

# Material Safety Data Sheet

Revision Date 08-Jun-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** NINHYDRIN REAGENT 25ml**Cat No.** R21238**Synonyms****Recommended Use** Laboratory chemicals**Company**Remel  
12076 Santa Fe Drive  
Lenexa, KS 66215 United States  
Telephone: 1-800-255-6730  
Fax: 1-800-621-8251**Emergency Telephone Number**INFOTRAC - 24 Hour Number: 1-800-535-5053  
Outside of the United States, call 24  
Hour Number: 001-352-323-3500 (Call  
Collect)

## 2. HAZARDS IDENTIFICATION

**Emergency Overview**

Toxic to aquatic organisms.

**Appearance** Clear Light yellow**Physical State** Liquid**odor** No information available**Target Organs** Central nervous system (CNS), Respiratory system, Eyes, Skin**Potential Health Effects****Acute Effects****Principle Routes of Exposure****Eyes**

Causes eye irritation.

**Skin**

Causes skin irritation. May be absorbed through the skin in harmful amounts. Repeated exposure may cause skin dryness or cracking.

**Inhalation**

Inhalation may cause central nervous system effects. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Causes respiratory tract irritation with possible burns.

**Ingestion**

May cause central nervous system effects. May be harmful if swallowed.

**Chronic Effects**

Avoid repeated exposure

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** Central nervous system disorders. Preexisting eye disorders.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Haz/Non-haz**

| Component       | CAS-No  | Weight % |
|-----------------|---------|----------|
| Acetone         | 67-64-1 | 50       |
| n-Butyl alcohol | 71-36-3 | 50       |

#### 4. FIRST AID MEASURES

|                           |  |
|---------------------------|--|
| <b>Eye Contact</b>        | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.         |
| <b>Skin Contact</b>       | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes |
| <b>Inhalation</b>         | Move to fresh air  |
| <b>Ingestion</b>          | Do not induce vomiting. Call a physician or Poison Control Center immediately. Rinse mouth.    |
| <b>Notes to Physician</b> | Treat symptomatically.   |

#### 5. FIRE-FIGHTING MEASURES

|   |                           |
|---|---------------------------|
| <b>Flash Point</b>                      |                           |
| <b>Method</b>                           | No information available. |
| <b>Autoignition Temperature</b>         | No information available. |
| <b>Explosion Limits</b>                 |                           |
| <b>Upper</b>                            | No data available         |
| <b>Lower</b>                            | No data available         |
| <b>Unsuitable Extinguishing Media</b>   | No information available. |
| <b>Hazardous Combustion Products</b>    | No information available. |
| <b>Sensitivity to mechanical impact</b> | No information available. |
| <b>Sensitivity to static discharge</b>  | No information available. |

#### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**                      **Health** 2                      **Flammability** 3                      **Instability** 0                      **Physical hazards** N/A

#### 6. ACCIDENTAL RELEASE MEASURES

|   |   |
|---|---|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation   |
| <b>Environmental Precautions</b>            | Should not be released into the environment   |
| <b>Methods for Containment and Clean Up</b> | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable and closed containers for disposal. Remove all sources of ignition. Provide adequate ventilation. |

**7. HANDLING AND STORAGE**

**Handling** Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Take precautionary measures against static discharges. Remove and wash contaminated clothing before re-use. Remove all sources of ignition. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flame. - No smoking.

**Storage** Keep containers tightly closed in a cool, well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Measures** Ensure adequate ventilation, especially in confined areas

