



**Be Right™**

# SAFETY DATA SHEET

Issue Date 05-Oct-2017

Revision Date 05-Oct-2017

Version 1.1

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Iodine Standard Solution 0.1 N

### Other means of identification

**Product Code(s)** 2321453

**Safety data sheet number** M01230

### Recommended use of the chemical and restrictions on use

**Recommended Use** Standard solution.

**Uses advised against** None.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company P.O.Box 389 Loveland,  
CO 80539 USA +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### **Hazards not otherwise classified (HNOC)**

Not applicable

### Label elements

### Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

### Other Information

Causes mild skin irritation

Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable

**Mixture**

Percent ranges are used where confidential product information is applicable.

| Chemical name         | CAS No.   | Percent Range | HMRIC # |
|-----------------------|-----------|---------------|---------|
| Potassium iodide (KI) | 7681-11-0 | 1 - 5%        | -       |
| Iodine                | 7553-56-2 | 1 - 5%        | -       |

### 4. FIRST AID MEASURES

**Description of first aid measures**

|   |  |
|---|--|
| <b>General advice</b>                     | IF IN EYES: Flush eyes for at least 15 minutes. May cause skin irritation.   |
| <b>Eye contact</b>                        | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.   |
| <b>Skin contact</b>                       | For minor skin contact, avoid spreading material on unaffected skin. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Call a POISON CENTER or doctor if you feel unwell. If skin irritation persists, call a physician. |
| <b>Inhalation</b>                         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.  |
| <b>Ingestion</b>                          | IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.  |
| <b>Self-protection of the first aider</b> | Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.   |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** See Section 11: TOXICOLOGICAL INFORMATION.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

**Flammable properties**

Material is not classified as flammable according to GHS criteria.

**Specific hazards arising from the chemical**

This product will not burn or explode.

**Hazardous combustion products**

This material will not burn.

**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.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice**

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**

Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions**

Stop spilled material from being released to the environment. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment**

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up**

Neutralize spill if necessary. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

**Emergency Response Guide Number**

Not applicable

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Flammability class**

Not applicable

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------|-----------|----------|------------|
|---------------|-----------|----------|------------|

|                                 |                                |  |   |
|---------------------------------|--------------------------------|--|---|
| Potassium iodide (KI)<br>1 - 5% | TWA: 0.01 ppm                  | NDF  | NDF   |
| Iodine<br>1 - 5%                | STEL: 0.1 ppm<br>TWA: 0.01 ppm | (vacated) Ceiling: 0.1 ppm<br>(vacated) Ceiling: 1 mg/m <sup>3</sup><br>Ceiling: 0.1 ppm<br>Ceiling: 1 mg/m <sup>3</sup> | IDLH: 2 ppm<br>Ceiling: 0.1 ppm<br>Ceiling: 1 mg/m <sup>3</sup> |

| Chemical name                   | Alberta OEL                                      | British Columbia OEL | Manitoba OEL                   | New Brunswick OEL                                  | New Foundland & Labrador OEL   |
|---------------------------------|--|----------------------|--------------------------------|--|--------------------------------|
| Potassium iodide (KI)<br>1 - 5% | NDF  | NDF                  | TWA: 0.01 ppm                  | NDF  | TWA: 0.01 ppm                  |
| Iodine<br>1 - 5%                | Ceiling: 0.1 ppm<br>Ceiling: 1 mg/m <sup>3</sup> | Ceiling: 0.1 ppm     | TWA: 0.01 ppm<br>STEL: 0.1 ppm | Ceiling: 0.1 ppm<br>Ceiling: 1.0 mg/m <sup>3</sup> | TWA: 0.01 ppm<br>STEL: 0.1 ppm |

| Chemical name                   | Northwest Territories OEL | Nova Scotia OEL                | Nunavut OEL      | Ontario TWA                    | Prince Edward Island OEL       |
|---------------------------------|---------------------------|--------------------------------|------------------|--------------------------------|--------------------------------|
| Potassium iodide (KI)<br>1 - 5% | NDF                       | TWA: 0.01 ppm                  | NDF              | TWA: 0.01 ppm                  | TWA: 0.01 ppm                  |
| Iodine<br>1 - 5%                | Ceiling: 0.1 ppm          | STEL: 0.1 ppm<br>TWA: 0.01 ppm | Ceiling: 0.1 ppm | TWA: 0.01 ppm<br>STEL: 0.1 ppm | STEL: 0.1 ppm<br>TWA: 0.01 ppm |

| Chemical name    | Quebec OEL   | Saskatchewan OEL | Yukon OEL  |
|------------------|--|------------------|--|
| Iodine<br>1 - 5% | Ceiling: 0.1 ppm<br>Ceiling: 1.0 mg/m <sup>3</sup> | Ceiling: 0.1 ppm | Ceiling: 0.7 ppm<br>Ceiling: 1 mg/m <sup>3</sup> |

**Other Information** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Legend** See section 16 for terms and abbreviations

**Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear tight sealing safety goggles and/or face protection shield. Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear suitable gloves and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended. Handle in accordance with good industrial hygiene and safety practice. Avoid prolonged or repeated contact with skin. Take off all contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs.

**Environmental exposure controls**

Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

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**Physical state** Liquid  
**Gas Under Pressure** Not classified according to GHS criteria  
**Appearance** aqueous solution **Color** Dark red to orange  
**Odor** Not determined **Odor threshold** No data available

| <u>Property</u>  | <u>Values</u>                            | <u>Remarks • Method</u>                     |
|--|--|---|
| <b>Molecular weight</b>                                | No data available                        |   |
| <b>pH</b>  | 6.57                                     |   |
| <b>Melting point/freezing point</b>                    | ~ -1 °C / 30 °F                          | Estimation based on theoretical calculation |
| <b>Boiling point / boiling range</b>                   | ~ 100 °C / 212 °F                        | Estimation based on theoretical calculation |
| <b>Evaporation rate</b>                                | 1.03 (water = 1)                         | Estimation based on theoretical calculation |
| <b>Vapor pressure</b>                                  | 23.627 mm Hg / 3.15 kPa at 25 °C / 77 °F | Estimation based on theoretical calculation |
| <b>Vapor density (air = 1)</b>                         | 0.62 (air = 1)                           |   |
| <b>Specific gravity (water = 1 / air = 1)</b>          | 1.03                                     |   |
| <b>Partition Coefficient (n-octanol/water)</b>         | Not applicable                           |   |
| <b>Soil Organic Carbon-Water Partition Coefficient</b> | Not applicable                           |   |
| <b>Autoignition temperature</b>                        | No data available                        |   |
| <b>Decomposition temperature</b>                       | No data available                        |   |
| <b>Dynamic viscosity</b>                               | No data available                        |   |
| <b>Kinematic viscosity</b>                             | No data available                        |   |

#### Solubility(ies)

##### **Water solubility**

| <u>Water solubility classification</u> | <u>Water solubility</u> | <u>Water Solubility Temperature</u> |
|--|-------------------------|-------------------------------------|
| Soluble                                | > 1000 mg/L             | 25 °C / 77 °F                       |

##### **Solubility in other solvents**

| <u>Chemical Name</u> | <u>Solubility classification</u> | <u>Solubility</u> | <u>Solubility Temperature</u> |
|----------------------|----------------------------------|-------------------|-------------------------------|
| None reported        | No information available         | No data available | No information available      |

#### Other Information

**Metal Corrosivity** Not classified as corrosive to metal according to GHS criteria

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|                                  |  |
|----------------------------------|--|
| <b>Steel Corrosion Rate</b>      | No data available  |
| <b>Aluminum Corrosion Rate</b>   | No data available  |
| <b>Bulk density</b>              | Not applicable   |
| <b>Explosive properties</b>      | Not classified according to GHS criteria.  |
| <b>Explosion data</b>            | No data available  |
| <b>Upper explosion limit</b>     | No data available  |
| <b>Lower explosion limit</b>     | No data available  |
| <b>Flammable properties</b>      | Material is not classified as flammable according to GHS criteria.   |
| <b>Flammability Limit in Air</b> |  |
| <b>Upper flammability limit:</b> | No data available  |
| <b>Lower flammability limit:</b> | No data available  |
| <b>Flash point</b>               | No data available  |
| <b>Method</b>                    | No information available   |
| <b>Oxidizing properties</b>      | Not classified according to GHS criteria.  |
| <b>Reactivity properties</b>     | Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria. |

## 10. STABILITY AND REACTIVITY

### **Reactivity properties**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

### **Chemical stability**

Stable under recommended storage conditions.

