. Toxicol.Enviro.Chem. 30:43-50 Data for 100% Glycerol: Toxicity threshold (cell multiplication inhibition test) Algae (Microcystis aeruginosa) 2900 mg/l ; Protozoa (Entosiphon sulcatum) 3200 mg/l ; LC50 Goldfish >5000 mg/l/24 hr - modified ASTM D 1345 [Verschuere, K. Handbook of Environmental Data of Organic Chemicals. 2nd ed. New York, NY: Van Nostrand Reinhold Co., 1983., p. 695] |
| Persistence/Degradability | Data for 100% Glycerol: Readily biodegradable |
| Mobility in Environmental Media | Data for 100% Glycerol: Very high mobility in soil [Swann RL et al; Res Rev 85: 17-28 (1983)] |
| Bioaccumulation/ Accumulation | Not expected |

13. DISPOSAL MEASURES

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|--------------------------------|--|
| Waste Disposal Method: | Observe all Federal, State and Local laws concerning health and pollution. |
| Contaminated Packaging: | Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations. |
| US EPA Waste Number: | Not Applicable |

14. TRANSPORTATION MEASURES

| | |
|--------------------------------------|----------------|
| DOT: | Not Available |
| IATA: | Not Available |
| ADR (road)/ RID (rail): | Not Available |
| IMDG (sea): | Not Available |
| General Transport Regulations | Not Applicable |

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

Triethylamine

CAS/313 Category Codes: 121-44-8 | CERCLA RQ: 5,000 | Section 313: 313 | RCRACODE:

U404 Nickel Compounds | CAS/313 Category Codes: N495 | CERCLA RQ: & (Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985).) | Section 313: 313

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains the following chemical or chemicals which are subject to the reporting requirements of the Clean Air Act. Listed as Chemical: NICKEL COMPOUNDS
 CAS Number: NDB000
 Listed as Chemical: TRIETHYLAMINE CAS Number: 121-44-8
 Federal Regulatory Program Lists
 Air Contaminants (Occupational and Safety Health Act) Hazardous Air Pollutants (Clean Air Act) Hazardous Constituents (Resource Conservation and Recovery Act) Hazardous Substances (Superfund) Toxic Release Inventory Chemicals California State Regulatory Program Lists
 Air Contaminants (California Occupational and Safety Health Act) California Air Toxics "Hot Spots" Chemicals (Assembly Bill 2588) California Toxic Air Contaminants (Assembly Bill 1807)

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: Nickel Compounds | Type of Toxicity: cancer | CAS No. --- | Date Listed: May 7, 2004

State Right to Know Act

| Chemical Name | Glycerol | Nickel Sulphate Hexahydrate | Triethylamine |
|---------------|------------|-----------------------------|---------------|
| New Jersey | Listed | Listed | Listed |
| Pennsylvania | Listed | Not Listed | Listed |
| New York | Not Listed | Not Listed | Listed |
| Rhode Island | Not Listed | Not Listed | Listed |

International Inventories

| Chemical Name | Glycerol | Nickel Sulphate Hexahydrate | Triethylamine |
|---------------|------------|-----------------------------|---------------|
| TSCA | Listed | Listed | Listed |
| DSL | Listed | Not Listed | Listed |
| NDSL | Not Listed | Not Listed | Not Listed |
| EINECS | Listed | Not Listed | Listed |
| CHINA | Listed | Listed | Listed |
| KECL | Listed | Listed | Listed |
| JAPAN: | Listed | Listed | Listed |
| AICS | Listed | Not Listed | Listed |

EU Regulations

| | |
|--|---|
| Annex I Index# | Data for 100% Nickel Sulfate CAS# 7786-81-4: 028-009-00-5 Data for TriethylAmine: 612-004-00-5 |
| Classification | Acute toxicity, Category 3, dermal *; H311 Skin sensitisation, Category 1; H317 Acute toxicity, Category 3, inhalation; H331 Carcinogen; H351 |
| Risk Phrases | H311: Toxic in contact with skin H317: May cause an allergic skin reaction. H331: Toxic if inhaled H351: May cause cancer by inhalation. |
| Safety Phrases | P201: Obtain special instructions before use. P261: Avoid breathin mist/ vapours/ spray. P273: Avoid release to the environment. P280: Wear protective gloves. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P308+P313: IF exposed or concerned: Get medical advice/attention. |
| Symbols and Indications of Danger | GHS08 GHS07 GHS09 |

Danger

**Specific Concentration
Limits**Data for Nickel Sulfate: STOT RE 1; H372: C >= 1 % STOT RE 2; H373: 0,1 % <= C
< 1 % Skin Irrit. 2; H315: C >= 20 % Skin Sens. 1; H317: C >= 0,01 %**16. OTHER INFORMATION**

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 6/19/2015