**Exposure Guidelines**

| Component       | ACGIH TLV                     | OSHA PEL  | NIOSH IDLH  |
|-----------------|-------------------------------|---|---|
| Acetone         | TWA: 500 ppm<br>STEL: 750 ppm | (Vacated) TWA: 750 ppm<br>(Vacated) TWA: 1800 mg/m <sup>3</sup><br>(Vacated) STEL: 1000 ppm<br>(Vacated) STEL: 2400 mg/m <sup>3</sup><br>TWA: 1000 ppm<br>TWA: 2400 mg/m <sup>3</sup> | IDLH: 2500 ppm<br>TWA: 250 ppm<br>TWA: 590 mg/m <sup>3</sup>        |
| n-Butyl alcohol | TWA: 20 ppm                   | Skin<br>(Vacated) Ceiling: 50 ppm<br>(Vacated) Ceiling: 150 mg/m <sup>3</sup><br>TWA: 100 ppm<br>TWA: 300 mg/m <sup>3</sup>   | IDLH: 1400 ppm<br>Ceiling: 150 mg/m <sup>3</sup><br>Ceiling: 50 ppm |

| Component       | Quebec  | Mexico OEL (TWA)   | Ontario TWAEV                 |
|-----------------|---|--|-------------------------------|
| Acetone         | TWA: 1190 mg/m <sup>3</sup><br>TWA: 500 ppm<br>STEL: 1000 ppm<br>STEL: 2380 mg/m <sup>3</sup> | TWA: 1000 ppm<br>TWA: 2400 mg/m <sup>3</sup><br>STEL: 1260 ppm<br>STEL: 3000 mg/m <sup>3</sup> | TWA: 500 ppm<br>STEL: 750 ppm |
| n-Butyl alcohol | Ceiling: 50 ppm<br>Ceiling: 152 mg/m <sup>3</sup><br>Skin                                     | Peak: 150 mg/m <sup>3</sup><br>Peak: 50 ppm  | TWA: 20 ppm                   |

**NIOSH IDLH:** Immediately Dangerous to Life or Health

**Personal Protective Equipment**

**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State**  
**Appearance**  
**odor**  
**Odor Threshold**  
**pH**  
**Vapor Pressure**

Liquid  
Clear Light yellow  
No information available  
No information available.  
No information available.44444  
No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                           |                           |
|---------------------------|---------------------------|
| Vapor Density             | No information available. |
| Viscosity                 | No information available. |
| Boiling Point/Range       |                           |
| Melting Point/Range       | No information available. |
| Decomposition temperature | No information available. |
| Flash Point               |                           |
| Evaporation Rate          | No information available. |
| Specific Gravity          | No information available. |
| Solubility                | No information available. |
| log Pow                   | No data available         |
| Molecular Formula         | Solution                  |

## 10. STABILITY AND REACTIVITY

|                                  |   |
|----------------------------------|---|
| Stability                        | Stable under normal conditions.   |
| Conditions to Avoid              | Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.        |
| Incompatible Materials           | Strong oxidizing agents, Strong reducing agents, Strong acids, Strong bases, Halogens, alkaline |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )   |
| Hazardous Polymerization         | Hazardous polymerization does not occur.  |
| Hazardous Reactions .            | None under normal processing.   |

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

| Component       | LD50 Oral          | LD50 Dermal           | LC50 Inhalation                               |
|-----------------|--------------------|-----------------------|---|
| Acetone         | 5800 mg/kg ( Rat ) | Not listed            | Not listed                                    |
| n-Butyl alcohol | 790 mg/kg ( Rat )  | 3400 mg/kg ( Rabbit ) | 17.7 mg/L ( Rat ) 4 h<br>8000 ppm ( Rat ) 4 h |

**Irritation** Severe eye irritant Irritating to respiratory system and skin

**Toxicologically Synergistic Products** Styrene Chloroform Acetonitrile

### Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product.

|  |   |
|--|---|
| <b>Sensitization</b>                   | None known  |
| <b>Mutagenic Effects</b>               | Mutagenic effects have occurred in experimental animals.                    |
| <b>Reproductive Effects</b>            | Experiments have shown reproductive toxicity effects on laboratory animals. |
| <b>Developmental Effects</b>           | Developmental effects have occurred in experimental animals.                |
| <b>Teratogenicity</b>                  | No information available..  |
| <b>Other Adverse Effects</b>           | The toxicological properties have not been fully investigated.              |
| <b>Endocrine Disruptor Information</b> | No information available  |

