SAFETY DATA SHEET

PROPOXUR 98 TC

SECTION 1 - IDENTIFICATION

Product Name: PROPOXUR 98 TC
Active Ingredients: Propoxur
Synonym: 2-isopropoxyphenyl methylcarbamate
Recommended use and restrictions on use: Used for Active ingredients of Insecticide
Company Identification: PT Inti Everspring Indonesia
Wisma UIC 4th floor, JL. Gatot Subroto Kav. 6-7
Jakarta 12930, Indonesia
Tel. 62-21-57905245; Fax. 62-21-57905244

SECTION 2 - HAZARDS IDENTIFICATION

GHS Classification:
- Acute Toxicity (Oral) Category 2
- Acute Toxicity (Dermal) Not Classified
- Acute Toxicity (Inhalation) Category 3
- Serious Eye Damage/Eye Irritation Category 2B
- Germ Cell Mutagenicity Category 2
- Carcinogenicity Category 2
- Reproductive Toxicity Category 2
- Specific Target Organ Toxicity (Single Exposure) Category 1
- Specific Target Organ Toxicity (Single Exposure) Category 3
- Specific Target Organ Toxicity (Repeated Exposure) Category 2
- Acute Aquatic Toxicity Category 1
- Chronic Aquatic Toxicity Category 1

GHS Labelling:
Symbol (s):

Signal Word: Danger

Hazard statements:
- H300 Fatal if swallowed
- H331 Toxic if inhaled
- H320 Causes eye irritation
- H341 Suspected of causing genetic defects
- H351 Suspected of causing cancer
- H361 Suspected of damaging fertility or the unborn child
- H370 Causes damage to organs (nervous and circulatory system)
- H336 May cause drowsiness or dizziness
- H373 May cause damage to organs (nervous system) through prolonged or repeated exposure
- H400 Very toxic to aquatic life
Precautionary Statements

**Prevention**
- P264 Wash thoroughly after handling
- P270 Do not eat, drink, or smoke when using this product
- P260 Do not breathe dust/fume/gas/mist/vapours/spray
- P271 Use only outdoors or in well ventilated area
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection
- P273 Avoid release to the environment

**Respons**
- P301+P310 IF SWALLOWED: Immediately Call a POISON CENTER/doctor
- P321 Specific treatment (see on this label)
- P330 Rinse mouth
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P311 Call a POISON CENTER/doctor
- P312 Call a POISON CENTER/doctor if you feel unwell
- P305+P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persist: Get medical advice/attention
- P308+P313 IF exposed or concerned : Get medical advice/attention
- P308+P311 IF exposed or concerned : call a POISON CENTER/doctor
- P314 Get medical advice/attention if you feel unwell
- P391 Collect spillage

Precautionary Statements

**Storage**
- P405 Store locked up
- P403+P233 Store in well ventilated place. Keep container tightly closed.

**Disposal**
- P501 Dispose of contents/container in accordance with local/ national/ international regulation

**Other Hazard**

### SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NO</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-isopropoxyphenyl methylcarbamate</td>
<td>114-26-1</td>
<td>98</td>
</tr>
</tbody>
</table>

### SECTION 4 - FIRST- AID MEASURES

Eye : IF IN EYES, rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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Skin: IF SPILT ON THE SKIN, remove contaminated clothing and wash affected areas of skin immediately. DO NOT Scrub the skin. Remove and wash contaminated clothing before re-use. Call a poison center/DOCTOR/ if you feel unwell.

Ingestion: IF SWALLOWED DO NOT induce vomiting. For advice, contact the National Poisons Centre or a doctor immediately.

Inhalation: IF INHALED, remove from exposure and have patient lie down and keep quiet. If patient is not breathing, start artificial respiration immediately. Never give anything by mouth to an unconscious person. Call a physician if necessary.

