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MSDS No: M01921

# SAFETY DATA SHEET

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

**Product Name:** Monochlor F™ Reagent  
**Catalog Number:** 2802299

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:** M01921

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Determination of monochloramine and ammonia

**CAS No.:** Not applicable

**Hazard:** Harmful if swallowed Causes burns.

**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

### Sodium Tartrate

**EEC Number:** 2127733

**CAS No.:** 6106247

**Percent Range:** < 30

**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

### Sodium Nitroferricyanide

**EEC Number:** 2383739

**CAS No.:** 14402-89-2

**Percent Range:** < 5,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Not applicable

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

**TLV:** 5 mg/m<sup>3</sup> as CN<sup>-</sup>

**PEL:** 5 mg/m<sup>3</sup> as CN<sup>-</sup>

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust. Cyanides are on the Priority List for OELs.

### Sodium Citrate

**EEC Number:** 2006753

**CAS No.:** 68042

**Percent Range:** < 50

**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

### **2-Hydroxybenzyl Alcohol**

**EEC Number:** 2019605  
**CAS No.:** 96047  
**Percent Range:** < 20  
**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

### **Lithium Hydroxide, Anhydrous**

**EEC Number:** 2151834  
**CAS No.:** 1310652  
**Percent Range:** 1,0 - 10,0  
**Percent Range Units:** weight / weight  
**Ingredient EEC Symbol:** C - CORROSIVE Xn - HARMFUL  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 20 R 34  
**TLV:** STEL 2 mg/m<sup>3</sup> (ceiling)  
**PEL:** 2 mg/m<sup>3</sup>  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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## **3. HAZARDS IDENTIFICATION**

### **Emergency Overview:**

**Appearance:** Light yellow powder  
**Odor:** None  
**EU Symbols:** C - CORROSIVE Xn - HARMFUL  
**R PHRASES:** R 20: Harmful by inhalation. R 34: Causes burns.

### **Protective Equipment:**

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

**Eye Contact (EC):** Causes burns  
**Skin Contact (EC):** Causes burns  
**Skin Absorption (EC):** Harmful if absorbed through the skin. Effects similar to those of ingestion. Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction.  
**Target Organs (SA E):** Central nervous system, Blood  
**Ingestion (EC):** Causes: burns. Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction. May cause: headache, nausea, vomiting, central nervous system effects, liver damage, kidney damage.  
**Target Organs (Ing E):** Central nervous system, Blood, Liver, Kidneys  
**Inhalation:** Causes: respiratory tract irritation. Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction. May cause: headache, nausea, vomiting, central nervous system effects.  
**Target Organs (Inh E):** Central nervous system, Blood  
**Medical Conditions Aggravated:** Pre-existing: Kidney conditions, Liver conditions  
**Chronic Effects:** Chronic overexposure may cause diarrhea, fatigue, weakness, death, central nervous system effects, kidney damage, liver damage. Lithium compounds have been implicated in development of aplastic anemia. Signs of lithium poisoning include dehydration, extreme weight loss, fine tremor of hands, nausea, vomiting and diarrhea.  
**Cancer / Reproductive Toxicity Information:**  
This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** None reported  
**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 soap and plenty of water. Remove contaminated clothing. 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. Give artificial respiration if necessary. Call physician.

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** During a fire, this product decomposes to form toxic gases.

**Hazardous Combustion Products:** May emit acrid smoke and fumes.

**Fire / Explosion Hazards:** This product will not burn or explode.

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Dry chemical. Carbon dioxide. 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. Evacuate area and fight fire from a safe distance.

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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:** Releases of this material may contaminate the environment. Stop spilled material from being released to the environment.

**Clean-up Technique:** Avoid contact with spilled material. Sweep up material. Dispose of material in an E.P.A. approved hazardous waste facility. 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.

