# SAFETY DATA SHEET

## METHOMYL 97% TC

<table>
<thead>
<tr>
<th>SDS No</th>
<th>SDS - 164B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision</td>
<td>0</td>
</tr>
<tr>
<td>Date of Issue</td>
<td>March 08th, 2019</td>
</tr>
</tbody>
</table>

### SECTION 1 - IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>METHOMYL 97% TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Ingredients</td>
<td>Methomyl</td>
</tr>
<tr>
<td>Synonym</td>
<td>S-methyl-N-(methylcarbamoyloxy)thioacetimidate</td>
</tr>
<tr>
<td>Recommended use and restrictions on use</td>
<td>Used for Active ingredients of Insecticide</td>
</tr>
<tr>
<td>Company Identification</td>
<td>PT Inti Everspring Indonesia</td>
</tr>
<tr>
<td></td>
<td>Wisma UIC 4th floor, JL. Gatot Subroto Kav. 6-7</td>
</tr>
<tr>
<td></td>
<td>Jakarta 12930, Indonesia</td>
</tr>
<tr>
<td></td>
<td>Tel. 62-21-57905245 ; Fax. 62-21-57905244</td>
</tr>
</tbody>
</table>

### SECTION 2 - HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Toxicity (Oral)</strong></td>
<td>Category 2</td>
</tr>
<tr>
<td><strong>Acute Toxicity (Inhalation)</strong></td>
<td>Category 2</td>
</tr>
<tr>
<td><strong>Serious Eye Damage/Eye Irritation</strong></td>
<td>Category 2B</td>
</tr>
<tr>
<td><strong>Specific Target Organ Toxicity (Single Exposure)</strong></td>
<td>Category 1</td>
</tr>
<tr>
<td><strong>Specific Target Organ Toxicity (Repeated Exposure)</strong></td>
<td>Category 2</td>
</tr>
<tr>
<td><strong>Acute Aquatic Toxicity</strong></td>
<td>Category 1</td>
</tr>
<tr>
<td><strong>Chronic Aquatic Toxicity</strong></td>
<td>Category 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GHS Labelling Symbol (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Symbol" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Danger</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H300 Fatal if swallowed</td>
</tr>
<tr>
<td>H330 Fatal if inhaled</td>
</tr>
<tr>
<td>H320 Causes eye irritation</td>
</tr>
<tr>
<td>H370 Causes damage to organs (neurology system)</td>
</tr>
<tr>
<td>H373 May damage to organs (neurology and blood system) through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400 Very toxic to aquatic life</td>
</tr>
<tr>
<td>H411 Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

### Precautionary Statements

#### Prevention

| P260 | Do not breathe dust/fume/gas/mist/vapours/spray |
| P264 | Wash thoroughly after handling |
| P270 | Do not eat, drink, or smoke when using this product |
| P271 | Use only outdoors or in well ventilated area |
| P284 | In case of inadequate ventilation wear respiratory protection |
| P273 | Avoid release to the environment |

#### Response

| P301+P310 | IF SWALLOWED: immediately call a poison |

---

Page 1 of 6
**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>S-methyl-N-(methylcarbamoyloxy)thioacetimidate</td>
<td>16752-77-5</td>
<td>97</td>
</tr>
</tbody>
</table>

### SECTION 4 - FIRST-AID MEASURES

**Eye**
- If concentrate is splashed in eyes, flush with running water for at least 15 minutes. Take to hospital without delay.

**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.

**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, water, or halon

**Specific Hazard of Fire**
- NO, SO, HCN, MIC

**Hazardous Product of Decomposition**
- NO, SO, HCN, MIC

### 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 breathe vapour or mist. This product causes mild eye irritation. Do not get in eyes, on skin, or on clothing. 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.

**Danger**
- There is a risk of explosion if formed mixture of dust and air. No smoking or welding in the workplace. Apply grounding system for power tools to prevent static electric charge.

