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Hach Company  
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MSDS No: M00649

## SAFETY DATA SHEET

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

**Product Name:** Phenolphthalein Solution 0,1%  
**Catalog Number:** 189736

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:** M00649

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Indicator for pH

**CAS No.:** Not applicable

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

**Date of MSDS Preparation:**

**Day:** 02

**Month:** February

**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

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Propylene Glycol

**EEC Number:** 2003380

**CAS No.:** 57-55-6

**Percent Range:** 90,0 - 100,0

**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

#### Phenolphthalein

**EEC Number:** 2010047

**CAS No.:** 77-09-8

**Percent Range:** < 1,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Xn - HARMFUL

**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 40

**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

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### 3. HAZARDS IDENTIFICATION

***Emergency Overview:***

*Appearance:* Clear, colorless liquid

*Odor:* Mild hydrocarbon

*EU Symbols:* Xn - HARMFUL

***R PHRASES:***

***Protective Equipment:***

***Potential Health Effects:***

*Eye Contact (EC):* Causes mild irritation

*Skin Contact (EC):* Causes mild irritation

*Skin Absorption (EC):* No effects anticipated

*Target Organs (SA E):* Not applicable

*Ingestion (EC):* 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:* None reported

***Cancer / Reproductive Toxicity Information:***

An ingredient of this mixture is: IARC Group 2B: Experimental Carcinogen  
Phenolphthalein

***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. Call physician if irritation develops.

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

***Inhalation:*** Remove to fresh air.

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### 5. FIRE FIGHTING MEASURES

***Flammable Properties:*** Can burn in fire, releasing toxic vapors.

***Hazardous Combustion Products:*** Toxic fumes of: carbon monoxide, carbon dioxide.

***Fire / Explosion Hazards:*** May react violently with: oxidizers

***Static Discharge:*** None reported.

***Mechanical Impact:*** None reported

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

**Extinguishing Media NOT To Be Used:** Not applicable 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:** 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:** Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. 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 Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Protect from: heat Keep away from: oxidizers

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Indicator for pH

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## 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

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes Wash thoroughly after handling. Protect from: heat Keep away from: oxidizers

**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:** Mild hydrocarbon

**pH:** 6,1

**Vapor Pressure:** Not determined

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

**Boiling Point:** 188° C (370° F)

**Melting Point:** Not determined

**Flash Point:** >100° C (>212° F)

**Method:** Open cup

**Autoignition Temperature:** 371° C (700° F)

**Flammability Limits:**

**Lower Explosion Limits:** 2,6%  
**Upper Explosion Limits:** 12,6%  
**Specific Gravity (water = 1):** 1,032  
**Evaporation Rate (water = 1):** 0,01  
**Volatile Organic Compounds Content:** Not determined  
**Partition Coefficient (n-octanol / water):** Not applicable  
**Solubility:**  
**Water:** Soluble  
**Acid:** Soluble  
**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: oxidizers  
**Hazardous Decomposition:** Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.  
**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: 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:** Propylene Glycol: Cytogenetic analysis, DNA inhibition mouse - subcutaneous - 8000 mg/kg  
**Reproductive Effects Data:** Propylene Glycol: Intraperitoneal mouse TDLo = 100 gm/kg -fetotoxicity, post implantation mortality  
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**Ingredient Toxicological Data:** Propylene Glycol: Oral rat LD50 = 20 g/kg  
  
An ingredient of this mixture is: IARC Group 2B: Experimental Carcinogen  
Phenolphthalein

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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:*** Xn - HARMFUL

