SAFETY DATA SHEET OF

TRICHLORFON 90% TC

1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Supplier: Shanghai Bosman Industrial Co., Ltd.

Street address: No.1611, North Sichuan Road, Hongkou District, Shanghai, P.R. China

FAX: +86 21 63065878

TEL: +86 21 63065878

Product name: Trichlorfon 90% TC

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

Acute toxicity (oral), Category 4 H302

Acute toxicity (dermal), Category 4 H312

Sensitisation — Skin, Category 1 H317

Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life with long lasting effects. May cause an allergic skin reaction. Harmful in contact with skin. Harmful if swallowed.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms:

Signal word: Warning

Hazard statements:

H302+H312 - Harmful if swallowed or in contact with skin

H317 - May cause an allergic skin reaction

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements:

P261 - Avoid breathing dust

P273 - Avoid release to the environment

P280 - Wear protective clothing, protective gloves, eye protection, Dust production: dust mask with filter type P2

P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

P501 - Dispose of contents/container to an approved waste disposal plant

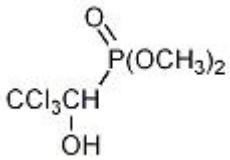
3. COMPOSITION/INFORMATION ON INGREDIENTS

Formulation Type: Technical material (TC)

Active Ingredients: Trichlorfon

IUPAC name: dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate

Structural Formula:



Other ingredients determined not to be hazardous

INGREDIENT	CAS NO	PROPORTION
Trichlorfon	52–68–6	90% min.
Others	Not available	Up to 100%

4. FIRST AID MEASURES

General : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

If inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

If skin contact : Take off contaminated clothing. Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

If eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

If ingestion : Rinse mouth. Do not induce vomiting without medical advice. Call a poison center or a doctor if you feel unwell.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand

Unsuitable extinguishing media: Do not use a heavy water stream.

Fire hazard : Non flammable.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire: For further information, refer to section 10 : "Stability and Reactivity".

Advice for firefighters Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENT RELEASE MEASURES

Personal precautions: Protective equipment : Equip cleanup crew with proper protection. For further information refer to section 8 :" Exposure-controls/personal protection".

Emergency procedures : Ventilate area.

Environmental precautions: Do not allow to enter drains or water courses. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

Method for cleaning up: Collect spillage. Sweep or shovel spills into appropriate container for disposal. Dispose of materials or solid residues at an authorized site.

7. HANDLING AND STORAGE

Handling: Read the label before use. Keep out of reach of children. Harmful if swallowed. Causes skin irritation and sensitivity. Avoid contact with skin and clothing. After work, remove protective clothing and equipment, wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Clean up spilled material immediately, and wash clothes, equipment and work area after use.

Storage: Store in tightly closed original container in a cool, dry well-ventilated area out of direct sunlight when not in use. This product can be stored in an unheated building. Do not store with food, feed stuffs, fertilizers and seeds. See product label for further handling/storage precautions relative to the end use of this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls: Ensure good ventilation of the work station.

Personal protective equipment (PPE):

Skin protection: All pesticide handlers must wear a long-sleeved shirt and long pants and shoes plus socks. Waterproof gloves are recommended when mixing, loading or cleaning equipment.

Eye protection: Safety goggles are recommended when mixing, loading or cleaning equipment.

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white powder

Odor: weak, characteristic odour

pH: NA

Specific gravity: NA

Solubility in Water: In water approx. 120 g/l (20 ° C).

Flash point: NA

Boiling point: NA

Melting point: 78.5 ° C; delayed melting to 84 ° C

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions

Conditions to avoid: Keep away from heat and direct sunlight.

Hazardous decomposition: Carbon oxides (CO, CO2).

Incompatible materials: Strong acids. Strong bases. Strong oxidation agent.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral: LD50 for male and female rats c. 250 mg/kg

Dermal: Acute percutaneous LD50 (24 h) for male and female rats >5000 mg/kg.

Inhalation: LC50 (4 h) for male and female rats >2.3 mg/l air (aerosol)

Irritant properties:

Skin: Not irritating to skin and eyes (rabbits)

Eye: Not irritating to skin and eyes (rabbits)

Chronic toxicity:

NOEL NOAEL for monkeys 0.2 mg/kg b.w. (EPA RED); NOEL (2 y) for rats 100, mice 300 mg/kg diet; (4 y)

for dogs 50 mg/kg diet.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish LC50 (96 h) for rainbow trout 0.7, golden orfe 0.52 mg/l.

Daphnia LC50 (48 h) 0.00096 mg/l.

Algae ErC50 for Scenedesmus subspicatus >10 mg/l.

Bees Low toxicity to bees and other beneficial insects.

Trichlorfon has a relatively high mobility in soil, but it is rapidly metabolised to CO2. Intermediates are dichloroethanol, dichloroacetic acid and trichloroacetic acid. Koc 20 (±10).

13. DISPOSAL CONSIDERATION

Waste treatment methods : Incinerate at a licensed installation.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

14. TRANSPORT INFORMATION

UN Number: 2783

UN Proper shipping name: ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (contains Trichlorfon)

Transport hazard class: 6.1

Packing group: III

15. REGULATARY INFORMATION

Follow all local and international laws and regulations.

16. OTHER INFORMATION

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal) Acute toxicity (dermal), Category 4

Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4

Aquatic Acute 1 Hazardous to the aquatic environment — Acute Hazard, Category 1

Aquatic Chronic 1 Hazardous to the aquatic environment — Chronic Hazard, Category 1

Skin Sens. 1 Sensitisation — Skin, Category 1

H302 Harmful if swallowed

H312 Harmful in contact with skin

H317 May cause an allergic skin reaction

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

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 the 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.

-- END OF SDS --