

World Headquarters  
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MSDS No: M00030

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** Potassium Iodide Reagent  
**Catalog Number:** 107799

HACH LANGE GmbH  
Willstätterstrasse 11  
40549 Düsseldorf, Germany  
+49-(0)211-52880

Emergency Telephone Numbers:  
(Poison Information Center Main)  
(+49 (0) 6131 19240) 24 HR

**SDS Number:** M00030

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Determination of chlorine, chromate, ozone

**CAS No.:** Not applicable

**Hazard:** May cause irritation.

**Date of MSDS Preparation:**

**Day:** 12

**Month:** 01

**Year:** 2006

**Additional Emergency Response Numbers:** Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33 (0)1-40370404, Italy: +39-0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41-(0)1-2515151

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Potassium Iodide

**EEC Number:** 2316594

**CAS No.:** 7681140

**Percent Range:** > 99,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

### Other component

**EEC Number:** Not applicable

**CAS No.:** Not applicable

**Percent Range:** < 1,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

## 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** White powder  
**Odor:** Not determined  
**EU Symbols:** Not applicable  
**R PHRASES:** Not applicable

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** May cause irritation

**Skin Contact (EC):** No effects are anticipated

**Skin Absorption (EC):** Product will not be absorbed through the skin

**Target Organs (SA E):** Not applicable

**Ingestion (EC):** Harmful May cause: abdominal pain

**Target Organs (Ing E):** None Reported

**Inhalation:** May cause: irritation of nose and throat

**Target Organs (Inh E):** None Reported

**Medical Conditions Aggravated:** Pre-existing: Skin conditions Persons with pre-existing respiratory conditions may be more susceptible to the effects of Potassium Iodide exposure.

**Chronic Effects:** Iodines overdose, 'iodism', may cause skin rash, runny nose, headaches, fever and bronchitis. Chronic overexposure may cause hypothyroidism

**Cancer / Reproductive Toxicity Information:**

This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** Contains: an experimental teratogen. Maternal ingestion of potassium iodide during pregnancy may cause congenital goiter and hyperthyroidism in the newborn infant.

**Toxicologically Synergistic Products:** None reported

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## 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.

**Skin Contact (First Aid):** Wash skin with plenty of water. Call physician if irritation develops.

**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. Call physician.

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Does not burn, but may melt in a fire, releasing toxic fumes.

**Hazardous Combustion Products:** This material will not burn.

**Fire / Explosion Hazards:** None reported

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Carbon dioxide Dry chemical. Alcohol foam.

**Extinguishing Media NOT To Be Used:** Not applicable Not applicable Not applicable

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. Flush the spilled material to the drain with a large excess of water.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Store in a cool, dry place. Protect from: moisture  
**Special Packaging Instructions:** Not applicable  
**Use of the substance/preparation:** Determination of chlorine, chromate, ozone

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Maintain general industrial hygiene practices when using this product.  
**Personal Protective Equipment:**  
**Eye Protection:** safety glasses with top and side shields  
**Skin / Hand Protection:** disposable latex gloves lab coat  
**Inhalation Protection:** adequate ventilation  
**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling.  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** White powder  
**Physical State:** Solid  
**Odor:** Not determined  
**pH:** of 5% solution = 6,7  
**Vapor Pressure:** Not applicable  
**Vapor Density (air = 1):** Not applicable  
**Boiling Point:** Not applicable  
**Melting Point:** 680°C (1258°F)  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Autoignition Temperature:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Specific Gravity (water = 1):** 3,07  
**Evaporation Rate (water = 1):** Not applicable  
**Volatile Organic Compounds Content:** Not determined  
**Partition Coefficient (n-octanol / water):** Not available  
**Solubility:**  
**Water:** Soluble  
**Acid:** Not determined  
**Other:** Alcohols, methanol, glycerol, acetone  
**Metal Corrosivity:**  
**Steel:** Not determined  
**Aluminum:** Not determined

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Excess moisture Exposure to air.  
**Reactivity / Incompatibility:** Incompatible with: alkaloidal salts metallic salts  
**Hazardous Decomposition:** Toxic fumes of: potassium oxide iodine iodine compounds  
**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**  
**LD50:** None reported  
**LC50:** None reported  
**Dermal Toxicity Data:** None reported  
**Skin and Eye Irritation Data:** None reported  
**Mutation Data:** None reported

**Reproductive Effects Data:** None reported

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**Ingredient Toxicological Data:** Potassium Iodide: Oral mouse LD<sub>Lo</sub> = 1862 mg/kg

This product does NOT contain any IARC listed chemicals.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** --

No ecological data available for the ingredients of this product.

