

# Material Safety Data Sheet

United States  
English

## Section 1. Chemical product and company identification

**Product name** His Mag Sepharose™ Ni, 2 x 1 ml

**Catalogue Number** 28-9673-88



9 0 2 8 9 6 7 3 8 8

**Material uses** Industrial applications: Analytical chemistry. Research. Liquid chromatography.  
**Product type** Liquid.  
**Validation date** 24 March 2010  
**Print date** 16 June 2010  
**Supplier** GE Healthcare UK Ltd  
 Amersham Place  
 Little Chalfont  
 Buckinghamshire HP7 9NA  
 England  
 +44 0870 606 1921

**In case of emergency**

|        |               |                |
|--------|---------------|----------------|
| US     | ChemTrec (US) | 1-800-424-9300 |
| Canada | ChemTrec (US) | 1-703-527-3887 |

## 2. Hazards identification

**Physical state** Liquid.  
**Odor** Sweetish. Slight Alcohol-like.  
**OSHA/HCS status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Emergency overview** WARNING!

FLAMMABLE LIQUID AND VAPOR. COMBUSTIBLE. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Flammable liquid. Irritating to eyes. Moderately irritating to the skin and respiratory system. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Contains material that can cause target organ damage. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**Routes of entry** Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

**Eyes** Irritating to eyes.  
**Skin** Moderately irritating to the skin.  
**Inhalation** Moderately irritating to the respiratory system.  
**Ingestion** No known significant effects or critical hazards.

### Potential chronic health effects

**Chronic effects** Contains material that can cause target organ damage.  
**Carcinogenicity** Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.  
**Mutagenicity** No known significant effects or critical hazards.  
**Teratogenicity** No known significant effects or critical hazards.  
**Developmental effects** No known significant effects or critical hazards.  
**Fertility effects** No known significant effects or critical hazards.  
**Target organs** Contains material which causes damage to the following organs: kidneys.  
 Contains material which may cause damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).  
**Inhalation** Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
**Ingestion** No specific data.



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|---|--|
| <b>Skin</b>   | Adverse symptoms may include the following:<br>irritation<br>redness   |
| <b>Eyes</b>   | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness   |
| <b>Medical conditions aggravated by over-exposure</b> | Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product. |

See toxicological information (section 11)

### 3. Composition/information on ingredients

| <b>Name</b>  | <b>CAS number</b>        | <b>% by weight</b> |
|--|--------------------------|--------------------|
| Ethanol  | 64-17-5                  | 14 - 19            |
| Nickel   | 7440-02-0                | 0.12               |
| Mag Sepharose (highly cross-linked agarose with Magnetite) | 9012-36-6 /<br>1317-61-9 | -                  |

### Section 4. First aid measures

|                                   |   |
|-----------------------------------|---|
| <b>Eye contact</b>                | In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.   |
| <b>Skin contact</b>               | Wash with soap and water. Get medical attention if irritation develops.   |
| <b>Inhalation</b>                 | If inhaled, remove to fresh air. Get medical attention if symptoms appear.  |
| <b>Ingestion</b>                  | Do not ingest. Get medical attention if symptoms appear.  |
| <b>Protection of first-aiders</b> | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

### Section 5. Fire-fighting measures

|   |  |
|---|--|
| <b>Flammability of the product</b>                    | Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.  |
| <b>Extinguishing media</b>                            |  |
| <b>Suitable</b>                                       | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.   |
| <b>Not suitable</b>                                   | Do not use water jet.  |
| <b>Special exposure hazards</b>                       | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| <b>Hazardous combustion products</b>                  | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>metal oxide/oxides   |
| <b>Special protective equipment for fire-fighters</b> | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  |
| <b>Special remarks on fire hazards</b>                | Use an extinguishing agent suitable for the surrounding fire.  |

### Section 6. Accidental release measures

|                                  |  |
|----------------------------------|--|
| <b>Personal precautions</b>      | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).   |
| <b>Environmental precautions</b> | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).  |
| <b>Methods for cleaning up</b>   | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. |
| <b>Small spill</b>               | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.   |



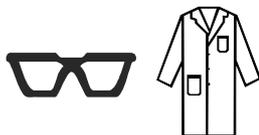
## Section 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| <b>Storage</b>  | Store between the following temperatures: 4 to 30°C (39.2 to 86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.   |