***R PHRASES:***

***S PHRASES:*** Not applicable

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## 16. OTHER INFORMATION

***References:*** 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. In-house information. Technical Judgment.

***R PHRASES:***

***Use of the substance/preparation:*** Indicator for pH

***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: M00648

## SAFETY DATA SHEET

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

**Product Name:** Sodium Hydroxide Standard Solution 0,01 N  
**Catalog Number:** 67132

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:** M00648

**Chemical Name:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Not applicable

**Use of the substance/preparation:** Determination of carbon dioxide

**CAS No.:** Not applicable

**Hazard:** Causes eye burns.

**Date of MSDS Preparation:**

**Day:** 31

**Month:** May

**Year:** 2006

**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

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Sodium Hydroxide

**EEC Number:** 2151855

**CAS No.:** 1310-73-2

**Percent Range:** < 1,0

**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>

**PEL:** 2 mg/m<sup>3</sup>

**EU Occupational Exposure Limits:** 2 mg/m<sup>3</sup>

#### Demineralized Water

**EEC Number:** 2317912

**CAS No.:** 7732-18-5

**Percent Range:** 90,0 - 100,0

**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

### **Isopropanol**

*EEC Number:* 2006617  
*CAS No.:* 67-63-0  
*Percent Range:* 1,0 - 10,0  
*Percent Range Units:* volume / volume  
*Ingredient EEC Symbol:* Not applicable  
*Ingredient R phrase(s) (R phrase details given in Heading 16):* Not applicable  
*TLV:* 400 ppm (500 ppm STEL)  
*PEL:* 400 ppm  
*EU Occupational Exposure Limits:* 200 ppm (500 mg/m<sup>3</sup>)

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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):* May cause irritation  
*Skin Contact (EC):* None reported  
*Skin Absorption (EC):* Will be absorbed through the skin. No effects anticipated  
*Target Organs (SA E):* None Reported  
*Ingestion (EC):* May cause: abdominal cramps nausea  
*Target Organs (Ing E):* None Reported  
*Inhalation:* No effects anticipated  
*Target Organs (Inh E):* Not applicable  
*Medical Conditions Aggravated:* Pre-existing: Eye conditions Skin 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 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 for 15 minutes. 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:*** None required.

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## **5. FIRE FIGHTING MEASURES**

***Flammable Properties:*** Combustible Liquid  
***Hazardous Combustion Products:*** Toxic fumes of: sodium oxides carbon monoxide, carbon dioxide.  
***Fire / Explosion Hazards:*** Combustible liquid Do not expose to flames.



**Static Discharge:** None reported.  
**Mechanical Impact:** None reported  
**Extinguishing Media:** Water. Carbon dioxide Dry chemical.  
**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:** Releases of this material may contaminate the environment. Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.

**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 acid, such as sulfuric or citric. 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 Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Keep container tightly closed when not in use. Keep away from: sparks, flames and other ignition sources Protect from: acids

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Determination of carbon dioxide

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## 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 clothing Wash thoroughly after handling. Keep away from: sparks, flames and other ignition sources Protect from: acids/acid fumes

**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:** 11,7

**Vapor Pressure:** Not determined

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

**Boiling Point:** 94°C

**Melting Point:** Not determined

**Flash Point:** 56,7°C (134°F)  
**Method:** Closed cup  
**Autoignition Temperature:** Not determined  
**Flammability Limits:**  
    **Lower Explosion Limits:** Not determined  
    **Upper Explosion Limits:** Not determined  
**Specific Gravity (water = 1):** 0,992  
**Evaporation Rate (water = 1):** Not determined  
**Volatile Organic Compounds Content:** Not determined  
**Partition Coefficient (n-octanol / water):** Not applicable  
**Solubility:**  
    **Water:** Soluble  
    **Acid:** Soluble  
    **Other:** Not determined  
**Metal Corrosivity:**  
    **Steel:** 0,00 in/yr  
    **Aluminum:** 0,00 in/yr

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Conditions to Avoid:** Contact with heat, sparks, open flames or other ignition sources. Exposure to air. Evaporation  
**Reactivity / Incompatibility:** Incompatible with: strong acids carbon dioxide contamination  
**Hazardous Decomposition:** Toxic fumes of: sodium oxides carbon dioxide carbon monoxide  
**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:** Data reported in RTECS for isopropanol  
    --  
**Ingredient Toxicological Data:** Isopropyl Alcohol: Oral rat LD<sub>50</sub> = 5045 mg/kg, Oral human LD<sub>Lo</sub> = 2770 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. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991.

***R PHRASES:*** Not applicable

***Use of the substance/preparation:*** Determination of carbon dioxide

***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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