

MSDS Number: S4130 * * * * * Effective Date: 02/16/06 * * * * * Supercedes: 05/14/03



From: Mallinckrodt Baker, Inc.
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24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. And Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

SODIUM HYPOPHOSPHITE

1. Product Identification

Synonyms: Phosphinic acid, sodium salt, monohydrate; Chemical NA-47

CAS No.: 7681-53-0 (Anhydrous); 10039-56-2 (Monohydrate)

Molecular Weight: 105.99

Chemical Formula: NaH₂PO₂.H₂O

Product Codes: 3740

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
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Sodium Hypophosphite	7681-53-0	90 - 100%
Yes		

3. Hazards Identification

Emergency Overview

WARNING! DECOMPOSITION PRODUCES TOXIC FLAMMABLE PHOSPHINE GAS. STRONG REDUCING AGENT. MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES,

AND RESPIRATORY TRACT.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:

May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Ingestion:

Not considered a toxic hazard but the ingestion of appreciable amounts may cause gastrointestinal disturbance. Nausea, vomiting and diarrhea may be experienced.

Skin Contact:

May cause irritation, especially on moist or sensitive areas. May cause moderate inflammation after prolonged contact.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Asthma, skin conditions, respiratory conditions.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard. When heated, may form spontaneously flammable phosphine.

Explosion:

Sodium hypophosphite explodes when titrated with chlorates or other oxidizing agents. A thermal explosion will occur if sodium hypophosphite is heated under confinement.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and Storage

Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Isolate from oxidizing materials. Keep away from all sources of heat, ignition and sparks because even residues of sodium hypophosphite can decompose to form flammable, explosive phosphine gas. Do not cut, grind, weld, or drill on or near this container, even when empty, because an explosion can result. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystals.

Odor:

Odorless.

Solubility:

100 g in 100 g of water.

Specific Gravity:

No information found.

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Not applicable.

Melting Point:

200C (392F) Decomposes, loses water

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Can decompose to form flammable, explosive phosphine gas.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Heat, fire. Contact with strong oxidizers may cause an explosion. Sodium hypophosphite decomposes in hot alkaline solution and liberates toxic and flammable phosphine gas. Self-reactive explosions can occur when hot sodium hypophosphite solution is evaporated.

Conditions to Avoid:

No information found.

11. Toxicological Information

For Monohydrate: Oral rat LD50: 7640 mg/kg.

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Sodium Hypophosphite (7681-53-0)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

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-----\Chemical Inventory Status - Part
1\-----
Ingredient          TSCA  EC   Japan
Australia
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Sodium Hypophosphite (7681-53-0)  Yes  Yes  Yes
Yes

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-----\Chemical Inventory Status - Part
2\-----
Ingredient          Korea  --Canada--
Phil.              DSL   NDSL
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Sodium Hypophosphite (7681-53-0)  Yes  Yes  No
Yes

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-----\Federal, State & International Regulations - Part
1\-----
Ingredient          -SARA 302-  -SARA
Chemical Catg.      RQ   TPQ   List
-----
Sodium Hypophosphite (7681-53-0)  No   No   No   No

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-----\Federal, State & International Regulations - Part
2\-----
Ingredient          CERCLA  -RCRA-  -TSCA-
                   261.33  8 (d)
-----
Sodium Hypophosphite (7681-53-0)  No     No     No

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Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes
SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: Yes (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 1 Reactivity: 2

Label Hazard Warning:

WARNING! DECOMPOSITION PRODUCES TOXIC FLAMMABLE PHOSPHINE

GAS. STRONG REDUCING AGENT. MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions:

- Avoid breathing dust.
- Keep container tightly closed.
- Use with adequate ventilation.
- Wash thoroughly after handling.
- Avoid contact with eyes, skin and clothing.
- Keep away from heat, sparks and flame.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

Product Use:

Laboratory Reagent.

Revision Information:

No Changes.

Disclaimer:

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