### **Special dangers of the product**

None reported

### **Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization**      Hazardous polymerization does not occur.

### **Conditions to avoid**

Extremes of temperature and direct sunlight. Incompatible materials.

### **Incompatible materials**

Strong oxidizing agents. Strong acids. Strong bases.

### **Hazardous Decomposition Products**

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Iodine. Iodine compounds.

**Explosive properties**

Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

**Autoignition temperature**

No data available

**Sensitivity to Static Discharge**

None reported

**Sensitivity to Mechanical Impact**

None reported

**11. TOXICOLOGICAL INFORMATION**

**Information on Likely Routes of Exposure**

|  |  |
|--|--|
| <b>Product Information</b>                           | Causes mild skin irritation.   |
| <b>Inhalation</b>                                    | No known effect based on information supplied.   |
| <b>Eye contact</b>                                   | No known effect based on information supplied.   |
| <b>Skin contact</b>                                  | Causes mild skin irritation.   |
| <b>Ingestion</b>                                     | No known effect based on information supplied.   |
| <b>Aggravated Medical Conditions</b>                 | Skin disorders.  |
| <b>Toxicologically synergistic products</b>          | None known.  |
| <b>Toxicokinetics, metabolism and distribution</b>   | See ingredients information below.   |
| <b>Chemical name</b>                                 | <b>Toxicokinetics, metabolism and distribution</b>   |
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | May cross placenta and be excreted in breast milk. May react synergistically with mercury.   |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Food present in the digestive tract rapidly inactivates iodine by converting it to comparatively harmLess iodide. Iodine is absorbed from the lung, converted to iodide in the body, and then excreted, mainly in urine. |

**Product Acute Toxicity Data**

Oral Exposure Route No data available  
 Dermal Exposure Route No data available  
 Inhalation (Dust/Mist) Exposure Route No data available  
 Inhalation (Vapor) Exposure Route No data available  
 Inhalation (Gas) Exposure Route No data available

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (oral)                 | 71,624.00 mg/kg |
| ATEmix (dermal)               | 87,302.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 119.00 mg/L     |
| ATEmix (inhalation-vapor)     | 873.00 mg/L     |

**Ingredient Acute Toxicity Data**

| Oral Exposure Route               |                         |               |               | If available, see data below |  |
|-----------------------------------|-------------------------|---------------|---------------|------------------------------|--|
| Chemical name                     | Endpoint type           | Reported dose | Exposure time | Toxicological effects        | Key literature references and sources for data |
| Potassium iodide (KI)<br>(1 - 5%) | Rat<br>LD <sub>50</sub> | 2779 mg/kg    | None reported | None reported                | RTECS (Registry of Toxic Effects of Chemical   |

| CAS#: 7681-11-0                                      |                           |               |               |                       | Substances)   |
|--|---------------------------|---------------|---------------|-----------------------|---|
| Chemical name  | Endpoint type             | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data  |
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Mouse<br>LD <sub>50</sub> | 1000 mg/kg    | None reported | None reported         | Vendor SDS  |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Rat<br>LD <sub>50</sub>   | 14000 mg/kg   | None reported | None reported         | GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) |

**Dermal Exposure Route** If available, see data below  
**Inhalation (Dust/Mist) Exposure Route** If available, see data below  
**Inhalation (Vapor) Exposure Route** If available, see data below  
**Inhalation (Gas) Exposure Route** If available, see data below

**Product Specific Target Organ Toxicity Single Exposure Data**

**Oral Exposure Route** No data available  
**Dermal Exposure Route** No data available  
**Inhalation (Dust/Mist) Exposure Route** No data available  
**Inhalation (Vapor) Exposure Route** No data available  
**Inhalation (Gas) Exposure Route** No data available

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

**Oral Exposure Route** If available, see data below

| Chemical name  | Endpoint type             | Reported dose | Exposure time | Toxicological effects                           | Key literature references and sources for data           |
|--|---------------------------|---------------|---------------|---|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Mouse<br>LD <sub>Lo</sub> | 1862 mg/kg    | None reported | <b>Lungs, Thorax, or Respiration</b><br>Dyspnea | RTECS (Registry of Toxic Effects of Chemical Substances) |

