



MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product name : Mono Sodium Phosphate (MSP)

Chemical formula : NaH₂PO₄

Material uses: It is mainly used as buffering agent, emulsification agent, nourishment, etc.

Contact Information:

Company: Aurora Industry Co.,Ltd.

Address:Room 7033, No.9-1, Haifu Road, Dalian Free Trade Zone, China

Tel:0411-82288674

Section 2. Hazards identification

Physical state : Solid. (Crystal powder.)

EMERGENCY

OVERVIEW RISK

Irritating to eyes, respiratory system and skin.

POTENTIAL HEALTH EFFECTS ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be damaging to the health of the individual.

As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms.

EYE

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterized by a temporary redness of the conjunctiva (similar to windburn).

SKIN

This material can cause inflammation of the skin oncontact in some persons.

The material may accentuate any pre-existing dermatitis condition.

Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasion

Open cuts, abraded or irritated skin should not be exposed to this material.

Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

The material can cause respiratory irritation in some persons.

The body's response to such irritation can cause further lung damage.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or



chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function.

Section 3. Composition, Information on Ingredients

United States Monosodium Phosphate Anhydrous

CAS number 7558-80-7

Assay: >98%

Section 4. First aid

measures SWALLOWED

If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

If this product comes in contact with the eyes: " Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

If skin contact occurs: " Immediately remove all contaminated clothing, including footwear " Flush skin and hair with running water (and soap if available)

INHALED

If fumes or combustion products are inhaled remove from contaminated area. " Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

Treat symptomatically

Section 5. Fire fighting measures

Vapour Pressure (mmHG): Negligible

Upper Explosive Limit (%): Not applicable

Specific Gravity (water=1): 2 approx

Lower Explosive Limit (%): Not applicable

EXTINGUISHING MEDIA

There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.



FIRE FIGHTING

Alert Emergency Responders and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves for fire only.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

Non combustible.

Not considered to be a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: phosphorus oxides (POx), metal oxides. May emit poisonous fumes.

May emit corrosive fumes.

FIRE INCOMPATIBILITY

None known.

PERSONAL PROTECTION

Glasses

Safety Glasses.

Chemical goggles.

Gloves Respirator:

Particulate

Section 6. Accidental release measures

MINOR SPILLS

Remove all ignition sources.

Clean up all spills immediately.

Avoid contact with skin and eyes.

Control personal contact by using protective equipment.

Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal. **MAJOR**

SPILLS

Moderate hazard.

CAUTION

Advise personnel in area.

Alert Emergency Responders and tell them location and nature of hazard

Section 7. Handling and storage PROCEDURE FOR HANDLING

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of exposure occurs.

RECOMMENDED STORAGE METHODS

Polyethylene or polypropylene container.

Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

Store in original containers.

Keep containers securely sealed.

Section 8. Exposure controls, personal protection



Engineering Controls

Ventilation required: Properly operating chemical fume hood designed for hazardous chemicals and having an average velocity of at least 1000 ft/min.

Components with critical values that require monitoring in the workplace

PNOC	(mg/m ³)
USA PEL	15(total dust) 5(respirable fraction)

Personal protection

Eyes

Safety glasses with side shields
Chemical goggles.



Respiratory

Particulate
Consult your EHS staff for recommendations



Hands

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
frequency and duration of contact,
chemical resistance of glove material,
glove thickness and
dexterity



Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

Application of a non-perfumed moisturiser is recommended

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

polychloroprene

nitrile rubber

butyl rubber

fluorocautchouc

polyvinyl chloride Gloves should be examined for wear and/ or degradation constantly

OTHER

Overalls.

P.V.C. apron.



Barrier cream.

Skin cleansing cream

Eye wash unit. ENGINEERING CONTROLS

Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction. If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered

Section 9. Physical and chemical properties

PHYSICAL PROPERTIES

Solid.

mixes with water.

State	Divided solid	Molecular Weight	119.98
Melting Range (°F)	>1112	Viscosity	Not Applicable
Boiling Range (°F)	Not available.	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not applicable	pH (1% solution)	4.4-4.5
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not applicable	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	2 approx
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not applicable.
applicable. Volatile Component (%vol)	Not applicable	Evaporation Rate	Not applicable

APPEARANCE

Odourless, white crystalline powder; slightly hygroscopic. Forms a mono- and dihydrate. Soluble in water; solutions are mildly acidic. Practically insoluble in alcohol.

Section 10. Stability and reactivity

CONDITIONS CONTRIBUTING TO INSTABILITY

Presence of incompatible materials.

Product is considered stable.

STORAGE INCOMPATIBILITY

Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.

These trifluorides are hypergolic oxidisers. They ignites on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.

The state of subdivision may affect the results.

Phosphates are incompatible with oxidizing and reducing agents.

Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides. Avoid storage with strong bases, methenamine, and magnesium.

DO NOT store in or near steel or aluminium containers. Store away from flavoured, perfumed, or toxic products.



For incompatible materials - refer to Section 7- Handling and Storage.

Section 11. Toxicological information Mono Sodium Phosphate anhydrous Toxicity data unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 8290 mg/kg

IRRITATION

Eye (human): 50 mg Mild

Eye (rabbit): 150 mg Mild

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Section 12. Ecological information

Ecological Information: Do not allow undiluted product or large quantities to reach ground water, water bodies, or sewage system. Do not allow material to be released to the environment without proper government permits.

Chemical Fate Information: ND

Section 13. Disposal considerations.

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory.

Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

Reduction

Reuse

Recyclin

g

Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or



reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

Recycle wherever possible or consult manufacturer for recycling options.

Consult Waste Management Authority for disposal.

Section 14. Transport information

US DOT Information: Proper shipping name: Not regulated.

IATA: Proper shipping name: Not regulated.

IMO: Proper shipping name: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated .

Section 15. Regulatory information

Mono sodium phosphate, anhydrous (CAS: 7558-80-7,1333-80-8,89140-32-9) is found on the following regulatory lists;

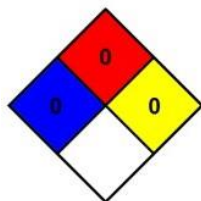
"Canada Domestic Substances List (DSL)", "Canada Toxicological Index Service – Workplace Hazardous Materials Information System - WHMIS (English)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals", "US Department of Homeland Security Chemical Facility Anti-Terrorism Standards – Chemicals of Interest", "US DOE Temporary Emergency Exposure Limits (TEELs)", "US FDA Direct Food Substances Generally Recognized as Safe", "US Food Additive Database", "US Toxic Substances Control Act (TSCA) - Inventory", "USA: Chemical Facility Anti-Terrorism Standards – List Appendix A - 6CFR 27"

Section 16. Other information

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Ingredients with multiple CAS Nos

Ingredient Name CAS Monosodium phosphate anhydrous 7558-80-7, 1333-80-8, 89140-32-9



NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.



Personal protection : A

A - Safety glasses

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.