

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Iron(II) Bromide Nanoparticles

**Product Code:** FE2-BR-04-NP

**CAS Number:** 7789-46-0

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation Category 1 C

Serious Eye Damage/Eye Irritation Category 1

Label Elements

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage

Causes serious eye damage



Precautionary Statements

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Eyes

Immediately call a POISON CENTER or doctor/physician

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

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component - Iron bromide ( $\text{FeBr}_2$ )

CAS-No - 7789-46-0

Weight % - >95

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### **SECTION 4. FIRST AID MEASURES**

Eye Contact Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes.

Inhalation Immediate medical attention is required. Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion Call a physician or poison control center immediately. Do NOT induce vomiting.

Most important symptoms and effects

Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically

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### **SECTION 5. FIREFIGHTING MEASURES**

Suitable Extinguishing Media Carbon dioxide ( $\text{CO}_2$ ). Dry chemical. Chemical foam.

Unsuitable Extinguishing Media No information available

Flash Point No information available  
Method - No information available  
Autoignition Temperature  
Explosion Limits  
Upper No data available  
Lower No data available  
Sensitivity to Mechanical Impact No information available  
Sensitivity to Static Discharge No information available  
Specific Hazards Arising from the Chemical  
Thermal decomposition can lead to release of irritating gases and vapors.  
Hazardous Combustion Products  
Hydrogen halides.  
Protective Equipment and Precautions for Firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.  
NFPA  
Health: 3  
Flammability: 0  
Instability: 1  
Physical hazards  
N/A

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions Avoid contact with skin and eyes. Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.  
Environmental Precautions Should not be released into the environment.  
Methods for Containment and Clean Up  
Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. Avoid dust formation.

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## **SECTION 7. HANDLING AND STORAGE**

Handling Wear personal protective equipment/face protection. Do not breathe dust. Handle product only in closed system or provide appropriate exhaust ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.  
Storage Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed.  
Corrosives area. Store under an inert atmosphere.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.  
Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.  
Personal Protective Equipment  
Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.  
Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard  
EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
Hygiene Measures  
Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State Solid  
Appearance Dark yellow  
Odor No information available  
Odor Threshold No information available  
pH No information available  
Melting Point/Range 684 °C / 1263.2 °F  
Boiling Point/Range 937 °C / 1718.6 °F @ 760 mmHg  
Flash Point No information available  
Evaporation Rate Not applicable  
Flammability (solid,gas) No information available  
Flammability or explosive limits  
Upper No data available  
Lower No data available  
Vapor Pressure No information available  
Vapor Density Not applicable  
Specific Gravity No information available  
Solubility Soluble in water  
Partition coefficient; n-octanol/water No data available  
Autoignition Temperature  
Decomposition Temperature No information available  
Viscosity Not applicable  
Molecular Formula Br<sub>2</sub> Fe  
Molecular Weight 215.65

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactive Hazard None known, based on information available  
Stability Hygroscopic. Air sensitive.  
Conditions to Avoid Incompatible products. Exposure to moist air or water. Exposure to air.  
Incompatible Materials Strong oxidizing agents, Strong acids  
Hazardous Decomposition Products Hydrogen halides  
Hazardous Polymerization Hazardous polymerization does not occur.  
Hazardous Reactions None under normal processing.

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Acute Toxicity  
Product Information No acute toxicity information is available for this product  
Component Information  
Toxicologically Synergistic

## Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Causes burns by all exposure routes

Sensitization No information available

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Do not empty into drains.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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## SECTION 14. TRANSPORT INFORMATION

### DOT

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Technical Name (IRON (II) BROMIDE)

Hazard Class 8

Packing Group III

### TDG

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class 8

Packing Group III

### IATA

UN-No UN3260

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.\*

Hazard Class 8  
Packing Group III  
IMDG/IMO  
UN-No UN3260  
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.  
Hazard Class 8  
Packing Group III

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## SECTION 15. REGULATORY INFORMATION

TSCA 12(b) - Notices of Export Not applicable  
U.S. Federal Regulations  
SARA 313 Not applicable  
SARA 311/312 Hazard Categories See section 2 for more information  
CWA (Clean Water Act) Not applicable  
Clean Air Act Not applicable  
OSHA - Occupational Safety and  
Health Administration  
Not applicable  
CERCLA Not applicable  
California Proposition 65 This product does not contain any Proposition 65 chemicals.  
U.S. State Right-to-Know  
Regulations  
Not applicable  
U.S. Department of Transportation  
Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N  
U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.  
Other International Regulations  
Mexico - Grade No information available

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.