**Dermal Exposure Route** If available, see data below  
**Inhalation (Dust/Mist) Exposure Route** If available, see data below  
**Inhalation (Vapor) Exposure Route** If available, see data below  
**Inhalation (Gas) Exposure Route** If available, see data below

**Aspiration toxicity**

No data available

**Product Skin Corrosion/Irritation Data**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

If available, see data below

| Chemical name  | Test method   | Species       | Reported dose | Exposure time | Results                             | Key literature references and sources for data |
|--|---|---------------|---------------|---------------|-------------------------------------|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Standard Draize Test  | Rabbit        | None reported | None reported | Skin irritant                       | No information available                       |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Organization for Economic Co-operation and Development (OECD) - Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method | None reported | 10 mg         | 15 minutes    | Not corrosive or irritating to skin | ECHA (The European Chemicals Agency)           |



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**Product Serious Eye Damage/Eye Irritation Data**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

If available, see data below

| Chemical name  | Test method               | Species | Reported dose | Exposure time | Results      | Key literature references and sources for data |
|--|---------------------------|---------|---------------|---------------|--------------|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | None reported             | Rabbit  | None reported | None reported | Eye irritant | HSDB (Hazardous Substances Data Bank)          |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Existing human experience | Human   | None reported | None reported | Eye irritant | ChemADVISOR                                    |

**Sensitization Information**

**Product Sensitization Data**

**Skin Sensitization Exposure Route**

No data available.

**Respiratory Sensitization Exposure Route**

No data available.

**Ingredient Sensitization Data**

**Skin Sensitization Exposure Route**

If available, see data below.

| Chemical name  | Test method | Species | Results                               | Key literature references and sources for data               |
|--|-------------|---------|---------------------------------------|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Patch test  | Human   | Not confirmed to be a skin sensitizer | ERMA (New Zealand's Environmental Risk Management Authority) |

**Respiratory Sensitization Exposure Route**

If available, see data below.

**Chronic Toxicity Information**

**Product Specific Target Organ Toxicity Repeat Dose Data**

**Oral Exposure Route**

No data available.

**Dermal Exposure Route**

No data available.

**Inhalation (Dust/Mist) Exposure Route**

No data available.

**Inhalation (Vapor) Exposure Route**

No data available.

**Inhalation (Gas) Exposure Route**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

**Oral Exposure Route**

If available, see data below

**Dermal Exposure Route**

If available, see data below

**Inhalation (Dust/Mist) Exposure Route**

If available, see data below

**Inhalation (Vapor) Exposure Route**

If available, see data below

**Inhalation (Gas) Exposure Route**

If available, see data below

**Product Carcinogenicity Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Carcinogenicity Data**

| Chemical name         | CAS No.   | ACGIH | IARC | NTP | OSHA |
|-----------------------|-----------|-------|------|-----|------|
| Potassium iodide (KI) | 7681-11-0 | -     | -    | -   | -    |
| Iodine                | 7553-56-2 | -     | -    | -   | -    |

**Legend**

|  |                |
|--|----------------|
| <b>ACGIH (American Conference of Governmental Industrial Hygienists)</b> | Does not apply |
|--|----------------|

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|  |                |
|--|----------------|
| IARC (International Agency for Research on Cancer)                                 | Does not apply |
| NTP (National Toxicology Program)  | Does not apply |
| OSHA (Occupational Safety and Health Administration of the US Department of Labor) | Does not apply |

Oral Exposure Route If available, see data below  
 Dermal Exposure Route If available, see data below  
 Inhalation (Dust/Mist) Exposure Route If available, see data below  
 Inhalation (Vapor) Exposure Route If available, see data below  
 Inhalation (Gas) Exposure Route If available, see data below

**Product Germ Cell Mutagenicity *invitro* Data**

No data available.

**Ingredient Germ Cell Mutagenicity *invitro* Data**

If available, see data below

| Chemical name  | Test                   | Cell Strain           | Reported dose | Exposure time | Results                               | Key literature references and sources for data              |
|--|------------------------|-----------------------|---------------|---------------|---------------------------------------|---|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Cytogenetic analysis   | Rat ascites tumor     | 500 mg/kg     | None reported | Positive test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances)    |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Chromosomal abberation | Syrian hamster embryo | 0.4 mmol/L    | None reported | Positive test result for mutagenicity | CCRIS (Chemical Carcinogenesis Research Information System) |
| Chemical name  | Test                   | Cell Strain           | Reported dose | Exposure time | Results                               | Key literature references and sources for data              |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Chromosomal abberation | Syrian hamster embryo | 0.6 mmol/L    | None reported | Positive test result for mutagenicity | CCRIS (Chemical Carcinogenesis Research Information System) |

