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MSDS No: M00621

## SAFETY DATA SHEET

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

**Product Name:** Sulfuric Acid Standard Solution 0,035 N  
**Catalog Number:** 2349732

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:** M00621  
**Chemical Name:** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Use of the substance/preparation:** Standard solution  
**CAS No.:** Not applicable  
**Hazard:** May cause eye irritation.  
**Date of MSDS Preparation:**  
**Day:** 29  
**Month:** April  
**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

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### 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>)

#### **Sulfuric Acid**

*EEC Number:* 2316395

*CAS No.:* 7664-93-9

*Percent Range:* < 0,5

*Percent Range Units:* weight / weight

*Ingredient EEC Symbol:* C - CORROSIVE

*Ingredient R phrase(s) (R phrase details given in Heading 16):* R 35

*TLV:* 1 mg/m<sup>3</sup> (TWA); 3 mg/m<sup>3</sup> (STEL)

*PEL:* 1 mg/m<sup>3</sup>

*EU Occupational Exposure Limits:* 0,1 mg/m<sup>3</sup>

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### **3. HAZARDS IDENTIFICATION**

#### *Emergency Overview:*

*Appearance:* Clear, colorless liquid

*Odor:* Alcoholic

*EU Symbol s:* Not applicable

*R PHRASES:* Not applicable

#### *Protective Equipment:*

##### *Potential Health Effects:*

*Eye Contact (EC):* May cause irritation

*Skin Contact (EC):* May cause irritation

*Skin Absorption (EC):* No effects anticipated

*Target Organs (S A E):* Not applicable

*Ingestion (EC):* Very large doses may cause: drowsiness dizziness incoordination headache abdominal pain nausea vomiting diarrhea blood pressure problems rapid pulse and respirations

*Target Organs (Ing E):* Central nervous system

*Inhalation:* No effects anticipated

*Target Organs (Inh E):* Not applicable

*Medical Conditions Aggravated:* Pre-existing: 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.

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

*Inhalation:* None required.

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

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

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

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

*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:** Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

**Clean-up Technique:** Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. 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 skin clothing Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Keep away from: oxidizers Protect from: heat sparks, flames and other ignition sources 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:** 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 Do not breathe: mist/vapor Wash thoroughly after handling. Keep away from: oxidizers Protect from: heat sparks, flames and other ignition sources

**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:** Alcoholic

**pH:** 1,6

**Vapor Pressure:** Not determined

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

**Boiling Point:** 89°C

**Melting Point:** -1°C

**Flash Point:** >212°F (100°C)

**Method:** Closed cup  
**Autoignition Temperature:** Not determined  
**Flammability Limits:**  
**Lower Explosion Limits:** Not determined  
**Upper Explosion Limits:** Not determined  
**Specific Gravity (water = 1):** 0,9943  
**Evaporation Rate (water = 1):** 0,86  
**Volatile Organic Compounds Content:** Not determined  
**Partition Coefficient (n -octanol / water):** Not applicable  
**Solubility:**  
**Water:** Soluble  
**Acid:** Soluble  
**Other:** Not determined  
**Metal Corrosivity:**  
**Steel:** 0,055 in/yr  
**Aluminum:** 0,041 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. Extreme temperatures  
**Reactivity / Incompatibility:** Incompatible with: oxidizers  
**Hazardous Decomposition:** Toxic fumes of: sulfur oxides carbon monoxide 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:** 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:** Isopropanol: 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:** 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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