

World Headquarters
Hach Company
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MSDS No: M00162

SAFETY DATA SHEET

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

Product Name: Dissolved Oxygen (Low Range) Reagent
Catalog Number: 2501025

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: M00162

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Determination of dissolved oxygen

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

Imidazole

EEC Number: 2060192

CAS No.: 288-32-4

Percent Range: 1,0 - 10,0

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/m³, Inhalable dust

Tin Wire

EEC Number: 2311418

CAS No.:

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: 2 mg/m³ (Sn)

PEL: 2 mg/m³ (Sn)

EU Occupational Exposure Limits: 2 mg/m³,

Demineralized Water

EEC Number: 2317912

CAS No.: 7732185

Percent Range: 85,0 - 95,0

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

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

Citric Acid

EEC Number: 2010691
CAS No.: 77929
Percent Range: 1,0 - 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: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Yellow liquid
Odor: Odorless
EU Symbols: 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): None Reported
Target Organs (SA E): None Reported
Ingestion (EC): May cause: gastrointestinal tract irritation
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: Citric acid chronic overexposure may cause effects due to the ability of citric acid to chelate metals, which could impair the body's ability to absorb calcium and iron.
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

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

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.

7. HANDLING AND STORAGE

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

Storage: Store between 10° and 25°C. Protect from: heat Keep away from: oxidizers

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Determination of dissolved oxygen

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 Wash thoroughly after handling. Protect from: heat Keep away from: oxidizers

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Yellow liquid

Physical State: Liquid

Odor: Odorless

pH: 6,8

Vapor Pressure: Not available

Vapor Density (air = 1): Not available

Boiling Point: 100°C; 212°F

Melting Point: Not available

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): 1,08
Evaporation Rate (water = 1): 1,10
Volatile Organic Compounds Content: Not available
Partition Coefficient (n -octanol / water): Not applicable
Solubility:
Water: Miscible
Acid: Miscible
Other: Not determined
Metal Corrosivity:
Steel: <0,08 in/yr
Aluminum: <0,08 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: Incompatible with: oxidizers
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: Citric Acid: Skin rabbit - 500 mg/24H - MODERATE; Eye rabbit - 750 µg/24H - SEVERE
Mutation Data: Imidazole: DNA inhibition - human cells - 1 mmol /l
Reproductive Effects Data: None reported
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Ingredient Toxicological Data: Imidazole: Oral rat LD50 = 220 mg/kg; Citric acid: Oral rat LD50 = 6730 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
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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

15. REGULATORY INFORMATION

National Inventories:

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / E LINC.S.

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. Vendor Information. Technical Judgment. In-house information.

R PHRASES: Not applicable

Use of the substance/preparation: Determination of dissolved oxygen

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.

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