World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00031

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: NitriVer ® 2 Nitrite Reagent
Catalog Number: 181369

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00031
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Determination of nitrite Laboratory Reagent

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: Serious Eye Damage/Eye Irritation:Eye Irrit. 2 Acute Toxicity: Acute Tox. 4-Orl
GHS Label Elements:
WARNING

Hazard statements: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Wear eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Dispose of contents/container according to state, local, federal or national regulations.
HMIS:
Health: 2
Flammability: 1
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.
NFPA:
Health: 2
Flammability: 1
Reactivity: 0
Symbol: Not applicable
WHMIS Hazard Classification: Class D, Division 2, Subdivision B - Toxic material (other toxic effects)
WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Ferrous Ethylenediammonium Sulfate

CAS Number: 63589-59-3
Chemical Formula: $FeC_2H_4(NH_3)_2(SO_4)_2 \cdot 4H_2O$
GHS Classification: Acute Tox. Orl. 4, H302; Skin Irrit. 2, H315
Percent Range: 55.0 - 65.0
Percent Range Units: weight / weight
PEL: 1 mg/m^3 as Fe
TLV: 1 mg/m^3 as Fe

WHMIS Symbols: Not applicable

Potassium Pyrosulfate

CAS Number: 7790-62-7
Chemical Formula: $K_2S_2O_7$
GHS Classification: Acute Tox. 5 -Orl, H303; Eye Irrit. 2A, H319;
Percent Range: 35.0 - 45.0
Percent Range Units: weight / weight
PEL: 15 mg/m^3 as inhalable dust; 5 mg/m^3 as respirable dust
TLV: 10 mg/m^3 as inhalable dust; 3 mg/m^3 as respirable dust

WHMIS Symbols: Other Toxic Effects

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.
Advice to doctor: Treat symptomatically.
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. Remove contaminated clothing.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.
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.

5. FIRE FIGHTING MEASURES

Flammable Properties: Can burn in fire, releasing toxic vapors.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Water. Carbon dioxide Dry chemical.
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: May react violently with: strong bases strong reducers
Hazardous Combustion Products: Toxic fumes of: nitrogen oxides. sulfur oxides.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Containment Technique: Stop spilled material from being released to the environment. Cover spilled solid material with sand or other inert material.
Clean-up Technique: If permitted by regulation, 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. Otherwise, Pick up spill for disposal and place in a closed container Dispose of in accordance with local, state and federal regulations or laws.
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.

DOT Emergency Response Guide Number: Not applicable

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
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: safety glasses with top and side shields
Skin Protection: lab coat disposable latex gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.
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
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale green powder
Physical State: Solid
Molecular Weight: Not applicable
Odor: None
Odor Threshold: Odorless
pH: of 5% solution = 1.30
Metal Corrosivity:
Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.
Steel: Not Applicable
Aluminum: Not Applicable
Specific Gravity/ Relative Density (water = 1; air =1): 2.06
Viscosity: Not determined
Solubility:
Water: soluble
Acid: Soluble
Other: Not determined
Partition Coefficient (n-octanol / water): Not determined
Coefficient of Water / Oil: Not determined
Melting Point: 156-164 C
Decomposition Temperature: Not determined
Boiling Point: Not applicable
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: Not determined
Flammable Properties: Can burn in fire, releasing toxic vapors.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not determined
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:

Not classifed as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Gas under Pressure:

Not classified according to GHS criteria.

Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: Incompatible with: strong bases reducers
Hazardous Decomposition: Toxic fumes of: sodium oxides nitrogen oxides
Conditions to Avoid: Excess moisture Heating to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data
ATE Oral LD50 = 682 mg/kg
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Irritating to skin.
Eye Damage: Irritating to eyes.
Sensitization: Based on classification principles, the classification criteria are not met.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Data insufficient for classification
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
Ingestion: May cause: nausea vomiting diarrhea liver damage coma death Iron poisoning is indicated by pink urine discoloration.
Inhalation: May cause: respiratory tract irritation
Skin Absorption: None Reported
Chronic Effects: Chronic overexposure may cause liver damage
Medical Conditions Aggravated: Pre-existing: Eye conditions Liver conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available
CEPA Categorization: Persistent Not Bioaccumulative Not inherently toxic to aquatic organisms
Ingredient Ecological Information: Potassium Pyrosulfate: 96 hr Oncorhynchus mykiss LC50 = 420 mg/L; 48 hr Daphnia magna EC50 = 140 mg/L.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (Disposal): Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.
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

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
T.D.G.:
Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
UN Number/PIN: NA
Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
I.M.O.:
Proper Shipping Name: Not Currently Regulated
--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)
E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard
S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.
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302 (EHS) TPQ (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Not applicable
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Not applicable
RCRA: Contains no RCRA regulated substances.
State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): Not applicable
California Perchlorate Rule CCR Title 22 Chap 33: Not applicable
Trade Secret Registry: Not applicable
National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
CAS Number: Not applicable
Canadian Inventory Status: All ingredients of this product are DSL/NDSL Listed.
EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: Some ingredients are not listed.
New Zealand Inventory (NZIoC) Status: All components either listed or exempt.
Korean Inventory (KECI) Status: Some ingredients are not listed or exempt.
Japan (ENCS) Inventory Status: All components either listed or exempt.
China (PRC) Inventory (MEP) Status: All components either listed or exempt.

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).
Complete Text of H phrases referred to in Section 3: H319 Causes serious eye irritation.
Revision Summary: . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).
Date of MSDS Preparation:
Day: 08
Month: July
Year: 2014
MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350
CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

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.