**Product Germ Cell Mutagenicity *invivo* Data**

Oral Exposure Route No data available  
 Dermal Exposure Route No data available  
 Inhalation (Dust/Mist) Exposure Route No data available  
 Inhalation (Vapor) Exposure Route No data available  
 Inhalation (Gas) Exposure Route No data available

**Ingredient Germ Cell Mutagenicity *invivo* Data**

Oral Exposure Route If available, see data below  
 Dermal Exposure Route If available, see data below  
 Inhalation (Dust/Mist) Exposure Route If available, see data below  
 Inhalation (Vapor) Exposure Route If available, see data below  
 Inhalation (Gas) Exposure Route If available, see data below

**Product Reproductive Toxicity Data**

Oral Exposure Route No data available  
 Dermal Exposure Route No data available  
 Inhalation (Dust/Mist) Exposure Route No data available  
 Inhalation (Vapor) Exposure Route No data available  
 Inhalation (Gas) Exposure Route No data available

**Ingredient Reproductive Toxicity Data**

Oral Exposure Route If available, see data below

| Chemical name | Endpoint | Reported | Exposure | Toxicological effects | Key literature references and |
|---------------|----------|----------|----------|-----------------------|-------------------------------|
|---------------|----------|----------|----------|-----------------------|-------------------------------|

|  | type                      | dose          | time          |  | sources for data   |
|--|---------------------------|---------------|---------------|--|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Human<br>TD <sub>Lo</sub> | 2700 mg/kg    | 39 weeks      | <b>Specific Developmental Abnormalities</b><br>Endocrine System  | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2                | Rat<br>TD <sub>Lo</sub>   | 2750 mg/kg    | 22 days       | <b>Effects on Newborn</b><br>Delayed effects<br>Growth statistics (e.g. stunted fetus)   | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical name  | Endpoint type             | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data           |
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Human<br>TD <sub>Lo</sub> | 3240 mg/kg    | 39 weeks      | <b>Effects on Newborn</b><br>Other neonatal measures or effects<br>Physical<br><b>Specific Developmental Abnormalities</b><br>Endocrine system | RTECS (Registry of Toxic Effects of Chemical Substances) |

Inhalation (Dust/Mist) Exposure Route

If available, see data below

Inhalation (Vapor) Exposure Route

If available, see data below

Inhalation (Gas) Exposure Route

If available, see data below

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Harmful to aquatic life.

### Product Ecological Data

#### Aquatic toxicity

#### Fish

No data available

#### Crustacea

No data available

#### Algae

No data available

### Ingredient Ecological Data

#### Aquatic toxicity

#### Fish

If available, see ingredient data below

| Chemical name  | Exposure time | Species                    | Endpoint type    | Reported dose | Key literature references and sources for data |
|--|---------------|----------------------------|------------------|---------------|--|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | 96 hours      | <i>Oncorhynchus mykiss</i> | LC <sub>50</sub> | 896 mg/L      | PEEN (Pan European Ecological Network)         |

#### Crustacea

No data available

#### Algae

No data available

### Other Information

#### Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations

| Chemical name  | Category   | Persistent | Bioaccumulation | Inherently Toxic to Aquatic Organisms |
|--|------------|------------|-----------------|---------------------------------------|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | Inorganics | Yes        | No              | Yes                                   |

### Persistence and degradability

### Product Biodegradability Data

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No data available.

**Ingredient Biodegradability Data**  
 No data available

**Bioaccumulation**

**Product Bioaccumulation Data** No data available.

**Partition Coefficient (n-octanol/water)** Not applicable

**Ingredient Bioaccumulation Data** No data available

| Chemical name  | Partition Coefficient (n-octanol/water) | Method                   |
|--|---|--------------------------|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | log K <sub>ow</sub> ~ 0                 | No information available |

**Mobility**

**Product Information**

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

**Water solubility**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---------------------------------|------------------|------------------------------|
| Soluble                         | > 1000 mg/L      | 25 °C / 77 °F                |