## Section 8. Exposure controls/personal protection

| <u>Product name</u>                      | <u>Exposure limits</u>   |
|--|--|
| Ethanol                                  | <p><b>ACGIH TLV (United States, 1/2009). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.</b><br/>STEL: 1000 ppm 15 minute(s).</p> <p><b>NIOSH REL (United States, 6/2008).</b><br/>TWA: 1900 mg/m<sup>3</sup> 10 hour(s).<br/>TWA: 1000 ppm 10 hour(s).</p> <p><b>OSHA PEL (United States, 11/2006).</b><br/>TWA: 1900 mg/m<sup>3</sup> 8 hour(s).<br/>TWA: 1000 ppm 8 hour(s).</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b><br/>TWA: 1900 mg/m<sup>3</sup> 8 hour(s).<br/>TWA: 1000 ppm 8 hour(s).</p>  |
| Nickel                                   | <p><b>ACGIH TLV (United States, 1/2009). Notes: Refers to Appendix A -- Carcinogens. Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract. 1998 Adoption.</b><br/>TWA: 1.5 mg/m<sup>3</sup> 8 hour(s). Form: Metallic form</p> <p><b>NIOSH REL (United States, 6/2008). Notes: as Ni</b><br/>TWA: 0.015 mg/m<sup>3</sup>, (as Ni) 10 hour(s).</p> <p><b>OSHA PEL (United States, 11/2006). Notes: as Ni</b><br/>TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hour(s).</p> <p><b>OSHA PEL 1989 (United States, 3/1989). Notes: as Ni</b><br/>TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hour(s).</p> |
| <b>Recommended monitoring procedures</b> | If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.   |
| <b>Engineering measures</b>              | Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.  |
| <b>Hygiene measures</b>                  | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.  |
| <b>Personal protection</b>               |  |
| <b>Respiratory</b>                       | Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: A respirator is not needed under normal and intended conditions of product use.   |
| <b>Hands</b>                             | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 1-4 hours (breakthrough time): butyl rubber, neoprene  |
| <b>Eyes</b>                              | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields   |
| <b>Skin</b>                              | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat  |
| <b>Environmental exposure controls</b>   | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.   |



**Personal protective equipment  
(Pictograms)****Section 9. Physical and chemical properties**

|                            |  |
|----------------------------|--|
| <b>Physical state</b>      | Liquid.  |
| <b>Flash point</b>         | Closed cup: 38 to 43°C (100.4 to 109.4°F)                            |
| <b>Color</b>               | solution : Colorless. / Suspension. : Blue. Green.                   |
| <b>Odor</b>                | Sweetish. Slight Alcohol-like.                                       |
| <b>Volatility</b>          | 14 to 19% (w/w)  |
| <b>Odor threshold</b>      | 180 ppm: Calculated value for the mixture                            |
| <b>VOC</b>                 | 14 to 19 % (w/w) [ISO 11890-1]                                       |
| <b>Ionicity (in water)</b> | Non-ionic.   |
| <b>Solubility</b>          | Easily soluble in the following materials: cold water and hot water. |

**Section 10. Stability and reactivity**

|                                 |  |
|---------------------------------|--|
| <b>Stability</b>                | The product is stable.   |
| <b>Conditions to avoid</b>      | Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid exposure - obtain special instructions before use.   |
| <b>Materials to avoid</b>       | Reactive or incompatible with the following materials:<br>oxidizing materials  |
| <b>Hazardous polymerization</b> | Under normal conditions of storage and use, hazardous polymerization will not occur.   |
| <b>Conditions of reactivity</b> | Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.<br>Non-flammable in the presence of the following materials or conditions: shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.<br>Use an extinguishing agent suitable for the surrounding fire.<br>Not considered to be a product presenting a risk of explosion. |

**Section 11. Toxicological information****Acute toxicity**

| Product/ingredient name | Result               | Species | Dose        | Exposure |
|-------------------------|----------------------|---------|-------------|----------|
| Ethanol                 | LD50 Intra-arterial  | Rat     | 11 mg/kg    | -        |
|                         | LD50 Intraperitoneal | Rat     | 3600 ug/kg  | -        |
|                         | LD50 Intravenous     | Rat     | 1440 mg/kg  | -        |
|                         | LD50 Oral            | Rat     | 7 g/kg      | -        |
|                         | LDLo Dermal          | Rabbit  | 20 g/kg     | -        |
|                         | TDLo Intracerebral   | Rat     | 363.6 ug/kg | -        |
|                         | TDLo Intracerebral   | Rat     | 106 ug/kg   | -        |
|                         | TDLo Intraperitoneal | Rat     | 500 mg/kg   | -        |
|                         | TDLo Oral            | Rat     | 6 g/kg      | -        |
|                         | TDLo Oral            | Rat     | 0.72 g/kg   | -        |
|                         | TDLo Oral            | Rat     | 0.5 g/kg    | -        |
|                         | TDLo Oral            | Rat     | 10 mL/kg    | -        |
|                         | TDLo Oral            | Rat     | 5 mL/kg     | -        |
|                         | TDLo Oral            | Rat     | 6000 mg/kg  | -        |
|                         | TDLo Oral            | Rat     | 5000 mg/kg  | -        |
|                         | TDLo Oral            | Rat     | 4300 mg/kg  | -        |
|                         | LC50 Inhalation Gas. | Rat     | 20000 ppm   | 10 hours |

