1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>NOBAN- TC 20 EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Name</td>
<td>CHLORPYRIFOS 20 % EC</td>
</tr>
<tr>
<td>Chemical Name of</td>
<td>O, O-Diethyl-O-(3, 5, 6-trichloro -2-pyridinyl) Phoshhorothioate.</td>
</tr>
<tr>
<td>Formula</td>
<td>C_{9}H_{11}Cl_{3}NO_{3}PS</td>
</tr>
<tr>
<td>Supplier</td>
<td>CHEMET WETS &amp; FLOWS P. LTD</td>
</tr>
<tr>
<td></td>
<td>Plot no. 129/c/2,</td>
</tr>
<tr>
<td></td>
<td>GIDC Estate,</td>
</tr>
<tr>
<td></td>
<td>Ankleshwer 393002</td>
</tr>
<tr>
<td></td>
<td>Tel: 91-2646 239490</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>CHEMET WETS &amp; FLOWS P. LTD</td>
</tr>
<tr>
<td></td>
<td>Plot no. 129/c/2,</td>
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<td></td>
<td>Tel: 91-2646 239490</td>
</tr>
<tr>
<td>Emergency Phone No.</td>
<td>02646-239490</td>
</tr>
<tr>
<td>Fax No</td>
<td>02646-220254</td>
</tr>
<tr>
<td>Environmental, Health and Safety Department</td>
<td>02646-239490</td>
</tr>
<tr>
<td></td>
<td>02646-220254</td>
</tr>
<tr>
<td>E mail Id</td>
<td><a href="mailto:chemetank@gmail.com">chemetank@gmail.com</a></td>
</tr>
</tbody>
</table>

2. COMPOSITION INFORMATION OF INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS NO</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpyrifos EC</td>
<td>2912-88-2</td>
<td>20%</td>
</tr>
</tbody>
</table>

3. HAZARD IDENTIFICATION SUMMARY

Emergency Overview

IMMEDIATE CONCERNS:
Amber liquid with a faint, mild petroleum odor. Moderately combustible. May support combustion if heated above the product's flash point. Thermal decomposition and burning may form toxic by-products. For huge exposures or tire, wear personal protective equipotent. Highly toxic to fish and aquatic organisms. Keep out of drains and water courses. Moderately irritating to the skin.
Potential Health Hazard

Effects from overexposure result from either swallowing, or coming into contact with the skin or eyes. Symptoms of overexposure include increased hypersensitivity to touch and sound. Tremors and convulsions. Contact with this product has rarely produced skin sensations such as numbing. Burning and tingling. These sensations are reversible and usually subside within 12 hours.

Medical Conditions Aggravated

None presently known.

4. FIRST AID AND MEASURES

Eyes

Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

Skin

Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

Inhalation

Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

Ingestion

Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

Notes to medical Doctor

This product has low oral, dermal and inhalation toxicity. It is moderately irritating to the skin and minimally irritating to the eyes. Reversible skin sensations (parenthesis) may occur and ordinary skin salves have been found useful in reducing discomfort. Contains aromatic hydrocarbons that may produce a severe pneumonitis if aspirated during vomiting. Consideration should be given to gastric lass-age with an end tracheal tube in place. Treatment is otherwise. Controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

Flammable Properties

Above 24.5°C

Extinguishing Media

Foam. CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Fire/ Explosion Hazards

Moderately combustible. When heated above the flash point, this material releases vapors which, when
mixed with air, can burn or be explosive.

**Fire Fighting Procedures**

Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

**Hazardous Decomposition Products**


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6. **ACCIDENTAL RELEASE MEASURES**

**ACTION TO TAKE FOR SPILLS/LEAKS:**

Absorb small spills with dry material such as sand, Saw Dust. Wash thoroughly after handling. Contain spill by diking to keep out of sewers. Barricade area and Report large spills to Chemet at given number in section 1.

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7. **HANDLING AND STORAGE**

Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides or fertilizers. Store below 122°F (50°C). Keep out of reach of children. Avoid contact with eyes and skin. Do not ingest this product.

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8. **EXPOSURE CONTROLS, PERSONAL PROTECTION**

**Engineering Controls**

Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes and Face**

For splash, mist or spray exposure. wear chemical protective goggles or a face shield

**Respiratory**

For splash, mist or spray exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides Respirator use and selection must be based on airborne concentrations

**Protective Clothing**

Depending upon concentrations encountered. Wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills. Wear full body Covet barrier suit, such as a PVC suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Laundry all work clothing before reuse (separately from household laundry)
**Work Hygienic Practices**

Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday. GLOVES chemical protective gloves made of materials such as nitrite or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Pale yellow - Off-white liquid</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>5.0 (4120°C (5% in water)</td>
</tr>
<tr>
<td><strong>Solubility in Water</strong></td>
<td>Emulsifies</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>0.94 @20°C (water = 1)</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Condition to avoid</th>
<th>Stability</th>
<th>Polymerization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive heat and fire</td>
<td>Stable</td>
<td>Will not occur</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

| Mutagenicity | Based on a majority of negative data and some equivocal or marginally positive results, Chlorpyrifos is considered to have minimal mutagenic potential. |

### 12. ECOLOGICAL INFORMATION

**Environmental Fate Movement & Partitioning**

Based largely or completely on information for Chlorpyrifos. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log pow between 3 and 5). Expected to be relatively Immobile in soil (Koc >5000).

**Degradation & Persistence**

Based largely or completely on information for Chlorpyrifos. The photolysis half-life in water is 3-4 weeks. In the atmospheric environment, material is estimated to have a tropospheric half-life of 1.4 hours. Degradation is expected in the soil environment within days to weeks. Under aerobic soil conditions the half-life is generally 30-60 days.
ECOTOXICOLOGY

Based largely or completely on information for Chlorpyrifos. Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in most sensitive species). Material is highly toxic to birds on a dietary basis (LC50 between 50 and 500 ppm). Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg).

13.DISPOSAL INFORMATION

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

NONE

15.REGULATORY INFORMATION

NONE

16.OTHER INFORMATION

NONE

DISCLAIMER

All reasonable care has been exercised in processing your request for information on the chemical listed in this Material Safety Data Sheet. No warranty is made, either expressed or implied and Perisseuma Projects does not hold itself liable for any injury, illness, loss or misinterpretation arising from the use of this data. CHEMET WETS & FLOWS P.LTD makes no warranty expressed or implied in respect of the adequacy of this document for any particular purpose.

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