



HERANBA
INDUSTRIES LIMITED
A Govt. Recognised Export House

H.O. : 101 / 102, Kanchanganga, Factory Lane, Borivli (West), Mumbai - 400 092, INDIA.

Tel. : 91-22-2898 2133 / 44, 2898 7912 / 14, 2898 4439 / Fax : 91-22-2899 3948 Website : www.heranba.com

Marketing Office : 201/202, Dwarkesh, Above Tribhuvandas Bhimji Jhaveri, L. T. Road, Borivli (W), Mumbai - 400 092, INDIA.

Tel. : 91-22-2833 8443 / 44 / Fax : 91-22-2833 8445 / e-mail : heranba@vsnl.com

MATERIAL SAFETY DATA SHEET **TEMEPHOS 1 % SG**

1. IDENTIFICATION OF THE SUBSTANCE:

Product name: TEMEPHOS 1% SG

Chemical group ORGANOPHOSPHOROUS

Use: Insecticide.

Formulation Soluble Granule (SG)

Supplier: Heranba Industries Limited

Address: 101/102, Kanchanganga, Factory Lane, Borivli (W), Mumbai - 400 092, INDIA.

Telephone: +91-22-898 0860, 28338444, 55774055

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2. COMPOSITION/INFORMATION ON INGREDIENTS:

COMPONENT	CAS NO.	CONCENTRATION
Temephos	3383-96-8	1.0%
Inert ingredients		99.0%

3. HAZARD IDENTIFICATION:

Temephos is an organophosphate insecticide and may cause cholinesterase inhibition. Keep out of reach of children. Irritating to eyes. Harmful to aquatic invertebrates.

4. FIRST AID MEASURES:

Call a physician or poison control center at once in all cases of suspected poisoning.

Call a physician or poison control center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person. Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a physician or poison control center for treatment advice. Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center for treatment advice. Move person to fresh air. If person is not breathing, call emergency medical services, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center for further treatment advice.

Notes to physician: The a.i. of this product is a cholinesterase inhibitor. Warning signs and symptoms include weakness, muscle twitching, headache, tightness in chest, respiratory depression, blurred vision, myosis, hypersecretion, nausea, vomiting, diarrhea, and abdominal cramps. If poisoning is probable, treat the patient immediately. Clear airway and provide oxygen before administering atropine. Give atropine intravenously (IV), intramuscularly or through an alternative route such as an endotracheal tube. Depending on the severity of the poisoning, use 2 to 4 milligrams IV in adults (or 0.05 mg/kg in children under 12 years) every 10-15 minutes until fully atropinized as shown primarily by control of pulmonary secretions. Proceed concurrently with decontamination using proper protective gear; for example, chemical resistant gloves rather than cotton or leather ones. Use soap (preferably, tincture of green soap) and water for decontaminating skin. Maintain atropinization by repeated doses based on



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recurrence of symptoms. Twenty to thirty milligrams, or more, may be required during the first 24 hours, and preservative-free atropine preparation should be used if large doses are required. Generally, inducing emesis is not advisable. Avoid opiates, parasympathomimetic agents (e.g. succinylcholine), theophylline, reserpine, and or phenothiazines. Suction oral secretions and emesis to avoid aspiration. Artificial respiration or oxygen administration may be necessary. If not contraindicated, gastric emptying by lavage may be considered after ingestion of a potentially life-threatening amount if it can be performed soon after ingestion (within an hour). A slurry of activated charcoal may be medically warranted at an oral dose appropriate for adult, child or infant. For seizures, give benzodiazepine intravenously. Observe patient continuously for at least 72 hours. Allow no further exposure until cholinesterase regeneration has taken place as determined by blood tests.

5. FIRE FIGHTING MEASURES:

FLASH POINT: Not applicable.

Fire Extinguishing Media: Use water fog, foam, dry-chemical, or carbon dioxide to extinguish fire.

Fire Control Tactics: Wear self-contained, positive pressure breathing apparatus and full fire fighting protective clothing. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent material run-off. Use spray or fog - solid stream may cause spreading. Do not decontaminate personnel or equipment, or handle broken packages or containers without protective equipment as specified in the Exposure Control Section. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors, and fumes from burning materials. Control run-off water - if water enters a drainage system, advice the authorities downstream.

6. ACCIDENTAL RELEASE MEASURES:

This material contains temephos. The decontamination solution for this material consists of 15% household bleach, 5% isopropyl alcohol, and 85% water. CAUTION: It is important to wear all appropriate clothing and personal protective equipment (see Exposure Control/Personal Protection section). Keep away from drains, surface and ground water and soil. Carefully shovel or sweep the spilled material into covered containers for proper disposal (see Disposal Considerations section). If possible, reuse the material for its intended purpose. Rinse the spill area and any tools thoroughly with a solution of 85% water, 10% household bleach, and 5% isopropyl alcohol and allow to stand for 10-15 minutes. Contain and absorb this rinsate with inert absorbent such as granular clay or sawdust, and place into the same covered container as the spilled material. Follow with a water rinse and repeat. Spills to the soil can be shoveled directly into covered containers for disposal. If the spill occurred to a body of water, immediately notify the appropriate authorities downstream of the spill so that they can decide what if any further action is needed. Depending on the local spill reporting requirements and the amount released to the environment, it may be necessary to notify the regulatory authorities.