**Ingredient Information**

| Chemical name  | Soil Organic Carbon-Water Partition Coefficient | Method                   |
|--|---|--------------------------|
| Potassium iodide (KI)<br>(1 - 5%)<br>CAS#: 7681-11-0 | log K <sub>oc</sub> ~ 0                         | No information available |

| Chemical name                            | Water solubility classification | Water solubility | Water solubility temperature °C | Water solubility temperature °F |
|--|---------------------------------|------------------|---------------------------------|---------------------------------|
| Potassium iodide (KI)<br>CAS#: 7681-11-0 | Completely soluble              | 1400000 mg/L     | 20 °C                           | 68 °F                           |
| Iodine<br>CAS#: 7553-56-2                | Moderately soluble              | > 100 mg/L       | 25 °C                           | 77 °F                           |

**Other adverse effects**  
 No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national, and local laws and regulations.

**Contaminated packaging** Working in a well-ventilated area. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state, or federal regulations. Dispose of empty

container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

**Special instructions for disposal** Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

#### 14. TRANSPORT INFORMATION

|                 |               |
|-----------------|---------------|
| <u>U.S. DOT</u> | Not regulated |
| <u>TDG</u>      | Not regulated |
| <u>IATA</u>     | Not regulated |
| <u>IMDG</u>     | Not regulated |

#### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

#### 15. REGULATORY INFORMATION

##### National Inventories

|                 |          |
|-----------------|----------|
| <b>TSCA</b>     | Complies |
| <b>DSL/NDSL</b> | Complies |

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

##### International Inventories

|                      |                 |
|----------------------|-----------------|
| <b>EINECS/ELINCS</b> | Complies        |
| <b>ENCS</b>          | Does not comply |
| <b>IECSC</b>         | Complies        |
| <b>KECL</b>          | Complies        |
| <b>PICCS</b>         | Complies        |
| <b>TCSI</b>          | Complies        |
| <b>AICS</b>          | Complies        |
| <b>NZIoC</b>         | Complies        |

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TCSI** - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

##### US Federal Regulations

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**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

|  |    |
|--|----|
| <b>Acute health hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire hazard</b>                       | No |
| <b>Sudden release of pressure hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**U.S. - DEA (Drug Enforcement Administration) List I & List II**

| <b>Chemical name</b>                  | <b>U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals</b> | <b>U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals</b> |
|---------------------------------------|---|--|
| Iodine<br>(1 - 5%)<br>CAS#: 7553-56-2 | no threshold under 21 CFR 1310.04   | Not Listed   |

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

| <b>Chemical name</b> | <b>New Jersey</b> | <b>Massachusetts</b> | <b>Pennsylvania</b> |
|----------------------|-------------------|----------------------|---------------------|
| Iodine<br>7553-56-2  | X                 | X                    | X                   |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

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| Chemical name       | Global Automotive Declarable Substance List Classifications | Global Automotive Declarable Substance List Thersholds |
|---------------------|---|--|
| Iodine<br>7553-56-2 | Prohibited Substance (LR)<br>Declarable Substance (LR)      | 0.0 %  |

**NFPA and HMIS Classifications**

| NFPA | Health hazards - 1 | Flammability - 0 | Instability - 0      | Physical and Chemical Properties -                              |
|------|--------------------|------------------|----------------------|---|
| HMIS | Health hazards - 1 | Flammability - 0 | Physical Hazards - 0 | Personal protection - X<br>- See section 8 for more information |

**Key or legend to abbreviations and acronyms used in the safety data sheet**

NIOSH IDLH *Immediately Dangerous to Life or Health*  
 ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)  
 NDF *no data*

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|      |                                 |         |   |
|------|---------------------------------|---------|---|
| TWA  | TWA (time-weighted average)     | STEL    | STEL (Short Term Exposure Limit)  |
| MAC  | Maximum Allowable Concentration | Ceiling | Ceiling Limit Value   |
| X    | Listed                          | Vacated | These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations. |
| SKN* | Skin designation                | SKN+    | Skin sensitization  |
| RSP+ | Respiratory sensitization       | **      | Hazard Designation  |
| C    | Carcinogen                      | R       | Reproductive toxicant   |
| M    | mutagen                         |         |   |

**Prepared By** Hach Product Compliance Department

**Issue Date** 05-Oct-2017

**Revision Date** 05-Oct-2017

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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**End of Safety Data Sheet**