

Precautionary Statements - Prevention

Obtain special instructions before use. . Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Precautionary Statements - Response

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. Immediately call a poison center or doctor/physician. If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician. If swallowed: Call a poison center or doctor/physician immediately. Rinse mouth. Do not induce vomiting. In case of fire: Use CO2, dry chemical, or foam for extinction.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/regional/national and international regulations.

Other Hazards

Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium Nitrite	7632-00-0	30-35
Sodium Molybdate	10102-40-6	5-15
Potassium hydroxide	1310-58-3	5-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	Immediately flush with plenty of water for at least 15 minutes while holding eyelids open. Immediately call a poison center or doctor/physician.
Skin Contact	Wash with soap and water. If irritation persists, call a physician or poison control center. Remove contaminated shoes and clothes and clean before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.
Ingestion	Call a poison center or doctor/physician immediately. Rinse mouth. Do not induce vomiting. Drink 1 or 2 glasses of water if conscious. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms	Harmful if swallowed. Fatal if inhaled. Causes severe skin burns and eye damage. May cause cancer.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray. Dry foam. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

This product is a water solution of sodium nitrite, a strong oxidizer. Residue left after product evaporation may give off nitrogen oxide fumes or may cause other materials to spontaneously ignite or burn more vigorously than normal.

Hazardous Combustion Products When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide and oxides of nitrogen.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Eliminate all sources of ignition. Maintain adequate ventilation. Clean up with a non-flammable absorbent such as clay or vermiculite and place in a labeled, closed metal container for proper disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep away from flammables. Store away from incompatible materials.

Incompatible Materials Ammonia. Amines. Sulfites. This product should not be added to any system containing residual chemical from sulfite or other oxygen-scavenging treatment program.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium Molybdate 7631-95-0	-	0.5 mg/m ³	-
Sodium Nitrite 7632-00-0	-	-	-
Potassium Hydroxide 1310-58-3	C: 2mg/m ³	C: 2mg/m ³	365 mg/kg (Rat/Oral)

Appropriate engineering controls

Engineering Controls Provide adequate ventilation and local exhaust is generally adequate.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical safety goggles are recommended.

Skin and Body Protection Chemical resistant gloves are recommended. Long sleeve shirt and long pants.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation or risk of inhalation of vapors, use suitable NIOSH/MSHA approved self-contained breathing apparatus respirator. Avoid breathing in fumes from this product.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Slight, medicinal odor
Appearance	Brown liquid		
Color	Brown		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11.5-12.5	
Melting Point/Freezing Point	No information available.	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	None	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	No information available.	
Lower Flammability Limit	No information available.	
Vapor Pressure	No information available.	
Vapor Density	No information available.	
Specific Gravity	1.18	(Water = 1)
Water Solubility	Completely soluble	
Solubility in other solvents	No information available.	
Partition Coefficient	No information available.	
Auto-ignition Temperature	No information available.	

Decomposition Temperature	No information available.
Kinematic Viscosity	No information available.
Dynamic Viscosity	No information available.
Explosive Properties	No information available.
Oxidizing Properties	No information available.
VOC Content	None.

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible Materials

Ammonia. Amines. Sulfites. Oxygen scavengers.

Hazardous Decomposition Products

When strongly heated, as in a fire, this product produces carbon dioxide, carbon monoxide and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	May cause eye irritation.
Skin Contact	May cause skin burns.
Inhalation	Fatal if inhaled.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Nitrite 7632-00-0	85 mg/kg (Rat)	-	5.5 mg/L (Rat) 4 h
Sodium Molybdate 7631-95-0	4 g/kg (Rat) 4000 mg/kg (Rat)	-	> 2080 mg/m ³ (Rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms Please see Section 4 of this SDS for symptoms

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

Carcinogenicity May cause cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium Nitrite 7632-00-0		Group 2A		X

Sodium Molybdate 7631-95-0	A3			
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Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
 A3 - Animal Carcinogen
 IARC (International Agency for Research on Cancer)
 Group 2A - Probably Carcinogenic to Humans
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Numerical measures of toxicity

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No information available.

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Sodium Nitrite 7632-00-0	Toxic

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN3093
Proper Shipping Name Corrosive liquid, oxidizing, n.o.s. (Sodium nitrite, potassium hydroxide)
Hazard Class 8 (5.1)
Packing Group II

IATA

UN/ID No UN3093
Proper Shipping Name Corrosive liquid, oxidizing, n.o.s. (Sodium nitrite, potassium hydroxide)

Hazard Class 8 (5.1)
Packing Group II

IMDG

UN/ID No UN3093
Proper Shipping Name Corrosive liquid, oxidizing, n.o.s. (Sodium nitrite, potassium hydroxide)
Hazard Class 8 (5.1)
Packing Group II
Marine Pollutant This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium Nitrite	Present	X		Present		Present	X	Present	X	X
Sodium Molybdate	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Chemical Name	CAS No	Weight-%
Sodium Nitrite - 7632-00-0	7632-00-0	3.09 pds of reportable material

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium Nitrite 7632-00-0	X	X	X

California Proposition 65: No Proposition 65 Carcinogens nor Reproductive Toxins exist in this product.

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards No information available	Flammability No information available	Instability No information available	Special Hazards No information available
<u>HMIS</u>	Health Hazards 3	Flammability 0	Physical Hazards 1	Personal Protection N+P

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet