CROP LIFE SCIENCE LTD.

Material safety data sheet
TRIAZOPHOS 35% + DELTAMETHRIN 1 % EC

1. IDENTIFICATION OF COMPANY & PRODUCT

Product Name: TRIAZOPHOS 40% EC
Chemical Name: O, O-diethyl O-1-phenyl-1H-1, 2, 4-triazol-3-yl phosphorothioate
Brand Name: TORAS
Users: Insecticide
Manufacturer: CROP LIFE SCIENCE LTD.
Address: Plot No. 5165, 5166, 5151, G.I.D.C., Ankleshwar-393002, Gujarat, India
Tele Fax Number: 91 2646 238479

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Cas #</th>
<th>Percent Or Content(W/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triazophos: O,O-diethyl O-1 -phenyl-1H-1,2,4-triazol-3-yl phosphorothioate</td>
<td>24017-47-8</td>
<td>40%</td>
</tr>
<tr>
<td>Blend of anionic and non-ionic surfactant</td>
<td>-</td>
<td>12 %</td>
</tr>
<tr>
<td>Aromatic solvent</td>
<td>---</td>
<td>Q.S.</td>
</tr>
</tbody>
</table>

3. HEALTH HAZARDS IDENTIFICATION

Hazard Description: Highly Toxic (USA) Toxic (EU) Dangerous for the environment Harmful in contact with skin; readily absorbed through skin system Toxic by inhalation. Very toxic if swallowed May cause sensitization by inhalation and skin contact Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Target organ(s): central nervous system, cardiovascular system Information pertaining to particular dangers for man and environment:

HMIS Ratings: Health =1 Flammability =0 Reactivity =0
## 4. FIRST AID MEASURES

### EYES
- Flush with plenty of water for 5 minutes.

### SKIN
- Flush with copious amounts of water; remove contaminated clothing and shoes; call a physician.

### INGESTION
- If swallowed, wash out mouth with copious amounts of water; call a physician.

### INHALATION
- If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.

### Antidotes / Dosage
- Inject atropine IV or IM (0.4-2.0 mg/Kg.) every 15 min. until atropinised or
- Universal antidote (A mixture containing 2 parts activated charcoal, 1 part MgO and 1 part tannic acid in 300 ml warm water.)

## 5. FIRE FIGHTING MEASURES

### FLAMMABILITY
- Not easily flammable

### FLASH POINT (°C)
- 78°C

### AUTO - IGNITION TEMP. (°C)
- Not Applicable

### LOWER EXPLOSION LIMIT
- Not Explosive

### SUITABLE EXTINGUISHING AGENTS
- water spray, carbon dioxide, dry chemical powder or foam

### Protective equipment:
- wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

### UNUSUAL FIRE HAZARD
- may emit toxic fumes under fire conditions.

### HAZARDOUS COMBUSTION PRODUCTS
- Under fire conditions some components of this product may decompose. Hazardous combustion products may include and are not limited to sulfur oxides, phosphorus compounds, nitrogen oxides, hydrogen chloride, carbon monoxide, and carbon dioxide.
6. ACCIDENTAL RELEASE MEASURES

PERSON-RELATED SAFETY PRECAUTIONS: cordon off area of spill; wear self-contained breathing apparatus, protective clothing and heavy rubber gloves.

MEASURES FOR CLEANING /COLLECTING: absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13.

7. HANDLING AND STORAGE

INFORMATION FOR SAFE HANDLING: avoid contact with skin, eyes and clothing; material may be an irritant.

STORAGE: Store solid and solutions at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Breathing equipment: NIOSH/MSHA-approved respirator
Protection of hands: chemical-resistant rubber gloves
Eye protection: chemical safety goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL STATE</td>
<td>Brownish yellow liquid</td>
</tr>
<tr>
<td>APPEARANCE</td>
<td>Clear</td>
</tr>
<tr>
<td>ODOR</td>
<td>Mild Odour</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY / DENSITY</td>
<td>1.05 at 25 °C</td>
</tr>
<tr>
<td>viscosity</td>
<td>Non viscous</td>
</tr>
<tr>
<td>MELTING RANGE/ POINT °C</td>
<td>NA</td>
</tr>
<tr>
<td>PH</td>
<td>6.8-7.2</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>At 20°C emulsifiable</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

**Chemical Stability**: Stable
**Hazardous polymerization**: Will not occur.
**Flash Point**: 78 °C
**Stability**: Avoid acids and bases

**Thermal decomposition / conditions to be avoided**: protect from light and heat

**Dangerous products of decomposition**: Thermal decomposition may produce toxic gases such as carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

**Acute oral & Dermal Toxicity**

<table>
<thead>
<tr>
<th>Active ingredient</th>
<th>Triazophos</th>
<th>Deltamethrin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 Rat</td>
<td>82 mg/kg b.w.</td>
<td>445 mg/kg b.w.</td>
</tr>
<tr>
<td>Dermal LD50 Rat</td>
<td>&gt;1100 mg/kg b.w.</td>
<td>&gt;2000 mg/kg b.w.</td>
</tr>
<tr>
<td>Acute Percutaneous LD50</td>
<td>&gt;1100 mg/kg b.w.</td>
<td>&gt;2000 mg/kg b.w.</td>
</tr>
<tr>
<td>Acute Inhalation Lc50 Rat</td>
<td>&gt;280 mg/m3 of air</td>
<td>2.9 mg/l</td>
</tr>
<tr>
<td>Skin irritation Rabbit</td>
<td>Causes skin irritation</td>
<td>Cause irritation</td>
</tr>
<tr>
<td>Eye irritation Rabbit</td>
<td>May cause eye irritation</td>
<td>Cause irreversible eye damage.</td>
</tr>
</tbody>
</table>

**MUTAGENICITY**: Based on a majority of negative data and some equivocal or marginally positive results, Deltamethrin is considered to have minimal mutagenic potential.

12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION**

**ACUTE AND LONG-TERM TOXICITY TO FISH AND INVERTEBRATES**: This product is extremely toxic to fish and aquatic invertebrates.

**ECOLOGICAL TOXICITY**

While this product is highly toxic to fish and other aquatic species, the toxicity to avian species is relatively low.
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<table>
<thead>
<tr>
<th>Species</th>
<th>Acute oral LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Triazophos</td>
</tr>
<tr>
<td>Mallard ducks (Dietary, 8d)</td>
<td>325 mg/kg</td>
</tr>
<tr>
<td>Bobwhite Quail</td>
<td>152 mg/kg</td>
</tr>
<tr>
<td>Japanese quail</td>
<td>4.2-27.1 mg/kg</td>
</tr>
<tr>
<td>Rainbow trout</td>
<td>0.01 mg/l</td>
</tr>
<tr>
<td>Daphnia (48h)</td>
<td>14.35 μg/l</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Do not contaminate food, feed, or water by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of law. Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of in accordance with applicable local, state or federal requirements.

14. TRANSPORT INFORMATION

DOT Hazard Class: 6.1, (3)
Proper shipping name: Organophosphorous, Liquid, Toxic
Non-Hazardous for transport: This substance is considered to be hazardous for transport
Packaging Group: III

15. REGULATORY INFORMATION

Code letter and hazard designation of product:
Hazard-determining components of labeling:

EU Risk and Safety phrases:
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28: After contact with skin, wash immediately with plenty of water
S29: Do not empty into drains
S36/37/39: Wear suitable protective clothing, gloves, and eye/face protection
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S53: Avoid exposure - obtain special instructions before use
R21: Harmful in contact with skin
R23: Toxic by inhalation
R27/28: Very toxic in contact with skin and if swallowed.

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations containing this product, it is the recipient’s sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.