SECTION 5 - FIRE FIGHTING MEASURES

General Information: Firefighters must consider the nature of the product and use the poison face shields, full breathing apparatus and flame resistant clothing

Extinguishing Media: Foam, dry chemical, carbon dioxide, or water spray

Specific Hazard of Fire: Irritating and toxic gas

SECTION 6 - ACCIDENTAL RELEASE MEASURES

If container is ruptured or begins to leak, place in a well-ventilated area free of sparks and ignition sources.

Use Personal protective equipment as recommended in section 8.

Prevent product from entering drains or water courses. Shovel or sweep up spills. Never return to container for reuse. Scoop into bags or boxes using plastic or aluminium shovel. Pesticide that cannot be used according to label instructions must be disposed of according to all applicable Local, procedures.

SECTION 7 - HANDLING AND STORAGE

Handling: Do not handle until all safety precautions have been read and understood. Do not breathe dust, vapour or mist. This product causes mild irritation to eyes. Do not get in eyes. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

This product must be under the control of an approved handler at all times. This product must be tracked.

Storage: Do not store near sources of sparks, flame or heat. Keep under lock and keep out of reach of unauthorised persons, children and animals.

Store in its original labeled container in isolated, dry, cool and well-ventilated area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering control: Use only with adequate ventilation. Apply grounding system for power tools to prevent static electric charge.

Threshold Limit Value (TLV): 0.5 mg/m³ – 8 h (TLV-TWA ACGIH, 2017)

Personal Protective Equipment

Eye Protection: Safety glasses or face shield
Gloves: Chemical resistant gloves
Clothing Protection: Wear clothing with long sleeve
Respiratory Protection: Mask, in case of inadequate ventilation wear respiratory protection that recommended by NIOSH

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

1 Physical Appearance: Crystalline Powder
2 Color: White
3 Odor: Not available
4 Odor Threshold: Not available
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5 pH (1%) : 4-7
6 Melting Point : >86.3 °C
7 Freezing Point : Not available
8 Boiling Point : Not available
9 Flash Point : Not available
10 The rate of Evaporation : Not available
11 Flammability : Not available
12 Lower Explosive Limit (LEL) : Not available
13 Vapour Pressure : 1.74 x 10^{-2} mPa (20°C)
14 Molecular weight : Not available
15 Decomposition temperature : Not available
16 Autoignition temperature : Not available
17 Viscosity : Not available
18 Bulk Density : Not available
19 Density relative : Not available
20 Solubility in water : 174 mg/l (distillated water 20 °C) in water
21 Koefisien partition : n-octanol/water : Not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity : None known
Stability : Stable
Hazardous Reaction under Specific Condition : Not available
Condition to Avoid : Open flames and very hot surfaces can cause thermal decomposition
Incompatible material to avoid : Avoid caustics, amines, alkanolamines, Aldehydes, strong oxidizing agents and chlorinated compounds.
Hazardous Product of Decomposition : Carbon dioxide, carbon monoxide, and methyl amine
Hazardous Polymerization : Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity (oral) LD_{50} : 50 mg/kg for male and female rats (Pesticide Manual, 2009)
Single oral dose acute toxicity studies using rats, decreases in cholinesterase activity in the plasma, erythrocytes and brain, convulsions, muscle spasm, dyspnea and salivation were observed (NITE, 2016).

Acute Toxicity (dermal) LD_{50} : >5000 mg/kg for male and female rats (Pesticide Manual, 2009)

Acute Toxicity (inhalation) LC_{50} : 0.654 mg/l (aerosol) for rat / 4 hour (Pesticide Manual, 2009)

Subchronic toxicity (90 days) - Technical Material : 16-week repeated dose toxicity study using rats by dietary administration, histopathological changes in the liver and depression of cholinesterase activity in the brain are reported at 1,000 ppm converted guidance value: 50 mg/kg/day (NITE, 2016)

Chronic Toxicity (2 years) - Technical Material : In a 2-year repeated dose toxicity study using rats by dietary administration, hyperplasia of the urinary bladder is reported at 1,000 ppm converted guidance value: 50 mg/kg/day (NITE, 2009)
Mutagenicity in germ cells: Multiple positive results of chromosome damage in mouse bone marrow/peripheral blood have been reported (NITE, 2016).