**Conclusion/Summary** Not available.

**Classification**

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP      | OSHA |
|-------------------------|-------|------|-----|-------|----------|------|
| Ethanol                 | A3    | 1    | -   | -     | -        | -    |
| Nickel                  | A5    | 2B   | -   | +     | Possible | -    |



## Section 12. Ecological information

**Environmental effects** No known significant effects or critical hazards.**Aquatic ecotoxicity**

| Product/ingredient name | Test   | Result  | Species   | Exposure   |          |
|-------------------------|--------|---|---|--|----------|
| Ethanol                 | -      | Acute EC50 >100 ppm Fresh water                   | Daphnia - Water flea<br>- Daphnia magna -<br><24 hours  | 48 hours   |          |
|                         | -      | Acute EC50 2000 ug/L Fresh water                  | Daphnia - Water flea<br>- Daphnia magna   | 48 hours   |          |
|                         | -      | Acute LC50 5680 to 7392 mg/L Fresh water          | Daphnia - Water flea<br>- Daphnia magna -<br>Neonate - <24 hours  | 48 hours   |          |
|                         | -      | Acute LC50 13 to 16 ml/L Fresh water              | Fish - Rainbow trout,donaldson trout<br>- Oncorhynchus mykiss - 0.8 g   | 96 hours   |          |
|                         | -      | Acute LC50 14200000 to 15100000 ug/L Fresh water  | Fish - Fathead minnow -<br>Pimephales promelas - 30 days -<br>19.4 mm - 0.099 g   | 96 hours   |          |
|                         | -      | Acute LC50 13480000 ug/L Fresh water              | Fish - Fathead minnow -<br>Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm | 96 hours   |          |
|                         | -      | Acute LC50 11000000 ug/L Marine water             | Fish - Bleak -<br>Alburnus alburnus - 8 to 10 cm  | 96 hours   |          |
|                         | -      | Acute LC50 10000000 to 11500000 ug/L Marine water | Fish - Bleak -<br>Alburnus alburnus - 8 cm  | 96 hours   |          |
|                         | -      | Acute LC50 6772000 ug/L Fresh water               | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 6386000 ug/L Fresh water               | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 6325000 ug/L Fresh water               | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 6076000 ug/L Fresh water               | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 5577000 ug/L Fresh water               | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 3715000 to 4432000 ug/L Fresh water    | Daphnia - Water flea<br>- Ceriodaphnia dubia<br>- Neonate   | 48 hours   |          |
|                         | -      | Acute LC50 >100000 ug/L Fresh water               | Fish - Fathead minnow -<br>Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g                 | 96 hours   |          |
|                         | -      | Acute LC50 42000 ug/L Fresh water                 | Fish - Rainbow trout,donaldson trout<br>- Oncorhynchus mykiss   | 4 days   |          |
|                         | -      | Acute LC50 25500 ug/L Marine water                | Crustaceans - Brine shrimp - Artemia franchiscana -<br>LARVAE   | 48 hours   |          |
|                         | Nickel | -   | Chronic NOEC <6.3 g/L Fresh water   | Daphnia - Water flea<br>- Daphnia magna                | 48 hours |
|                         |        | -   | Acute EC50 1000 ug/L Marine water   | Daphnia - Water flea<br>- Daphnia magna -<br><24 hours | 48 hours |
|                         |        | -   | Acute IC50 >10.1 mg/L Marine water  | Crustaceans -<br>Amphipod -<br>Ampelisca abdita        | 48 hours |
| -                       |        | Acute IC50 9.4 mg/L                               | Crustaceans -   | 48 hours   |          |

