

MATERIAL SAFETY DATA SHEET - PRECOR® IGR CONCENTRATE

Manufacturer: Sandoz Agro, Inc.
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Emergency Phone: 1-800-248-7763
Transposition Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Preco® IGR Concentrate
Chemical Name/Synonym: (S) -Methoprene: Isopropyl (2E, 4E, 7S) -11 -methoxy-3,7,11 -trimethyl-2,4-dodecadienoate
Chemical Family: Terpenoid
Formula: C₁₉H₃₄O₃
EPA Registration No.: 2724-352
RF Number: 291A
Inventory Control No.: 37768 D

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Wt%</u>	<u>Exposure Limits</u>
(S) - Methoprene: Isopropyl (2E, 4E, 7S) -11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate	65733-16-6	1.0%	Not established
Kerosene (petroleum), hydrotreated	64742-47-8		Not established
Inert ingredients (non-hazardous and/or trade secret)			Not established

3. HAZARD INFORMATION

PRECAUTIONARY	STATEMENT
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<p>CAUTION: HARMFUL IF ABSORBED THROUGH THE SKIN. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.</p>

SIGNS AND SYMPTOMS OF OVEREXPOSURE

At large exposures, may cause headaches, nausea, dizziness, may act as anesthetic, cause drowsiness.

PRIMARY ROUTE OF ENTRY
Dermal/Eye: Yes Oral: Yes Inhalation: No
ACUTE TOXICITY
Oral: LD₅₀: >5,100 mg/kg (highest dose level tested)

Dermal: LD₅₀: >2,100 mg/kg (highest dose level tested)

Inhalation: Unknown

OTHER TOXICOLOGICAL INFORMATION
Skin Irritation: Moderate (rabbit)

Eye Irritation: Minimal (rabbit)

Sensitizer: Not considered a sensitizer

4. FIRST AID MEASURES

Eye:	Flush immediately with gently flowing water. If irritation persists, get medical attention.
Skin:	Wash with plenty of soap and water. If irritation persists, get medical attention.
Ingestion:	Do not induce vomiting. Call a physician or poison control center immediately for guidance.
Inhalation:	Remove to clear air area.
Note to Physician:	Treat symptomatically

5. FIRE FIGHTING MEASURES

NFPA Rating:	Health: 0 Fire: 2 Reactivity: 0
Flammability Class:	Combustible liquid
Flash Point:	145.4°F
Explosive Limits (% of Volume):	Unknown
Extinguishing Media:	Water fog, CO ₂ , dry chemical, foam
Special Protective Equipment	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire Fighting Procedures:	Normal procedures. Do not allow fire fighting water to escape into waterways or sewers.
Combustion Products:	Carbon monoxide and carbon dioxide
Unusual Fire/Explosion Hazards:	None known

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken:	Eliminate all ignition sources. Soak up spill with absorbent material. Place in container for disposal. Do not allow spill to enter waterways inhabited by aquatic organisms.
Absorbents:	Clay granules, sawdust, dirt or equivalent.
Incompatibles:	Oxidizers

7. HANDLING AND STORAGE

Handling:	Avoid contact with skin, eyes, or clothing when handling, mixing, cleaning up liquid. Wash hands, arms and face thoroughly with soap and water after handling product.
Storage:	Store in a cool place. Do not store near heat or open flame.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits:	Not established
Ventilation:	General ventilation is sufficient
Personal Protective Equipment	If prolonged exposure is anticipated users and handlers should wear a MSHA/NIOSH approved vapor/pesticide respirator, impervious gloves, goggles and appropriate clothing to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Light yellow to amber oily liquid with faint aliphatic odor
Boiling Point:	N / A
Melting Point:	N / A
Vapor Pressure (mm Hg):	N / A
Vapor Density (Air = 1):	N / A
Specific Gravity:	0.789 ± 0.010 (H ₂ O = 1)
Bulk Density:	6.6 lbs/gal
Solubility:	Forms an emulsion in water
Evaporation Rate:	N / A
pH:	Not applicable

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Non-reactive
Incompatibility with Other Materials:	Oxidizers
Decomposition Products:	Carbon monoxide, carbon dioxide
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active ingredient(s)]

(S) -Methoprene is not considered as an oncogenic compound. No evidence of compound related gross or histopathologic lesions, or an weight variations or tumorigenic effects was observed at dietary levels up to and including 5,000 ppm (HDT - highest dose tested) in a 2-year chronic toxicity/oncogenicity study in rats.

Also, in mice (18-month chronic toxicity/oncogenicity) (S) -Methoprene produced no compound related effect on body weight, food consumption or survival rate. No gross pathological lesions or tumorigenic effects were observed at levels up to 2,500 ppm (HDT). An unidentified brown pigment was observed in liver cells of some animals of mid and high dose groups. NOEL in this study for mice was 250 ppm.

DEVELOPMENTAL / REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]

(S) -Methoprene did not affect the reproductive performance of rats when tested at levels up to 2,500 ppm over a period of 3 generations. The NOEL for reproductive toxicity in rats was 500 ppm.

No teratogenic effects were observed in mice when female mice were fed (S) -Methoprene at levels up to 500 mg/kg/day during days 7 to 14 of the gestation period. In rabbits, no teratogenic effects were observed at levels up to 2,000 mg/kg/day, the maximum tolerated dose for maternal toxicity. NOEL or maternal and embryotoxicity in rabbit was 200 mg/kg/day fed to pregnant animals during days 7-18 of the gestation period.

MUTAGENICITY [Specific to Active Ingredient(s)]

(S) -Methoprene is not a mutagenic compound. It has been found negative in the following tests. a) Ames Test (in vitro), b) Chromosomal aberration in CHO cells (in vitro) and c) Dominant lethal assay (in vivo test for chromosomal damage) test.

U.S. EPA has evaluated other similar product's toxicity as part of the U.S. registration process. EPA requires extensive toxicity tests be performed before any chemical is approved for use. Based on their review of test results, they have determined that no significant risk to users, the public, or the environment exists when this product is used as indicated on the product label.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Hydrolysis: T1/2 > 4 weeks ((S)) -Methoprene)

Photolysis: T1/2 < 10 hours ((S)) -Methoprene)

Soil half life: ~ 10 days ((S)) -Methoprene)

Water solubility: < 2 ppm ((S)) -Methoprene)

ECOTOXICITY (Active Ingredients Only)

Acute Toxicity fish: LC₅₀ (trout): 760 ppb, (bluegill): > 370 ppb ((S)) -Methoprene)

Acute Toxicity aquatic invertebrates: LC₅₀ (Daphnia): 360 ppb ((S)) -Methoprene)

13. DISPOSAL CONSIDERATIONS

Entire contents and rinsate must be used according to label directions. Triple-rinsed containers may be placed in trash. As a waste material, this product maybe classified as a RCRA hazardous waste due to ignitability. Recommended disposal is by an approved hazardous waste management facility.

14. TRANSPORTATION INFORMATION

DOT49CFR Description: Not regulated as hazardous by U.S. DOT

Freight Classification: Insecticides other than poison, NOI
NMFC # 102120, Class 60

15. REGULATORY INFORMATION

CERCLA (Superfund): Not regulated

RCRA: Regulated due to ignitability

SARA 311 /31 2 HAZARD CATEGORIES

Immediate Health: Yes (irritation)

Delayed Health: No

Fire: No

Sudden Pressure: No

Reactivity: No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

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