Reproductive Toxicity: Study of high doses, decreases in the number of implantation sites/dam and the number of pups/dam in F1 females were observed at 2,500 ppm (228 - 239 mg/kg/day), where a decrease in red blood cell acetyl cholinesterase activity (males: at 100 ppm or above), body weight reductions (at 500 ppm or above) and urothelial hyperplasia were observed in F0 and F1 parental animals (NITE, 2016).

Carcinogenicity: ACGIH classified this substance as A3. In a one-year carcinogenicity study using rats dosed by feeding, there was an increase in the incidence of urinary bladder papillomas and carcinomas (NITE, 2016).

Eye Irritation: Slightly irritant (Pesticide Manual, 2009)

Skin Irritation: Not irritant (Pesticide Manual, 2009)

### SECTION 12 - ECOLOGICAL INFORMATION

#### Acute Toxicity

<table>
<thead>
<tr>
<th>Organism</th>
<th>Species</th>
<th>LC₅₀ (96 h)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>Bluegill sunfish</td>
<td>6.2 – 6.6 mg/l</td>
<td>(Pesticide Manual, 2009)</td>
</tr>
<tr>
<td>Daphnia</td>
<td>Daphnia Magna</td>
<td>0.15 mg/l</td>
<td>(Pesticide Manual, 2009)</td>
</tr>
<tr>
<td>Bird</td>
<td>Mallard Duck (LC₅₀) 5 days</td>
<td>5 g/kg</td>
<td>(Pesticide Manual, 2009)</td>
</tr>
</tbody>
</table>

Bio accumulation: Not available

Persistence and degradation by environment: Reliable chronic toxicity data were not obtained. Due to being not rapidly degradable (a degradation rate by BOD (NH₃): 1%, 9%, 6%.

Soil Mobility: Mobility of the Propoxur in the soil is relatively high. The compound readily degradable in different soils.

Others adverse effect: Highly toxic for bees

### SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal, storage or cleaning equipment should not be used to contaminate food, animal feed or water. Read extermination instructions listed on the product label. Products are very toxic to aquatic life with long lasting effects. Do not contaminate domestic water or other water sources.

Disposal Containers / Packaging: Destroy empty container and dispose of / destroyed in accordance with local regulations. Never use second-hand containers for any purpose.

### SECTION 14 - TRANSPORT INFORMATION

#### DOT (US)

- Proper shipping name: CARBAMATE PESTICIDE, SOLID, TOXIC (Propoxur Technical)
- Class Danger Transport: 6.1
- UN Number: UN 2757
- Packing Group: II

#### IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

- UN Number: UN 2757
- Class and Packing group: 6.1 and II
- Proper shipping name: CARBAMATE PESTICIDE, SOLID, TOXIC (Propoxur Technical)
Marine Pollutant : Yes (Propoxur)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN Number : UN 2757
Class and Packing group : 6.1 and II
Proper shipping name : CARBAMATE PESTICIDE, SOLID, TOXIC (Propoxur Technical)

SECTION 15 - REGULATORY INFORMATION
Safety Data Sheet / Safety Data Sheet meets the regulations :
1. Regulation of the Minister of Industry of the Republic of Indonesian number 23 / M-INDPER / 4/2013
3. Building Blocks seventh revised edition of the GHS

SECTION 16 - OTHER INFORMATION
The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

Reference:
1. Building Blocks seventh revised edition of the GHS
2. Regulation of the Minister of Industry of the Republic of Indonesian number 23 / M-INDPER / 4/2013
5. American Conference of Governmental Industrial Hygienist (ACGIH). Table of Exposure Limit for Chemical and Biological Substances. 2017