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MSDS No: M00031

## SAFETY DATA SHEET

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

**Product Name:** NitriVer ® 2 Nitrite Reagent  
**Catalog Number:** 2107569

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:** M00031  
**Chemical Name:** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Use of the substance/preparation:** Determination of nitrite  
**CAS No.:** Not applicable  
**Hazard:** Causes eye burns.  
**Date of MSDS Preparation:**  
**Day:** 16  
**Month:** March  
**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

#### Potassium Pyrosulfate

**EEC Number:** 2322168  
**CAS No.:** 7790-62-7  
**Percent Range:** 35,0 - 45,0  
**Percent Range Units:** weight / weight  
**Ingredient EEC Symbol:** Xi - IRRITATING  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 41  
**TLV:** Not established  
**PEL:** Not established  
**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

#### Ferrous Ethylenediammonium Sulfate

**EEC Number:** 2643576  
**CAS No.:** 63589-59-3  
**Percent Range:** 55,0 - 65,0  
**Percent Range Units:** weight / weight  
**Ingredient EEC Symbol:** Not applicable  
**Ingredient R phrase(s) (R phrase details given in Heading 16):** Not applicable  
**TLV:** 1 mg/m<sup>3</sup> as Fe  
**PEL:** 1 mg/m<sup>3</sup> as Fe

*EU Occupational Exposure Limits:* 3 mg/m<sup>3</sup>, Inhalable dust

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### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** Pale green powder

**Odor:** None

**EU Symbols:** Xi - IRRITATING

**R PHRASES:** R 41: Risk of serious damage to eyes.

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** Causes irritation

**Skin Contact (EC):** May cause irritation

**Skin Absorption (EC):** None Reported

**Target Organs (SA E):** None Reported

**Ingestion (EC):** May cause: nausea vomiting diarrhea liver damage coma death Iron poisoning is indicated by pink urine discoloration.

**Target Organs (Ing E):** Liver

**Inhalation:** May cause: respiratory tract irritation

**Target Organs (Inh E):** None Reported

**Medical Conditions Aggravated:** Pre-existing: Eye conditions Liver conditions

**Chronic Effects:** Chronic overexposure may cause liver damage

**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

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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 soap and plenty of water. 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.

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### 5. FIRE FIGHTING MEASURES

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

**Hazardous Combustion Products:** Toxic fumes of: nitrogen oxides. sulfur oxides.

**Fire / Explosion Hazards:** May react violently with: strong bases strong reducers

**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:** Stop spilled material from being released to the environment. Cover spilled solid material with sand or other inert material.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. 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 local area (15 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder 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 Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Protect from: heat moisture

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Determination of nitrite

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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:** lab coat disposable latex gloves

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Pale green powder

**Physical State:** Solid

**Odor:** None

**pH:** of 5% solution = 1,30

**Vapor Pressure:** Not applicable

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

**Boiling Point:** Not applicable

**Melting Point:** 156-164 C

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not determined

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** 2,06

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

**Volatile Organic Compounds Content:** Not determined

**Partition Coefficient (n-octanol / water):** Not determined

**Solubility:**

**Water:** soluble

*Acid:* Soluble  
*Other:* Not determined  
*Metal Corrosivity:*  
*Steel:* Not Applicable  
*Aluminum:* Not Applicable

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## 10. STABILITY / REACTIVITY

*Chemical Stability:* Stable when stored under proper conditions.  
*Conditions to Avoid:* Excess moisture Heating to decomposition.  
*Reactivity / Incompatibility:* Incompatible with: strong bases reducers  
*Hazardous Decomposition:* Toxic fumes of: sodium oxides nitrogen oxides  
*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:* Potassium Pyrosulfate: Oral rat LD50 = 2340 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:** Xi - IRRITATING

**R PHRASES:** R 41: Risk of serious damage to eyes.

**S PHRASES:** S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 37/39: Wear suitable gloves and eye / face protection.

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## 16. OTHER INFORMATION

**References:** Outside Testing. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. 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. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

**R PHRASES:** R 41: Risk of serious damage to eyes.

**Use of the substance/preparation:** Determination of nitrite

**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.

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