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| - | Marine water  | Amphipod -<br>Ampelisca abdita   | 48 hours |
| - | Acute IC50 2.86 mg/L<br>Marine water                | Crustaceans -<br>Amphipod -<br>Ampelisca abdita  | 48 hours |
| - | Acute IC50 0.72 mg/L<br>Marine water                | Crustaceans -<br>Opossum shrimp -<br>Americamysis bahia<br>- Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- <48 hours | 48 hours |
| - | Acute IC50 0.61 mg/L<br>Marine water                | Crustaceans -<br>Opossum shrimp -<br>Americamysis bahia<br>- Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- <48 hours | 48 hours |
| - | Acute IC50 0.31 mg/L<br>Marine water                | Crustaceans -<br>Opossum shrimp -<br>Americamysis bahia<br>- Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- <48 hours | 48 hours |
| - | Acute LC50 47.5 ng/L<br>Fresh water                 | Fish - Indian catfish -<br>Heteropneustes<br>fossilis  | 96 hours |
| - | Acute LC50 13.7 ppm<br>Fresh water                  | Fish - White perch -<br>Morone americana   | 96 hours |
| - | Acute LC50 10.4 ppm<br>Fresh water                  | Fish - common carp -<br>Cyprinus carpio  | 96 hours |
| - | Acute LC50 8 ppm<br>Fresh water                     | Fish - Pumpkinseed -<br>Lepomis gibbosus   | 96 hours |
| - | Acute LC50 6.3 ppm<br>Fresh water                   | Fish - Striped bass -<br>Morone saxatilis  | 96 hours |
| - | Acute LC50 2.3 ppm<br>Fresh water                   | Fish - common carp -<br>Cyprinus carpio -<br>Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- 6 cm                      | 96 hours |
| - | Acute LC50 1.64 ppm<br>Fresh water                  | Fish - common carp -<br>Cyprinus carpio -<br>Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- 6 cm                      | 96 hours |
| - | Acute LC50 1.54 ppm<br>Fresh water                  | Fish - common carp -<br>Cyprinus carpio -<br>Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- 3.5 cm                    | 96 hours |
| - | Acute LC50 1.3 ppm<br>Fresh water                   | Fish - common carp -<br>Cyprinus carpio -<br>Juvenile (Fledgling,<br>Hatchling, Weanling)<br>- 3.5 cm                    | 96 hours |
| - | Acute LC50 100000<br>to 330000 ug/L<br>Marine water | Crustaceans -<br>Common shrimp,<br>sand shrimp -<br>Crangon crangon  | 48 hours |
| - | Acute LC50 9280<br>ug/L Marine water                | Crustaceans -<br>Greasyback shrimp -<br>Metapenaeus ensis  | 48 hours |
| - | Acute LC50 8850<br>ug/L Marine water                | Crustaceans -<br>Greasyback shrimp -<br>Metapenaeus ensis -<br>Post-larvae   | 48 hours |
| - | Acute LC50 >5400<br>ug/L Marine water               | Fish - Sheepshead<br>minnow -<br>Cyprinodon<br>variegatus  | 96 hours |
| - | Acute LC50 1280<br>ug/L Marine water                | Crustaceans -<br>Greasyback shrimp -<br>Metapenaeus ensis  | 48 hours |

**Conclusion/Summary** Not available.

**Biodegradability**

**Product/ingredient name**  
Ethanol

| Test | Result                    | Dose | Inoculum |
|------|---------------------------|------|----------|
| -    | 100 % - Readily - 20 days | -    | -        |

**Conclusion/Summary** Not available.



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| <b>Octanol/water partition coefficient</b>        | Not applicable. (Suspension.)                                     |
| <b>Toxicity of the products of biodegradation</b> | The product itself and its products of degradation are not toxic. |
| <b>Other adverse effects</b>                      | No known significant effects or critical hazards.                 |

## Section 13. Disposal considerations

|   |   |
|---|---|
| <b>Waste disposal</b>   | The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. |
| <b>Waste stream</b>   | Code: D001<br>Classification: Ignitability  |
| <b>Disposal should be in accordance with applicable regional, national and local laws and regulations.</b>  |   |
| <b>Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.</b> |   |

## Section 14. Transport information

### International transport regulations

Not classified.

#### Remarks

IATA Special Provision A 58 - Aqueous solutions containing 24% or less alcohol by volume is not subject to these regulations.