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## 13. DISPOSAL CONSIDERATIONS

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

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## 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

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**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. UN Number:** NA

**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

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**A.D.R. Hazard Class:** NA

**A.D.R. Subsidiary Risk:** NA

**A.D.R. UN-Number::** NA

**A.D.R. Packing Group:** NA

**Additional Information:** This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

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## 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**EEC Number:** Not applicable

**EEC LABEL COPY:**

**EU Symbols:** Not applicable

**R PHRASES:** Not applicable

**S PHRASES:** Not applicable

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## 16. OTHER INFORMATION

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. In-house information. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Technical Judgment. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

**R PHRASES:** Not applicable

**Use of the substance/preparation:** Determination of chlorine, chromate, ozone

**Revision Summary:** Updates in Section(s) 14,

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**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**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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(970) 669-3050

MSDS No: M01136

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** Sodium Thiosulfate Standard Solution 0,113 N  
**Catalog Number:** 2267301

HACH LANGE GmbH  
Willstätterstrasse 11  
40549 Düsseldorf, Germany  
+49-(0)211-52880

Emergency Telephone Numbers:  
(Poison Information Center Main)  
(+49 (0) 6131 19240) 24 HR

**SDS Number:** M01136

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Standard solution

**CAS No.:** Not applicable

**Hazard:** Practically non-toxic.

**Date of MSDS Preparation:**

**Day:** 13

**Month:** 01

**Year:** 2006

**Additional Emergency Response Numbers:** Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33 (0)1-40370404, Italy: +39-0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41-(0)1-2515151

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Propylene Glycol

**EEC Number:** 2003380

**CAS No.:** 57556

**Percent Range:** 25,0 - 35,0

**Percent Range Units:** volume / volume

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

#### Demineralized Water

**EEC Number:** 2317912

**CAS No.:** 7732185

**Percent Range:** 55,0 - 65,0

**Percent Range Units:** volume / volume

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

#### Other component

**EEC Number:** Not applicable

**CAS No.:** Not applicable

**Percent Range:** < 1,0

**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** Not established

#### **Sodium Thiosulfate**

**EEC Number:** 2318675  
**CAS No.:** 10102-17-7  
**Percent Range:** 1,0 - 10,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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### **3. HAZARDS IDENTIFICATION**

#### **Emergency Overview:**

**Appearance:** Clear, colorless liquid  
**Odor:** None  
**EU Symbols:** Not applicable  
**R PHRASES:** Not applicable

#### **Protective Equipment:**

#### **Potential Health Effects:**

**Eye Contact (EC):** No effects are anticipated  
**Skin Contact (EC):** No effects are anticipated  
**Skin Absorption (EC):** No effects anticipated  
**Target Organs (SA E):** Not applicable  
**Ingestion (EC):** Practically non-toxic Very large doses may cause: central nervous system depression kidney damage rapid pulse and respirations convulsions  
**Target Organs (Ing E):** None Reported  
**Inhalation:** No effects anticipated  
**Target Organs (Inh E):** Not applicable  
**Medical Conditions Aggravated:** None reported  
**Chronic Effects:** No effects anticipated  
**Cancer / Reproductive Toxicity Information:**  
This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** None reported  
**Toxicologically Synergistic Products:** Not applicable

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### **4. FIRST AID MEASURES**

**Eye Contact:** Flush eyes with water. Call physician if irritation develops.  
**Skin Contact (First Aid):** Wash skin with soap and plenty of water.  
**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.  
**Inhalation:** None required.

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### **5. FIRE FIGHTING MEASURES**

**Flammable Properties:** Material will not burn.  
**Hazardous Combustion Products:** None reported  
**Fire / Explosion Hazards:** None reported  
**Static Discharge:** None reported.  
**Mechanical Impact:** None reported  
**Extinguishing Media:** Use media appropriate to surrounding fire conditions

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Keep container tightly closed when not in use.

