

World Headquarters
Hach Company
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MSDS No: M01087

SAFETY DATA SHEET

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

Product Name: HgEx TM Reagent 3 Alkaline Reagent
Catalog Number: 2658448

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: M01087

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Determination of mercury

CAS No.: Not applicable

Hazard: Toxic. Oxidizer. Experimental carcinogen. Experimental mutagen. Experimental teratogen. May be embryotoxic. Causes moderate eye irritation.

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

Sodium Nitrite

EEC Number: 2315559

CAS No.: 763200

Percent Range: 50,0 - 60,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: T - TOXIC O - Oxidizing N - Dangerous for the Environment

Ingredient R phrase(s) (R phrase details given in Heading 16): R 25 R 8 R 50

TLV: Not established.

PEL: Not established.

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Carbonate

EEC Number: 2078388

CAS No.: 497 -19 -8

Percent Range: 40,0 - 50,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s) (R phrase details given in Heading 16): R 36

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: White crystals

Odor: None

EU Symbols: T - TOXIC O - OXIDIZER

R PHRASES: R 25: Toxic if swallowed. R 8: Contact with combustible material may cause fire. R 36: Irritating to eyes. R 50: Very toxic to aquatic organisms.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes moderate irritation

Skin Contact (EC): Causes mild irritation

Skin Absorption (EC): Effects similar to those of ingestion

Target Organs (SA E): Blood Cardiovascular system

Ingestion (EC): Toxic May cause: headache vomiting colic diarrhea muscular weakness dizziness collapse blood pressure problems cyanosis (a reduction of the blood's ability to carry oxygen, giving a bluish discoloration) convulsions coma respiratory paralysis death

Target Organs (Ing E): Blood Cardiovascular system

Inhalation: Toxic Effects similar to those of ingestion.

Target Organs (Inh E): Blood Cardiovascular system

Medical Conditions Aggravated: Pre-existing: Bone marrow diseases Cardiovascular diseases

Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.

Cancer / Reproductive Toxicity Information:

This product does NOT contain any IARC listed chemicals.

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental carcinogen. an experimental mutagen. an experimental teratogen.

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): 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.

5. FIRE FIGHTING MEASURES

Flammable Properties: Strong oxidizer. Contact with combustible materials may cause a fire or explosion. Exposure to heat may promote violent decomposition. During a fire, this product decomposes to form toxic gases.

Hazardous Combustion Products: Toxic fumes of: sodium oxides nitrogen oxides.

Fire / Explosion Hazards: Sodium nitrite explodes when heated to 537°C (1000°F) or on contact with cyanides, cellulose, lithium, or sodium thiosulfate. Do not expose to flames. May react violently with: combustible materials

Static Discharge: Ignites on friction.

Mechanical Impact: Explodes when shocked or heated.

Extinguishing Media: Alcohol foam. Carbon dioxide 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. Evacuate area and fight fire from a safe distance.

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. Cover spilled solid material with sand or other inert material.

Clean-up Technique: Remove all combustible materials from the spill area. Cover with an inert material, such as sand. Sweep up material. Work in an approved fume hood. Working in small batches, dilute with excess water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Filter to remove solids. 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 general area (50 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. Deny access to unnecessary and unprotected personnel.

7. HANDLING AND STORAGE

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

Storage: Keep container tightly closed when not in use. Protect from: heat air moisture Keep away from: oxidizable materials

Special Pack aging Instructions: Not applicable

Use of the substance/preparation: Determination of mercury

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: safety glasses with top and side shields

Skin / Hand Protection: disposable latex gloves lab coat

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: oxidizable materials

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: White crystals

Physical State: Solid

Odor: None

pH: 9,5-10 (in solution)

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: Soluble

Acid: Not determined

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: Contact with heat, sparks, open flames or other ignition sources. Exposure to air. Heating to decomposition. Moisture: substance is hygroscopic.

Reactivity / Incompatibility: Explodes on contact with: cellulose cyanides lithium sodium thiosulfate May react violently in contact with: combustible materials Incompatible with: aminoguanidine salts butadiene phthalic acid phthalic anhydride sodium amide sodium disulfite sodium thiocyanate urea wood
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: nitrogen oxides sodium oxides
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 Carbonate: Eye rabbit 100 mg/24H - MODERATE, Skin rabbit 100 mg/24H - MILD; Sodium Nitrite: Eye rabbit 500 mg/24H - MILD

Mutation Data: Sodium Nitrite: Unscheduled DNA synthesis in human HeLa cells @ 6 mmol/L, DNA inhibition human fibroblasts 200 ppm

Reproductive Effects Data: Sodium Nitrite: Oral rat TDLo = 660 mg/kg - Embryo or fetus death, Effects on newborn growth statistics; Oral mouse TDLo = 12000 mg/kg - Embryo or fetus death, fertility - pre-implantation mortality
Oral mouse TDLo = 840 mg/kg Paternal effects - spermatogenesis

Ingredient Toxicological Data: Sodium Carbonate: Oral rat LD50 = 4090 mg/kg, Inhalation rat LC50 = 2300 mg/m³/2H; Sodium Nitrite: Oral rat LD50 = 85 mg/kg, Oral human LSLo = 71 mg/kg, Oral Mouse LD50 = 175 mg/kg, Inhalation rat LC50 = 5500 µg/m³

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: Sodium Nitrite Mixture

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ICAO Hazard Class: 5,1

ICAO Subsidiary Risk: 6,1

ICAO UN/ID Number: UN1500

ICAO Packing Group: III

I.M.O.:

I.M.O. Proper Shipping Name: Sodium Nitrite Mixture

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I.M.O. Hazard Class: 5,1

I.M.O. Subsidiary Risk: 6,1

I.M.O. UN Number: UN1500

I.M.O. Packing Group: III

A.D.R.:

A.D.R. Proper Shipping Name: Sodium Nitrite Mixture

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A.D.R Hazard Class: 5,1
A.D.R. Subsidiary Risk: NA
A.D.R. UN -Number:: 1500
A.D.R. Packing Group: III

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: T - TOXIC O - OXIDIZER

R PHRASES: R 25: Toxic if swallowed. R 8: Contact with combustible material may cause fire. R 36: Irritating to eyes. R 50: Very toxic to aquatic organisms.

S PHRASES: S 22: Do not breathe dust. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 60: This material and / or its container must be disposed of as hazardous waste.

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. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1 -42) Supplement 7. France: 1987. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992 -1993. American Conference of Governmental Industrial Hygienists, 1992. Vendor Information.

R PHRASES: R 25: Toxic if swallowed. R 8: Contact with combustible material may cause fire. R 36: Irritating to eyes. R 50: Very toxic to aquatic organisms.

Use of the substance/ preparation: Determination of mercury

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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