**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)**
- 2.5 mg/m³ - 8 hour (TLV TWA, ACGIH 2017)

**Personal Protective Equipment**
- **Eye Protection**: Safety glasses
- **Gloves**: Chemical resistant gloves
- **Clothing Protection**: Wear clothing with long sleeve
- **Respiratory Protection**: Mask or wear respiratory protection in case of inadequate ventilation

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

1. **Physical Appearance**: Powder
2. **Color**: White to cream
3. **Odor**: Sulfurous odor
4. **Odor Threshold**: Not available
5. **pH (1%)**: 5 - 6 (pH 1%)
6. **Melting Point**: 78-79 °C
7. **Freezing Point**: Not available
8. **Boiling Point**: 136 °C (Auto decomposition)
9. **Flash Point**: Not available
10. **The rate of Evaporation**: Not available
11. **Flammability**: Not available
12. **Lower Explosive Limit (LEL)**: 0.096 g/L
13. **Vapour Pressure**: 0.72 mPa (25 °C)
14. **Molecular weight**: Not available
15. **Decomposition temperature**: Not available
16. **Autoignition temperature**: Not available
17. **Viscosity**: Not available
18. **Bulk Density**: 1.2946 (25 °C)
19. **Density relative**: 1.3
20. **Solubility**: 57.9 g/l (25 °C)
SECTION 10 - STABILITY AND REACTIVITY

Reactivity : None known
Stability : Stable
Hazardous Reaction under Specific Condition : Not available
Condition to Avoid : Avoid processing temperature: > 136 °C. Heating can release hazardous gases. To avoid thermal decomposition, do not overheat.
Under severe dusting conditions, this material may form explosive mixtures in air. Avoid static electric charge and other ignition sources.

Incompatible material to avoid : Avoid mixed with highly reactive chemicals such as strong acid, strong base or strong oxidizing agent.

Hazardous Product of Decomposition : NO, SO, HCN
Hazardous Polymerization : Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity (oral) LD$_{50}$ : 17-24 mg/kg Rat (Salim Agrochemical, 2015)
The oral LD 50 values for methomyl based on rat studies, were 34 and 30 mg/kg in males and females, respectively (Toxicity Category I). Clinical signs observed in all treatment groups of both sexes included tremors, low posture and salivation (EPA, 1998 in NITE 2006).

Acute Toxicity (dermal) LD$_{50}$ : >5000 mg/kg (Salim Agrochemical, 2015)

Acute Toxicity (inhalation) LC$_{50}$ : 0.3 mg/l Rat / 4 hour (Pesticide Manual 2009)

Subchronic toxicity (90 days) - Technical Material : In a 90-day feeding study in rats, Charles River CD rats (10/sex/group) were fed methomyl at dietary levels of 0, 0.5, 2.5 or 12.5 mg/kg/day for 13 weeks. The NOEL is 6.25 mg/kg/day and the LOEL is 12.5 mg/kg/day for rat based on inhibited body weight gain in both sexes and erythroid hyperplasia in the bone marrow of males (EPA, 1998 in NITE 2006).

Chronic Toxicity (2 years) - Technical Material : Not available

Mutagenicity in germ cells : No mutagenicity

Carcinogenicity : No carcinogenic activity

Eye Irritation : Mild eye irritant (rabbits), corneal opacity and iritis were observed at 1 hour after the treatment and completely reversed by 7 days.

Skin Irritation : Non irritant

SECTION 12 - ECOLOGICAL INFORMATION

Acute Toxicity

Fish - Bluegill sunfish (LC$_{50}$ 96 h) : 0.63mg/l
Fish - Fathead minnow (Pimephales promelas) NOEC : 0.076 ppm
Daphnia - Daphnia Magna (LC$_{50}$ 48 h) : 17 µg/l
Daphnia Magna NOEC 21 days : >0.4 ppb
Bird - Bobwhite Quail (LD$_{50}$) : 24.2 mg/l

Bio accumulation : No bioaccumulation, unstable intermediates were converted to acetonitrile and CO$_2$, which were eliminated primarily via respiration and in the urine.
Persistence and degradation by environment: Methomyl is weak to moderately persistent, with a soil half life ($t_{1/2}$) ranging from a few to more than 50 days. Rapidly degraded in soil. DT50 in groundwater samples <0.2 d. Koc 72.

Soil Mobility: Low mobility in soil
 Others adverse effect: Very 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 and 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 (Methomyl 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 (Methomyl Technical)
Marine Pollutant: Yes (Methomyl)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN Number: UN 2757
Class and Packing group: 6.1 and II
Proper shipping name: CARBAMATE PESTICIDE, SOLID, TOXIC (Methomyl 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
3. Toxicity Data of Salim Agrochemical Group’s Product 2015

6. American Conference of Governmental Industrial Hygienist (ACGIH). Table of Exposure Limit for Chemical and Biological Substances. 2017