## Section 15. Regulatory information

|                                 |   |
|---------------------------------|---|
| <b>HCS Classification</b>       | Combustible liquid<br>Irritating material<br>Carcinogen<br>Target organ effects   |
| <b>U.S. Federal regulations</b> | <b>United States inventory (TSCA 8b):</b> All components are listed or exempted.<br><b>SARA 302/304/311/312 extremely hazardous substances:</b> No products were found.<br><b>SARA 302/304 emergency planning and notification:</b> No products were found.<br><b>SARA 302/304/311/312 hazardous chemicals:</b> Ethanol<br><b>SARA 311/312 MSDS distribution - chemical inventory - hazard identification:</b> Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard<br><b>Clean Water Act (CWA) 307:</b> Nickel<br><b>Clean Water Act (CWA) 311:</b> No products were found.<br><b>Clean Air Act (CAA) 112 accidental release prevention:</b> No products were found.<br><b>Clean Air Act (CAA) 112 regulated flammable substances:</b> No products were found.<br><b>Clean Air Act (CAA) 112 regulated toxic substances:</b> No products were found. |

### SARA 313

|  | <u>Product name</u> | <u>CAS number</u> | <u>Concentration</u> |
|--|---------------------|-------------------|----------------------|
| <b>Form R - Reporting requirements</b> | Nickel              | 7440-02-0         | 0.12                 |
| <b>Supplier notification</b>           | Nickel              | 7440-02-0         | 0.12                 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

|                          |   |
|--------------------------|---|
| <b>State regulations</b> | <b>Connecticut Carcinogen Reporting:</b> None of the components are listed.<br><b>Connecticut Hazardous Material Survey:</b> None of the components are listed.<br><b>Florida substances:</b> None of the components are listed.<br><b>Illinois Chemical Safety Act:</b> None of the components are listed.<br><b>Illinois Toxic Substances Disclosure to Employee Act:</b> None of the components are listed.<br><b>Louisiana Reporting:</b> None of the components are listed.<br><b>Louisiana Spill:</b> None of the components are listed.<br><b>Massachusetts Spill:</b> None of the components are listed.<br><b>Massachusetts Substances:</b> The following components are listed: ETHYL ALCOHOL<br><b>Michigan Critical Material:</b> None of the components are listed.<br><b>Minnesota Hazardous Substances:</b> None of the components are listed.<br><b>New Jersey Hazardous Substances:</b> The following components are listed: ETHYL ALCOHOL; NICKEL<br><b>New Jersey Spill:</b> None of the components are listed.<br><b>New Jersey Toxic Catastrophe Prevention Act:</b> None of the components are listed.<br><b>New York Acutely Hazardous Substances:</b> The following components are listed: Nickel<br><b>New York Toxic Chemical Release Reporting:</b> None of the components are listed. |
|--------------------------|---|



**Pennsylvania RTK Hazardous Substances:** The following components are listed: DENATURED ALCOHOL; NICKEL

**Rhode Island Hazardous Substances:** None of the components are listed.

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

| <u>Ingredient name</u>                   | <u>Cancer</u>   | <u>Reproductive</u> | <u>No significant risk level</u> | <u>Maximum acceptable dosage level</u> |
|--|---|---------------------|----------------------------------|--|
| Nickel                                   | Yes.  | No.                 | No.                              | No.                                    |
| <b>United States inventory (TSCA 8b)</b> | All components are listed or exempted.  |                     |                                  |  |
| <b>EU regulations</b>                    |   |                     |                                  |  |
| <b>Risk phrases</b>                      | R10- Flammable.   |                     |                                  |  |
| <b>International regulations</b>         |   |                     |                                  |  |
| <b>International lists</b>               | <b>Australia inventory (AICS):</b> All components are listed or exempted.<br><b>China inventory (IECSC):</b> All components are listed or exempted.<br><b>Japan inventory:</b> Not determined.<br><b>Korea inventory:</b> All components are listed or exempted.<br><b>New Zealand Inventory of Chemicals (NZIoC):</b> All components are listed or exempted.<br><b>Philippines inventory (PICCS):</b> All components are listed or exempted. |                     |                                  |  |

**Section 16. Other information**

**Label requirements** FLAMMABLE LIQUID AND VAPOR. COMBUSTIBLE. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

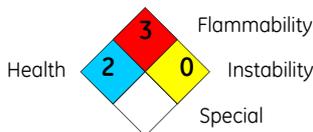
**Hazardous Material Information System (U.S.A.)**

|                  |   |
|------------------|---|
| Health           | 2 |
| Flammability     | 3 |
| Physical hazards | 0 |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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



 Indicates information that has changed from previously issued version.

**History**

|                         |               |                               |                        |
|-------------------------|---------------|-------------------------------|------------------------|
| <b>Date of printing</b> | 16 June 2010  | <b>Date of previous issue</b> | No previous validation |
| <b>Date of issue</b>    | 24 March 2010 | <b>Version</b>                | 1                      |

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