7. HANDLING AND STORAGE:

Do not breathe dust and do not get on eyes, skin, or clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in well-



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ventilated area. Maintain good housekeeping to control dust accumulation. Store in a secure, dry, well-ventilated separate room, building, or covered area. Do not contaminate water, food, or feed by storage or disposal. Keep away from children, livestock, pets, and food products. Keep away from sources of ignition and protect from exposure to fire and heat. Segregate from oxidizers and any incompatible materials listed in the Stability and Reactivity section.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

Laboratory Workers must follow prudent laboratory practices. Pesticide Applicators & Workers must refer to the Product Label and Directions For Use attached to the product for agricultural use requirements and the measures below as appropriate.

Respiratory Protection: Approved combination organic vapor/particulate air-purifying respirator should be used if dust is generated in limited quantities only. Supplied air should be used if large quantities of dust are generated, if prolonged exposure is possible, if there is any potential for an uncontrolled release, or any other circumstances where an air purifying respirator may not provide adequate protection.

Eye Protection: Protective eyewear is required if respiratory protection does not provide eye protection.

Protective Clothing: Gloves impermeable to water, mineral oil and organic solvents. Long-sleeved shirt, pants and work boots. Ventilation: Work in well-ventilated areas. Whenever possible, engineering controls should be used to minimize the need for personal protective equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. In case of contact, immediately remove clothing and wash skin thoroughly with soap and water. Remove any contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling. Do not eat, drink, or smoke at the workplace. Administer a cholinesterase test monitoring program at the workplace if there is potential for regular low level exposure to product. Consult with an occupational physician knowledgeable in organophosphate hygiene in order to determine the appropriate cholinesterase monitoring program.

9. PHYSICO CHEMICAL PROPERTIES:

Appearance and Odor: Tan granules. Mercaptan-like odor.

Melting Point: 30.0-30.5°C (a.i.)

Solubility in Water: Negligible

10. STABILITY AND REACTIVITY:

Storage temperatures: above 49°C

CONDITIONS TO AVOID:

POLYMERIZATION: None known

Incompatibility: Incompatible with alkaline substances

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, phosphorus, and sulfur

STABILITY: Temephos is hydrolyzed by strong acids and alkalis (optimum stability is at pH 5 to pH 7). Do not store at temperatures above 49°C.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity Data: Rat acute oral LD50 (male): >5000 mg/kg body weight

Rabbit acute dermal LD50 (male): >5000 mg/kg body weight

Rat acute 4-hr inhalation LC50: >4.8 mg/L (analytical determination) temephos a.i.



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Rabbit eye irritation: Based on the potential for mechanical injury caused by the inerts (sand), it is expected that this formulation may be irritating to the rabbit eye

Rabbit skin irritation: Non-irritating (a.i.)

Guinea pig skin sensitization (Buehler): Not a skin sensitizer (a.i)

12. ECOTOXICOLOGICAL INFORMATION:

Based on the results of studies with the a.i., this product is likely harmful to aquatic invertebrates and harmless to fish and birds.

Environmental Fate: The a.i. is stable in water in the pH range 5 to 9, but will hydrolyze in the presence of strong acids or bases. It will undergo slow photolytic degradation. It will adsorb strongly to soil.

13. DISPOSAL CONSIDERATIONS:

To avoid disposal, all attempts should be made to use this product completely, in accordance with its intended use. If this is not possible, handle with care and dispose in a safe manner. Empty containers or liners may retain some product residues. Do not reuse. Rinse the container or liner as needed for disposal. Render it unusable by crushing or puncturing. Dispose of the container and any rinsate in a safe manner. Follow all applicable community, national or regional regulations regarding waste management methods. It is the ultimate responsibility of the waste generator to determine at the time of disposal whether this product and/or "empty" container residue meets any hazardous waste criteria.

14. REGULATORY INFORMATION:

Symbol: "Xi" Irritant

Risk Phrases: R-36 Irritating to eyes. Safety Phrases: S-02 Keep out of reach of children.

S-13 Keep away from food, drink and animal feeding stuffs.

S-20/21 When using do not eat, drink or smoke.

S-46 If swallowed, seek medical advice immediately and show this container or label.

Other Labeling Information: This formulation is likely harmful to aquatic invertebrates.

15. TRANSPORT INFORMATION:

PROPER SHIPPING NAME (PSN): ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC

IMDG CODE : 6221

UN NO : 2783

CLASS : 6.1

PACKING GROUP: III

EMS NO : 6.1-04

16. DISCLAIMER:

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.