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Standard solution

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin / Hand Protection:** lab coat

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Odor:** None

**pH:** 7,9

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Boiling Point:** ~100°C

**Melting Point:** Not applicable

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** 0,996

**Evaporation Rate (water = 1):** 0,74

**Volatile Organic Compounds Content:** Not applicable

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

**Solubility:**

**Water:** Miscible

**Acid:** Miscible

**Other:** Not determined

**Metal Corrosivity:**



*Steel:* Not determined  
*Aluminum:* Not determined

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Heat Evaporation Exposure to direct sunlight.  
**Reactivity / Incompatibility:** None reported  
**Hazardous Decomposition:** None reported  
**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported

**LC50:** None reported

**Dermal Toxicity Data:** Propylene glycol: Skin rabbit LD50 = 20,8 g/kg

**Skin and Eye Irritation Data:** Propylene glycol: Skin human 500 mg/7D - MILD; Eye rabbit 500 mg/24H - MILD

**Mutation Data:** None reported

**Reproductive Effects Data:** None reported

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**Ingredient Toxicological Data:** Propylene glycol: Oral rat LD50 = 20 g/kg; Sodium Thiosulfate: Oral rat LD50 > 8 g/kg

This product does NOT contain any IARC listed chemicals.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** Sodium Thiosulfate: Aquatic toxicity - 24 g/l/96 Hours/mosquito-fish/TLm turbid water at 22°- 24°C

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## 13. DISPOSAL CONSIDERATIONS

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

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## 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

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**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. UN Number:** NA

**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

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*A.D.R Hazard Class:* NA  
*A.D.R. Subsidiary Risk:* NA  
*A.D.R. UN-Number::* NA  
*A.D.R. Packing Group:* NA

**Additional Information:** This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

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## 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**EEC Number:** Not applicable

**EEC LABEL COPY:**

**EU Symbols:** Not applicable

**R PHRASES:** Not applicable

**S PHRASES:** Not applicable

---

## 16. OTHER INFORMATION

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. In-house information. Technical Judgment.

**R PHRASES:** Not applicable

**Use of the substance/preparation:** Standard solution

**Revision Summary:** Updates in Section(s) 14,

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**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**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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(970) 669-3050

MSDS No: M00294

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** Starch Indicator Solution  
**Catalog Number:** 34932

HACH LANGE GmbH  
Willstätterstrasse 11  
40549 Düsseldorf, Germany  
+49-(0)211-52880

Emergency Telephone Numbers:  
(Poison Information Center Main)  
(+49 (0) 6131 19240) 24 HR

**SDS Number:** M00294

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Oxidation-reduction indicator

**CAS No.:** Not applicable

**Hazard:** May cause irritation.

**Date of MSDS Preparation:**

**Day:** 12

**Month:** 01

**Year:** 2006

**Additional Emergency Response Numbers:** Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33 (0)1-40370404, Italy: +39-0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41-(0)1-2515151

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Demineralized Water

**EEC Number:** 2317912

**CAS No.:** 7732185

**Percent Range:** >95,0

**Percent Range Units:** volume / volume

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

#### Salicylic Acid

**EEC Number:** 2007123

**CAS No.:** 69727

**Percent Range:** < 1,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Not applicable

**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

#### Starch

**EEC Number:** 2326864

**CAS No.:** 900849

**Percent Range:** < 1,0

**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** 10 mg/m<sup>3</sup> total dust  
**PEL:** 15 mg/m<sup>3</sup> total dust  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** Clear to slightly turbid, colorless solution  
**Odor:** None  
**EU Symbols:** Not applicable  
**R PHRASES:** Not applicable

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** No effects are anticipated  
**Skin Contact (EC):** No effects are anticipated  
**Skin Absorption (EC):** No effects anticipated  
**Target Organs (SA E):** Not applicable  
**Ingestion (EC):** No Effects Anticipated  
**Target Organs (Ing E):** Not applicable  
**Inhalation:** No effects anticipated  
**Target Organs (Inh E):** Not applicable  
**Medical Conditions Aggravated:** Allergies or sensitivity to aspirin or salicylates.  
**Chronic Effects:** No effects anticipated  
**Cancer / Reproductive Toxicity Information:**  
This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** Contains: an experimental mutagen. an experimental teratogen.

**Toxicologically Synergistic Products:** None reported

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### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.  
**Skin Contact (First Aid):** Wash skin with plenty of water.  
**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.  
**Inhalation:** None required.

---

### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn.  
**Hazardous Combustion Products:** This material will not burn.  
**Fire / Explosion Hazards:** None reported  
**Static Discharge:** None reported.  
**Mechanical Impact:** None reported  
**Extinguishing Media:** Use media appropriate to surrounding fire conditions  
**Extinguishing Media NOT To Be Used:** Not applicable  
**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

---

### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

**Clean-up Technique:** Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes. Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Store between 10° and 25°C.

