

IMIPROTHRIN®
TECHNICAL GRADE

WARNING



POISON

Potential Skin Sensitizer

FOR MANUFACTURING USE ONLY

REGISTRATION NO. 27377 PEST CONTROL PRODUCTS ACT

READ THE LABEL AND ATTACHED TECHNICAL BULLETIN BEFORE USING

KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL

GUARANTEE: Imiprothrin.....92.2%
Net Contents:.....Supplied in iron drums of either 20L or 1L

PRECAUTIONS:

Harmful if swallowed or inhaled. Harmful if absorbed through skin or eyes. May cause eye irritation. Do not breathe the vapor and avoid getting on skin or in eyes. Wear protective clothing and rubber gloves. Remove and wash contaminated clothing before reuse. Anyone handling this product should wash themselves thoroughly with soap and water before eating, drinking or smoking.

DO NOT contaminate irrigation / drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DIRECTIONS FOR USE: To be used only in the manufacture of a pesticide which is registered under the Pest Control Products Act. Read Technical Bulletin for formulation details.

FIRST AID: Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

IF IN EYES, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

ENVIRONMENTAL HAZARDS: TOXIC to aquatic organisms.

TOXICOLOGICAL INFORMATION: Treat any signs of poisoning, intoxication, or injury symptomatically. Seek medical attention if indicated.

STORAGE: Keep product in original container while stored. Store product in a cool, dry, well-ventilated place away from seed, feed, fertilizer or other pesticides. Keep away from fire or open flame, or other heat source.

DISPOSAL: Canadian formulators using this product should dispose of unwanted active ingredient and containers in accordance with municipal or provincial regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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IMIPROTHRIN® TECHNICAL GRADE

Pest Control Product Registration Number: 27377

TECHNICAL BULLETIN

Sumitomo Chemical Company, Limited
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Imiprothrin® Technical Grade Technical Bulletin

I. Introduction

A common complaint among consumers is the dissatisfaction with the lack of immediate knockdown from conventional aerosols used against cockroaches. Because of this, consumers feel that cockroaches need repeated and excessive doses of the insecticide. They perceive these products as being less effective than is actually the case, and therefore seek alternative methods for controlling cockroaches. In response to this complaint, Sumitomo Chemical Co., Ltd. of Japan has developed a new compound which provides extremely rapid knockdown activity against cockroaches. This compound is known generically as imiprothrin, coded experimentally as S-41311.

This brochure describes the characteristics of IMIPROTHRIN® Technical Grade, thus enabling formulators to develop products for a new market area based upon its unique activity.

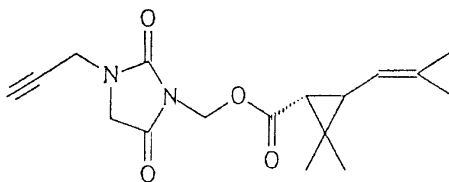
II. Chemical Name and Formula of Imiprothrin

Common name: Imiprothrin

Chemical name: 2,5-dioxo-3-prop-2-ynylimidazolidin-1-ylmethyl (1R)-cis, trans-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate

(1R)-isomer ratio at the acid moiety: 95% (w/w) min. trans-isomer ratio at the acid moiety: 78% (w/w) min.

Chemical structure:



Empirical formula:

$C_{17}H_{22}N_2O_4$

Molecular weight:

318.4

Imiprothrin® Technical Grade Technical Bulletin

IV. Efficacy

The knockdown efficacy of imiprothrin far exceeds that of other compounds due to its extremely rapid action. German cockroaches (*Blattella germanica*) sprayed with imiprothrin formulations are knocked down within seconds. Laboratory tests have shown knockdown values of less than 42 seconds when imiprothrin is applied in amounts as low as 0.3 mg/insect.

We recommend that an effective killing agent be added to imiprothrin products so as to give a combination of extremely rapid knockdown and kill. Examples of such killing agents are cyphenothrin (Gokilaht®), cyphenothrin-S (Gokilaht®-S) or esfenvaterate (Sumi-alpha®). Such combinations of active ingredients provide significantly better efficacy against American and German cockroaches by the direct spray method, residual contact, and dart board methods.

V. Safe Handling and Use Imiprothrin® Technical Grade

Precautions to be Used in Handling and Storage:

- KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL
- If you are pregnant or if you may become pregnant, you should not handle Imiprothrin® Technical Grade.
- Wear the following protective clothing and equipment (all of which must be chemically-resistant): work suit, hat, face-shield, safety glasses or goggles, full or half face air purifying respirator which is NIOSH/MSHA approved for pesticides (choice of respirator should be based upon concentration of vapour), rubber plastic apron, gloves and boots.
- DO NOT contaminate irrigation / drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- Wash protective clothing and equipment after each use.
- Avoid getting this material on your mouth, skin, in your eyes or on your clothing.
- Thoroughly wash all exposed areas of skin with soap and water after handling Imiprothrin® Technical Grade.
- Keep all equipment for handling this material in closed work areas which are adequately ventilated.
- Do not allow waste material from Imiprothrin® Technical Grade, or contaminated equipment, containers or clothing, to be removed from the work area.
- Keep the work area well ventilated so as to minimize inhalation of this material.
- Imiprothrin® Technical Grade should be stored in cool, dry well-ventilated places.
- Do not use this material at high temperatures or near flames.
- Do not expose Imiprothrin® Technical Grade to heat.
- If Imiprothrin® Technical Grade has been stored at temperatures below 5°C, warm the drum at 40-60°C and shake well before using.

VI. Environmental Hazards: TOXIC to aquatic organisms

Imiprothrin® Technical Grade Technical Bulletin

Steps to be taken in case of Spills:

Small Spills:

- If a small spill occurs, immediately soak up the spilled material with a suitable absorbent material, such as saw dust or granular clay.
- Scrub contaminated area with detergent and water.
- Put waste material in a disposable container.
- Wear protective clothing and equipment during the clean up.

Large Spills:

- Dike to prevent runoff.
- Recover liquid for reprocessing or disposal.
- Decontaminate the spill area, tools and equipment by immediately washing them with a suitable solvent (e.g. organic solvent or detergent).
- Dispose of the solution resulting from decontamination as directed below under Waste Disposal Method (below).
- Wear protective clothing and equipment during the clean up.

Disposal: Canadian formulators using this product should dispose of unwanted active ingredient and containers in accordance with municipal or provincial regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

First Aid: Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

- IF IN EYES, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.
- IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.
- IF INHALED, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
- IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.
- Toxicological Information: Treat any signs of poisoning, intoxication, or injury symptomatically.

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Technical Bulletin**

VII. Recommendation to Formulators of End Use Products

In order to avoid over exposing consumers to the compound, the end use products should not be used as space sprays, but should be used as direct sprays to visible insect or crack & crevice treatments to unseen insects. Treatments should be brief and intermittent, not long lasting. Formulators should confirm that their end use products have adequate margin of safety before making them available to the market place.

We believe that the above information is accurate and represents the best information currently available to Sumitomo Chemical Co., Ltd. ("Sumitomo"). To the extent permitted by law, Sumitomo offers no guarantee or warranty of any kind, expressed or implied, with respect to the information contained herein.

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