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## 7. HANDLING AND STORAGE

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

**Storage:** Store between 10° and 25°C. Keep away from: acids / acid fumes, oxidizers

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Determination of monochloramine and ammonia

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Use a fume hood to avoid exposure to dust, mist or vapor. 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, disposable latex gloves

**Inhalation Protection:** laboratory fume hood

**Precautionary Measures:** Avoid contact with: eyes, skin, clothing. Do not breathe: dust. Wash thoroughly after handling. Use with adequate ventilation. Keep away from: acids/acid fumes, oxidizers

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:**

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Light yellow powder

**Physical State:** Solid

**Odor:** None

**pH:** Not determined

**Vapor Pressure:** Not applicable  
**Vapor Density (air = 1):** Not applicable  
**Boiling Point:** Not applicable  
**Melting Point:** Not determined  
**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):** Not determined  
**Evaporation Rate (water = 1):** Not applicable  
**Volatile Organic Compounds Content:** Not applicable  
**Partition Coefficient (n-octanol / water):** Not applicable  
**Solubility:**  
    **Water:** Not determined  
    **Acid:** Not determined  
    **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:** Heating to decomposition. Extreme temperatures  
**Reactivity / Incompatibility:** Incompatible with: acids iodine iron salts lead acetate organic materials oxidizers silver nitrate sodium phosphate  
**Hazardous Decomposition:** Contact with acids/acid fumes releases toxic cyanide gas. Heating to decomposition releases toxic and/or corrosive fumes of: cyanide nitrogen oxides sodium oxides  
**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  
    --  
**Ingredient Toxicological Data:** Sodium ferricyanide: Orl rat LDLo=20mg/kg; Sodium citrate: Orl rat LD50 > 8g/kg; Sodium tartrate: Orl rabbit LD50 = 5290 mg/kg; LiOH: Orl rat LD50=225mg/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:** Lithium Hydroxide Mixture

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**ICAO Hazard Class:** 8

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** UN2680

**ICAO Packing Group:** II

### **I.M.O.:**

**I.M.O. Proper Shipping Name:** Lithium Hydroxide Mixture

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**I.M.O. Hazard Class:** 8

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

**I.M.O. UN Number:** UN2680

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

### **A.D.R.:**

**A.D.R. Proper Shipping Name:** Lithium Hydroxide Mixture

NA

**A.D.R. Hazard Class:** 8

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

**A.D.R. UN-Number::** 2680

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

**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:** C - CORROSIVE Xn - HARMFUL

**R PHRASES:** R 20: Harmful by inhalation. R 34: Causes burns.

**S PHRASES:** S 22: Do not breathe dust. S 37/39: Wear suitable gloves and eye / face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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## 16. OTHER INFORMATION

**References:** TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. In-house information. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Cassaret and Doull's Toxicology, 3rd Ed. New York: Macmillan Publishing Co., Inc., 1986. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

**R PHRASES:** R 20: Harmful by inhalation. R 34: Causes burns.

**Use of the substance/preparation:** Determination of monochloramine and ammonia

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

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### **Legend:**

NA - Not Applicable

ND - Not Determined

w/w - weight/weight

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: M02376

## SAFETY DATA SHEET

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

**Product Name:** Free Ammonia Reagent Solution  
**Catalog Number:** 2877336

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:** M02376

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Determination of ammonium nitrogen

**CAS No.:** Not applicable

**Hazard:** Causes severe burns.

**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

#### Demineralized Water

**EEC Number:** 2317912

**CAS No.:** 7732185

**Percent Range:** > 90,0

**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:** < 0,5

**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

#### Sodium Hypochlorite

**EEC Number:** 2316683

**CAS No.:** 7684529

**Percent Range:** 0,5 - 3,0

**Percent Range Units:** volume / volume  
**Ingredient EEC Symbol:** C - CORROSIVE  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 31 R 34  
**TLV:** Not established (0,5 ppm as chlorine)  
**PEL:** Not established  
**EU Occupational Exposure Limits:** Not established (Chlorine as a decomposition product)

#### **Potassium Hydroxide**

**EEC Number:** 2151813  
**CAS No.:** 1310588  
**Percent Range:** < 10,0  
**Percent Range Units:** weight / volume  
**Ingredient EEC Symbol:** C - CORROSIVE  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 35  
**TLV:** 2 mg/m<sup>3</sup> Ceiling  
**PEL:** 2 mg/m<sup>3</sup> Ceiling  
**EU Occupational Exposure Limits:** 2 mg/m<sup>3</sup>

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### **3. HAZARDS IDENTIFICATION**

#### **Emergency Overview:**

**Appearance:** Clear, colorless liquid  
**Odor:** Irritating  
**EU Symbols:** C - CORROSIVE  
**R PHRASES:** R 35: Causes severe burns.

