

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY**Identification**

Product Name: Sodium Hexametaphosphate (SHMP)

Synonyms: Glass H, Hexaphos, Sodaphos, SHMP; glassy Sodium Phosphate; Sodium Polyphosphate, glassy; Metaphosphoric Acid, Sodium Salt; Sodium Acid Metaphosphate; Graham's Salt.

Use of the substance or preparation

Sequestrant; food additive; water softening and detergents; dispersing agent to break down clay and other soil types.

Company Information:

Supplier: Chemical Store Inc. (DBA: ChemicalStore.com)

1059 Main Avenue,
Clifton, NJ 07011, USA

Manufacturer/ Brand: Astaris/ICL/ Thermphos, Others

Emergency telephone: In USA call CHEMTREC: 1 800 424 9300

In Canada call CANUTEC: 1 613 996 6666

Ordering Information: +1 973 405 6248 and online: www.ChemicalStore.com

2. COMPOSITION/INFORMATION ON INGREDIENTS**Composition**

<u>Substance</u>	<u>CAS No</u>	<u>EINECS No</u>	<u>%w/w</u>	<u>Risk Phrase</u>
Sodium Hexametaphosphate (Polyphosphoric acids, sodium salts)	68915-31-1	272-808-3	100	R36/37/38

3. HAZARDS IDENTIFICATION**Classification of the substance/preparation**

EC Classification None

Safety phrase S26 S36

Human Health Effects

May cause skin, eye and respiratory tract irritation.

Environmental Effects

On the basis of available information, this material is not expected to produce any significant environmental effects when recommended use instructions are followed.

4. FIRST-AID MEASURES**General**

This product has low oral toxicity and is minimally irritating to the skin and eyes. Treatment is controlled removal of exposure and symptomatic and supportive care.

Eye contact

Rinse immediately with plenty of water. Get medical attention if irritation occurs and persists. The dry material may cause foreign body irritation in some individuals.

Skin contact

Wash with plenty of water. Prolonged contact with the dry material may cause drying or chapping of the skin.

Inhalation

Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Inhalation of the dust may cause coughing and sneezing.

Ingestion Drink plenty of water. Never give anything by mouth to an unconscious person. No significant adverse health effects are expected if only small amount (less than a mouthful) are swallowed.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible.

No special requirement.

Unsuitable extinguishing media

Non-combustible

No special requirement.

Exposure hazards

No special considerations.

Protective equipment

As a general precaution, firefighters, and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

No special requirement.

Environmental precautions

Small quantities: Presents no environmental problems.

Large quantities: As general precaution, avoid discharge into the environment.

Methods for cleaning up

Sweep, scoop or vacuum and place into containers for disposal.

Flush area with water.

7. HANDLING AND STORAGE

Handling

Good industrial practice in housekeeping and personal hygiene should be followed.

Avoid contact with eyes and skin.

Wash hands immediately after handling.

Remove material from clothing.

Engineering measures

Prevention of eye and skin contact may be required under normal use conditions.

However, severe agitation or dispersion into the work environment may require enclosure of the process and local exhaust ventilation at the source to prevent release into the air. If the work environment controls are not implemented, then personal protection for inhalation, skin and eye may be required.

Storage

Store in cool, dry place to maintain product performance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit

ACGIH TLV 10 mg/m³ (inhalable) 8-hr TWA, 3 mg/m³ (respirable) 8-hr TWA

OSHA PEL 15 mg/m³ (total dust) 8-hr TWA, 5 mg/m³ (respirable) 8-hr TWA

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use approved respiratory protective equipment as described in the U.S. OSHA 29 CFR 1910.134 or European Standard EN149.

Hand/skin protection

Wearing protective clothes is recommended; wash hand and contaminated skin thoroughly after handling.

Eye protection

Wear appropriate protective eye glasses or chemical safety goggles as described in the U.S. OSHA 29 CFR 1910.133 or European Standard EN 166.

9. PHYSICAL AND CHEMICAL PROPERTIES**General Information**

Chemical Formula: $\text{Na}_2\text{O P}_2\text{O}_5$

Form: powder, free flowing

Color: White

Odor: Odorless

Important health, safety and environmental information

pH (1% solution) SHMP: 7.0

long chain SHMP: 5.6-6.8

Specific gravity: 1.79 (20 °C / 4 °C)

Water solubility: < 150 g/l (partly soluble)

Melting point: 628 °C or 1162 °F

Boiling point: 1500 °C or 2732 °F

Bulk density: 700 kg/m³ (loose) 850 kg/m³ (packed)

Other Information

Miscibility with water < 150g/l

Flash point: not applicable

Lower/upper explosion limits: not applicable

Minimum ignition temperature: not applicable

Particulate size and distribution > 45% -100 mesh USSS

10. STABILITY AND REACTIVITY

Solutions of this product will hydrolyze to form ortho-phosphate and other shorter chain phosphates. Dissolution is impacted by temperature and pH of the system.

Conditions to avoid

Excessive moisture.

Materials to avoid

No special material to avoid.

Hazardous decomposition products

Oxides of phosphorus

11. TOXICOLOGICAL INFORMATION**Laboratory data**

Oral LD₅₀ (rat): 6600 mg/kg.

Dermal LD₅₀ (rabbit): > 7940 mg/kg.

Eye Irritation (rabbit): 1.3/110.0; slightly irritating

Skin irritation (rabbit): 0.0/8.0, nonirritating

Rats fed this material in their diet for one month showed decreased growth, increased kidney, lung and spleen weight, and kidney damage. Rats fed this material for two years also showed decreased weight gain, increased kidney weight, and kidney changes. No increase in tumors was reported. No adverse effects in reproduction capacity were reported in a multigenerational study using rats fed this material.

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

12. ECOLOGICAL INFORMATION**Environmental Toxicity**

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity

48-hr EC50 Daphnia magna > 485 mg/l

96-hr LC50 Rainbow trout > 1000 mg/l

96-hr LC50 Medina & Mysid shrimp > 1000 mg/l

Environmental Fate

Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become a part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic compounds.

13. DISPOSAL CONSIDERATIONS**European waste catalog number**

Unknown

Disposal Considerations

This material when discarded is not a hazardous waste as that term is defined by the U.S. Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be land filled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION**Road/Rail, Sea and Air**

IMDG/UN Not classified

ICAO/IATA Not classified

RID/ADR Unknown

Canadian TDG Not classified

U.S. DOT Not classified

15. REGULATORY INFORMATION

Sodium Hexametaphosphate

MSDS

EC label

Hazard symbol: none

Risk phrase R36/37/38 – irritating to eyes, respiratory system and skin.

Safety phrase S26 – In case of contact with eyes, immediately flush with plenty of water and seek medical attention

S36 – Wear suitable protective clothing

Chemical Inventory

USA TSCA: Listed

Canada DSL: Listed

EC: Listed

Japan Listed

Australia Listed

Korea Listed

Philippines Listed

China Listed

Additional information

WHMIS Classification Not Controlled

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370): None

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemical(s): None

CERCLA Reportable Quantity: Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

16. OTHER INFORMATION

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	1	0	0	
Suggested HMIS Rating	1	0	0	F F = Safety glasses, gloves, synthetic apron, dust respirator

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