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Oxidation-reduction indicator

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin / Hand Protection:** disposable latex gloves

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes. Do not breathe: mist/vapor. Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear to slightly turbid, colorless solution

**Physical State:** Liquid

**Odor:** None

**pH:** 3,1

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Boiling Point:** ~100 °C (~212 °F)

**Melting Point:** Not applicable

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** 0,986

**Evaporation Rate (water = 1):** 0,53

**Volatile Organic Compounds Content:** Not applicable

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

**Solubility:**

**Water:** Soluble

**Acid:** Soluble

**Other:** Not determined

**Metal Corrosivity:**

**Steel:** Not determined

**Aluminum:** Not determined

---

## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Extreme temperatures

**Reactivity / Incompatibility:** None reported  
**Hazardous Decomposition:** No hazardous decomposition products known.  
**Hazardous Polymerization:** Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported  
**LC50:** None reported  
**Dermal Toxicity Data:** None reported  
**Skin and Eye Irritation Data:** None reported  
**Mutation Data:** None reported  
**Reproductive Effects Data:** None reported

--  
**Ingredient Toxicological Data:** Salicylic Acid: Oral rat LD50 =891 mg/kg, Oral mouse LD50 = 480 mg/kg, Oral cat LD50 = 400 mg/kg, Oral rabbit LD50 = 1300 mg/kg

This product does NOT contain any IARC listed chemicals.

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** --

No ecological data available for the ingredients of this product.

---

## 13. DISPOSAL CONSIDERATIONS

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

## 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

--

**ICAO Hazard Class:** NA  
**ICAO Subsidiary Risk:** NA  
**ICAO UN/ID Number:** NA  
**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

--

**I.M.O. Hazard Class:** NA  
**I.M.O. Subsidiary Risk:** NA  
**I.M.O. UN Number:** NA  
**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

--

**A.D.R Hazard Class:** NA  
**A.D.R. Subsidiary Risk:** NA  
**A.D.R. UN-Number::** NA  
**A.D.R. Packing Group:** NA

**Additional Information:** This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

---

## 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**EEC Number:** Not applicable

**EEC LABEL COPY:**

**EU Symbols:** Not applicable

**R PHRASES:** Not applicable

**S PHRASES:** Not applicable

---

## 16. OTHER INFORMATION

**References:** TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Vendor Information. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993.

**R PHRASES:** Not applicable

**Use of the substance/preparation:** Oxidation-reduction indicator

**Revision Summary:** Updates in Section(s) 14,

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### Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**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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(970) 669-3050

MSDS No: M00007

## SAFETY DATA SHEET

---

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** Dissolved Oxygen 3 Powder Pillows  
**Catalog Number:** 98799

HACH LANGE GmbH  
Willstätterstrasse 11  
40549 Düsseldorf, Germany  
+49-(0)211-52880

Emergency Telephone Numbers:  
(Poison Information Center Main)  
(+49 (0) 6131 19240) 24 HR

**SDS Number:** M00007  
**Chemical Name:** Sulfamic Acid  
**Chemical Formula:** H<sub>3</sub>NO<sub>3</sub>S  
**Chemical Family:** Inorganic Acid  
**Use of the substance/preparation:** Laboratory Reagent  
**CAS No.:** 5329-14-6  
**Hazard:** Causes eye burns.  
**Date of MSDS Preparation:**  
**Day:** 09  
**Month:** July  
**Year:** 2007

**Additional Emergency Response Numbers:** Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245,  
France: +33-(0)1-40370404, Italy: +39-02-66101029, Netherlands: +31-(0)30-2748888, Switzerland: +41-  
(0)1-2515151

---

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Other component

**EEC Number:** Not applicable  
**CAS No.:** Not applicable  
**Percent Range:** < 1,0  
**Percent Range Units:** weight / weight  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** Not established

#### Sulfamic Acid

**EEC Number:** 2262188  
**CAS No.:** 5329-14-6  
**Percent Range:** > 99,0  
**Percent Range Units:** weight / weight  
**Ingredient EEC Symbol:** Xi - IRRITATING  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 36/38  
**TLV:** Not established  
**PEL:** Not established



*EU Occupational Exposure Limits:* 3 mg/m<sup>3</sup>, Inhalable dust

---

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** White crystals

**Odor:** None

**EU Symbols:** Xi - IRRITATING

**R PHRASES:** R 36/38: Irritating to eyes and skin. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** Causes severe irritation

**Skin Contact (EC):** Causes severe irritation

**Skin Absorption (EC):** None Reported

**Target Organs (SA E):** None Reported

**Ingestion (EC):** May cause: irritation of the mouth and esophagus gastrointestinal tract irritation

**Target Organs (Ing E):** None Reported

**Inhalation:** May cause: irritation of nose and throat

**Target Organs (Inh E):** None Reported

**Medical Conditions Aggravated:** Pre-existing: Eye conditions Skin conditions Respiratory conditions

**Chronic Effects:** None reported

**Cancer / Reproductive Toxicity Information:**

IARC Listed: No

**Additional Cancer / Reproductive Toxicity Information:** Not applicable

**Toxicologically Synergistic Products:** None reported

---

### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.

