

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

MSDS No: M01433

## SAFETY DATA SHEET

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

**Product Name:** HgEx™ Reagent C  
**Catalog Number:** 2659059

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:** M01433

**Chemical Name:** Sodium Hypochlorite Solution

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

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

**CAS No.:** Not applicable

**Hazard:** May cause irritation. Experimental mutagen.

**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 -026101029, 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

#### Sodium Hypochlorite

**EEC Number:** 2316683

**CAS No.:** 7684529

**Percent Range:** < 10,0

**Percent Range Units:** volume / volume

**Ingredient EEC Symbol:** Xi - IRRITATING

**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 31 R 36/38

**TLV:** Not established (0,5 ppm as chlorine)

**PEL:** Not established

**EU Occupational Exposure Limits:** Not established (Chlorine as a decomposition product)

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** Clear, colorless to light yellow liquid  
**Odor:** Chlorine  
**EU Symbols:** Xi - IRRITATING  
**R PHRASES:** R 31: Contact with acids liberates toxic gas. R 36/38: Irritating to eyes and skin.

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** Causes moderate irritation  
**Skin Contact (EC):** Causes irritation  
**Skin Absorption (EC):** None Reported  
**Target Organs (SA E):** None Reported  
**Ingestion (EC):** Causes: nausea vomiting circulatory collapse confusion coma death  
**Target Organs (Ing E):** None Reported  
**Inhalation:** May cause: respiratory tract irritation  
**Target Organs (Inh E):** None Reported  
**Medical Conditions Aggravated:** None reported  
**Chronic Effects:** Chronic overexposure may cause pulmonary edema nausea vomiting confusion coma  
**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

---

#### 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 if irritation develops.  
**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.

---

#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn. During a fire, corrosive and toxic gases may be generated by thermal decomposition.  
**Hazardous Combustion Products:** This material will not burn.  
**Fire / Explosion Hazards:** This product will not burn or explode.  
**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:** Evacuate area and fight fire from a safe distance. 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.  
**Containment Technique:** Stop spilled material from being released to the environment.  
**Clean-up Technique:** Flush the spilled material to the drain with a large excess of water.  
**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled.

---

#### 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:** Keep container tightly closed when not in use.  
**Special Packaging Instructions:** Not applicable

*Use of the substance/preparation:*     Laboratory reagent

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:**     Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust.     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: mist/vapor Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:**     Not established

---

## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:**     Clear, colorless to light yellow liquid

**Physical State:**     Liquid

**Odor:** Chlorine

**pH:** 11,5

**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):**     1,06

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

**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

---

## 10. STABILITY / REACTIVITY

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

**Conditions to Avoid:**     Extreme temperatures Heating to decomposition.

**Reactivity / Incompatibility:**     Incompatible with: amines oxidizable material cellulose acids ammonia ammonia salts methanol phenyl acetonitrile ethyleneimine

**Hazardous Decomposition:**     Heating to decomposition releases: Chlorine oxygen

**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:**     Sodium Hypochlorite: Eye irritation rabbit (Standard Draize) @ 10 mg = MODERATE

**Mutation Data:** Sodium Hypochlorite: Cytogenetic analysis in human lymphocytes @ 100 ppm/24hr; Sister chromatid exchange in human embryo @ 149 mg/L; Cytogenetic analysis in hamster lung cells @ 100 mg/L

**Reproductive Effects Data:** None reported

--

**Ingredient Toxicological Data:** Sodium Hypochlorite: Oral mouse LD50 = 5800 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:** Xi - IRRITATING

**R PHRASES:** R 31: Contact with acids liberates toxic gas. R 36/38: Irritating to eyes and skin.

**S PHRASES:** S 28a: After contact with skin, wash immediately with plenty of water.

---

## 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. Vendor Information. Technical Judgment. NIOSH Registry of Toxic Effects of Chemical Substances, 1985 -86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

**R PHRASES:** R 31: Contact with acids liberates toxic gas. R 36/38: Irritating to eyes and skin.

**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.

**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.**

HACH COMPANY ©2006