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Do not empty into drains

| Component       | Freshwater Algae  | Freshwater Fish  | Microtox  | Water Flea   |
|-----------------|---|--|---|--|
| Acetone         | Not listed  | Leuciscus idus: LC50 = 11300 mg/L/48h<br>Salmo gairdneri: LC50 = 6100 mg/L/24h | EC50 = 14500 mg/L/15 min  | EC50 = 39 mg/L/48h<br>EC50 = 12700 mg/L/48h<br>EC50 = 12600 mg/L/48h |
| n-Butyl alcohol | EC50 96 h >500 mg/L<br>EC50 72 h >500 mg/L<br>EC50 96 h >500 mg/L | Not listed   | EC50 = 2041.4 mg/L 5 min<br>EC50 = 2186 mg/L 30 min<br>EC50 = 3980 mg/L 24 h<br>EC50 = 4400 mg/L 17 h | EC50 48 h 1983 mg/L  |

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Persistence and Degradability</b> | No information available |
| <b>Bioaccumulation/ Accumulation</b> | No information available |

**Mobility**

| Component       | log Pow |
|-----------------|---------|
| Acetone         | -0.24   |
| n-Butyl alcohol | 0.785   |

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

| Component                 | RCRA - U Series Wastes | RCRA - P Series Wastes |
|---------------------------|------------------------|------------------------|
| Acetone - 67-64-1         | U002                   | -                      |
| n-Butyl alcohol - 71-36-3 | U031                   | -                      |

**14. TRANSPORT INFORMATION**

**DOT**

|                             |                           |
|-----------------------------|---------------------------|
| <b>UN-No</b>                | UN1993                    |
| <b>Proper Shipping Name</b> | FLAMMABLE LIQUIDS, N.O.S. |

**14. TRANSPORT INFORMATION**

**Proper technical name** (Acetone, Butyl Alcohol)  
**Hazard Class** 3  
**Packing Group** II

**TDG**

**UN-No** UN1993  
**Proper Shipping Name** FLAMMABLE LIQUIDS, N.O.S.  
**Hazard Class** 3  
**Packing Group** II

**IATA**

**UN-No** UN1993  
**Proper Shipping Name** FLAMMABLE LIQUIDS, N.O.S.  
**Hazard Class** 3  
**Packing Group** II

**IMDG/IMO**

**UN-No** UN1993  
**Proper Shipping Name** FLAMMABLE LIQUIDS, N.O.S.  
**Hazard Class** 3  
**Packing Group** II

**15. REGULATORY INFORMATION**

**International Inventories**

| Component       | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL          |
|-----------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|---------------|
| Acetone         | X    | X   | -    | 200-662-2 | -      |     | X     | X    | X    | X     | KE-29367<br>X |
| n-Butyl alcohol | X    | X   | -    | 200-751-6 | -      |     | X     | X    | X    | X     | KE-03867<br>X |

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

**SARA 313**

| Component       | CAS-No  | Weight % | SARA 313 - Threshold Values % |
|-----------------|---------|----------|-------------------------------|
| n-Butyl alcohol | 71-36-3 | 50       | 1.0                           |

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard No  
 Chronic Health Hazard No  
 Fire Hazard Yes  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**Clean Water Act**

Not applicable

**Clean Air Act**

Not applicable

**OSHA**

Not applicable

**CERCLA**

Not Applicable

| Component       | Hazardous Substances RQs | CERCLA EHS RQs |
|-----------------|--------------------------|----------------|
| Acetone         | 5000 lb                  | -              |
| n-Butyl alcohol | 5000 lb                  | -              |

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Not applicable

| Component       | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------------|---------------|------------|--------------|----------|--------------|
| Acetone         | X             | X          | X            | -        | X            |
| n-Butyl alcohol | X             | X          | X            | -        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|-----------|---|
| Acetone   | 2000 lb STQ                                   |

## Other International Regulations

**Mexico - Grade** No information available

### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### WHMIS Hazard Class

B2 Flammable liquid

D2B Toxic materials



## 16. OTHER INFORMATION

**Prepared By** Regulatory Affairs  
Remel  
Tel: 1-800-255-6730

**Print Date** 08-Jun-2010

**Revision Summary** No information available.

#### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**