#### **Protective Equipment:**

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

**Eye Contact (EC):** Causes severe burns  
**Skin Contact (EC):** Causes severe burns  
**Skin Absorption (EC):** None Reported  
**Target Organs (SA E):** None Reported  
**Ingestion (EC):** Harmful Causes: abdominal pain vomiting Can cause: death  
**Target Organs (Ing E):** None Reported  
**Inhalation:** Causes: severe burns sneezing coughing discomfort bronchospasm Can cause: death  
**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:**  
This product does NOT contain any IARC listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** Contains: an experimental mutagen.  
**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 for 15 minutes. Remove contaminated clothing. Call physician immediately.  
**Ingestion (First Aid):** Do not induce vomiting. Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. 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:** Material will not burn.  
**Hazardous Combustion Products:** This material will not burn.  
**Fire / Explosion Hazards:** Contact with metals gives off hydrogen gas which is flammable  
**Static Discharge:** None reported.  
**Mechanical Impact:** None reported



**Extinguishing Media:** Water.

**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. Evacuate area and fight fire from a safe distance.

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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:** 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. Dilute with a large excess of water. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a weak acid solution.

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

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## 7. HANDLING AND STORAGE

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

**Storage:** Store away from: acids metals organic peroxides combustible materials Protect from: heat freezing

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Determination of ammonium nitrogen

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Have a safety shower nearby. Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** chemical splash goggles

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

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Protect from: heat freezing

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:**

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Odor:** Irritating

**pH:** 13,3

**Vapor Pressure:** Not determined

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

**Boiling Point:** Not determined

**Melting Point:** Not determined

**Flash Point:**

**Method:** Not applicable

**Autoignition Temperature:**

**Flammability Limits:**

**Lower Explosion Limits:**

**Upper Explosion Limits:**

**Specific Gravity (water = 1):** Not determined

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

**Volatile Organic Compounds Content:** Not applicable

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

**Solubility:**

**Water:** Miscible

**Acid:** Reactive

**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:** Extreme temperatures

**Reactivity / Incompatibility:** May react violently in contact with: acids metals organic peroxides combustible materials

**Hazardous Decomposition:** Contact with metals may release flammable hydrogen gas.

**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported

**LC50:** None reported

**Dermal Toxicity Data:** Contains corrosive components

**Skin and Eye Irritation Data:** Contains corrosive components

**Mutation Data:** Potassium hydroxide: Cytogenic analysis rat Ascites tumor: 180 mg/Kg; Cytogenic analysis hamster Ovary: 12 mmol/L; Sodium hypochlorite: Cytogenic analysis in human lymphocytes @ 100 ppm/24Hr: Sister chromatid exchange in human embryo @ 149 mg/L;

**Reproductive Effects Data:** None reported

**Ingredient Toxicological Data:** Potassium Hydroxide: Oral rat LD<sub>50</sub> = 273 mg/Kg; Sodium hypochlorite: Oral mouse LD<sub>50</sub> = 5800 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:** Sodium hypochlorite: Fish Toxicity: LC<sub>50</sub> (48 hr) rainbow trout 0.07 mg/L; LC<sub>50</sub> (96 hr) fathead minnow 5.9 mg/L

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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:** Potassium Hydroxide Solution

**ICAO Hazard Class:** 8

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** UN1814

**ICAO Packing Group:** II

**I.M.O.:**

*I.M.O. Proper Shipping Name:* Potassium Hydroxide Solution

*I.M.O. Hazard Class:* 8

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

*I.M.O. UN Number:* UN1814

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

*A.D.R.:*

*A.D.R. Proper Shipping Name:* Potassium Hydroxide Solution

*A.D.R Hazard Class:* 8

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

*A.D.R. UN-Number::* 1814

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

**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:** C - CORROSIVE

**R PHRASES:** R 35: Causes severe burns.

**S PHRASES:** S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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## 16. OTHER INFORMATION

**References:** Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Technical Judgment. In-house information. 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 35: Causes severe burns.

**Use of the substance/preparation:** Determination of ammonium nitrogen

**Revision Summary:**

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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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