**Skin Contact (First Aid):** Wash skin with plenty of water for 15 minutes. Call physician immediately.

**Ingestion (First Aid):** Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air.

---

### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

**Hazardous Combustion Products:** Toxic fumes of: ammonia nitrogen oxides. sulfur oxides.

**Fire / Explosion Hazards:** May react violently with: chlorine / chlorine compounds metal nitrates metal nitrites nitric acid

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Dry chemical. Water.

**Extinguishing Media NOT To Be Used:** Not applicable Not applicable

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

---

### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment. Cover spilled solid material with sand or other inert material.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder is spilled. If conditions warrant, increase the size of the evacuation.

---

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. Maintain general industrial hygiene practices when using this product.

**Storage:** Store away from: oxidizers alkalis chlorine/chlorinated metals Protect from: heat moisture

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Laboratory Reagent

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin / Hand Protection:** disposable latex gloves lab coat

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Keep away from: alkalis metals Protect from: heat moisture

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

---

## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** White crystals

**Physical State:** Solid

**Odor:** None

**pH:** 1% soln = 1,18

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** Product decomposes at 205 °C; 401 °F

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** 2,15

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** None reported

**Solubility:**

**Water:** 1:2 ratio @ 80 ° C (176 °F)  
**Acid:** Soluble  
**Other:** Slightly soluble in alcohol, methanol.  
**Metal Corrosivity:**  
**Steel:** 0,814 in/yr  
**Aluminum:** 0,212 in/yr

---

## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Heating to decomposition. Excess moisture  
**Reactivity / Incompatibility:** May react violently in contact with: chlorates metal nitrates metal nitrites nitric acid Incompatible with: alkalies oxidizers  
**Hazardous Decomposition:** Heating to decomposition releases toxic and/or corrosive fumes of: ammonia nitrogen oxides sulfur oxides  
**Hazardous Polymerization:** Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**  
**LD50:** Oral rat LD50 = 3160 mg/kg.  
**LC50:** None reported  
**Dermal Toxicity Data:** None reported  
**Skin and Eye Irritation Data:** Skin Human 4%/5 days intermittent MILD, Skin rabbit 500 mg/24H SEVERE, Eye rabbit 20mg MODERATE, Eye rabbit 250µg/24H SEVERE.  
**Mutation Data:** None Reported  
**Reproductive Effects Data:** None reported  
--  
**Ingredient Toxicological Data:** --  
Not applicable  
IARC Listed: No

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --  
No ecological data available for this product.  
**Ingredient Ecological Information:** --  
Not applicable

---

## 13. DISPOSAL CONSIDERATIONS

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

## 14. TRANSPORT INFORMATION

**I.C.A.O.:**  
**I.C.A.O. Proper Shipping Name:** Sulphamic Acid  
--  
**ICAO Hazard Class:** 8

**ICAO Subsidiary Risk:** NA  
**ICAO UN/ID Number:** UN2967  
**ICAO Packing Group:** III

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Sulphamic Acid

--

**I.M.O. Hazard Class:** 8  
**I.M.O. Subsidiary Risk:** NA  
**I.M.O. UN Number:** UN2967  
**I.M.O. Packing Group:** III

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Sulphamic Acid

--

**A.D.R Hazard Class:** 8  
**A.D.R. Subsidiary Risk:** NA  
**A.D.R. UN-Number::** 2967  
**A.D.R. Packing Group:** III

**Additional Information:** This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

---

## 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** EINECS Listed: Yes

**EEC Number:** 2262188

**EEC LABEL COPY:**

**EU Symbols:** Xi - IRRITATING

**R PHRASES:** R 36/38: Irritating to eyes and skin. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S PHRASES:** S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 28a: After contact with skin, wash immediately with plenty of water. S 61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

---

## 16. OTHER INFORMATION

**References:** Vendor Information. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Outside Testing, Technical Judgment. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

**R PHRASES:** R 36/38: Irritating to eyes and skin. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Use of the substance/preparation:** Laboratory Reagent

**Revision Summary:** Updates in Section(s) 14,

---

**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume

NV - Not Available

v/v - volume/volume

**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.

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