

MSDS Number: S4750 * * * * * Effective Date: 08/23/04 * * * * * Supersedes: 09/12/03

Dongjin Lee
Prof. Cui**MSDS****Material Safety Data Sheet**From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865Mallinckrodt
CHEMICALS24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300National Response in Canada
CANUTEC: 613-996-6666Outside 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 PHOSPHATE MONOBASIC

1. Product Identification

Synonyms: Sodium phosphate monobasic, monohydrate; Sodium biphosphate, monohydrate; Sodium acid phosphate, monohydrate; Sodium dihydrogen phosphate, monohydrate

CAS No.: 7558-80-7 (Anhydrous); 10049-21-5 (Monohydrate)

Molecular Weight: 137.99

Chemical Formula: NaH2PO4.H2O

Product Codes:

J.T. Baker: 3799, 3802, 3818, 3820, 3821, 3825, 4011

Mallinckrodt: 0877, 7774, 7868, 7892, 7894, 7991

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Biphosphate	7558-80-7	98 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
MAY BE HARMFUL IF SWALLOWED OR INHALED.

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

Health Rating: 2 - Moderate

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:

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

Ingestion:

Phosphates are slowly and incompletely absorbed when ingested, and seldom result in systemic effects. Such effects, however, have occurred. Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, heart disturbances and central nervous system effects. The toxicity of phosphates is because of their ability to sequester calcium.

Skin Contact:

Irritant due to its acidic nature. May cause inflammation and pain on prolonged contact, especially with moist skin.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

May sequester calcium and cause calcium phosphate deposits in the kidneys.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

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

Ingestion:

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Immediately flush skin with plenty of 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.

Explosion:

Not considered to be an explosion hazard.

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. Small amounts of residue may be flushed to sewer with plenty of water.

7. Handling and Storage

Keep in a well closed container stored under cold to warm conditions, 2 to 40 C, (36 to 104F). Protect against physical damage. 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:

Safety glasses. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystalline powder.

Odor:

Odorless.

Solubility:

59.9 g/100g @ 0C (32F)

Specific Gravity:

2.04

pH:

4.5

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

0

Boiling Point:

204C (399F)

Melting Point:

100C (212F) 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. Slightly hygroscopic.

Hazardous Decomposition Products:

Phosphorus oxides may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

No incompatibility data found.

Conditions to Avoid:

No information found.

11. Toxicological Information

Anhydrous: Oral Rat LD50: 8290 mg/kg.

-----WCancer ListsW-----				
---NTP Carcinogen---				
Ingredient	Known	Anticipated	IARC Category	
Sodium Biphosphate (7558-80-7)	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 disposal facility. 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

-----WChemical Inventory Status - Part 1W-----				
Ingredient	TSCA	EC	Japan	Australia
Sodium Biphosphate (7558-80-7)	Yes	Yes	Yes	Yes

-----WChemical Inventory Status - Part 2W-----				
--Canada--				
Ingredient	Korea	DSL	NDSL	Phil.

SODIUM PHOSPHATE MONOBASIC

Sodium Biphosphate (7558-80-7)	Yes	Yes	No	Yes
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-----WFederal, State & International Regulations - Part 1W-----				
	-SARA 302-	-----SARA 313-----		
Ingredient	RQ	TPQ	List	Chemical Catg.

Sodium Biphosphate (7558-80-7)	No	No	No	No
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-----WFederal, State & International Regulations - Part 2W-----				
	-RCRA-	-TSCA-		
Ingredient	CERCLA	261.33	8(d)	

Sodium Biphosphate (7558-80-7)	No	No	No
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Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
 Reactivity: No (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: 0 Reactivity: 0

Label Hazard Warning:

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
 MAY BE HARMFUL IF SWALLOWED OR INHALED.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Label First Aid:

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. 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 swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:

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