



MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:

Cleary Chemical Corp.
178 Ridge Road
Dayton, NJ 08810
(800) 524-1662

EMERGENCY TELEPHONE NUMBERS:

(800) 424-9300 (CHEMTREC, transportation and spills)
(800) 900-4000 (Poison Control Center, human health)
(800) 345-4735 (ASPCA, animal health)

PRODUCT NAME : EMBLEM

CHEMICAL NAME : 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidine carboxamide (iprodione)
(dimethyl[1,2-phenylene]-bis(iminocarbonothioyl))
bis[carbamate] (thiophanate-methyl)

CHEMICAL FAMILY : Dicarboxamide and Thioloophanate fungicides

PRODUCT CODE : EPA Reg. No. 51036-387-1001

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Thiophanate-methyl	19.65	23564-05-8	Not listed	Not listed
Iprodione	19.65	36734-19-7	Not listed	Not listed

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

EMERGENCY OVERVIEW: Off white viscous liquid with slight odor.

- May be harmful if swallowed, inhaled or absorbed through skin.
- Causes slight eye irritation.
- Avoid breathing vapor or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

Symptoms of over exposure are nausea, vomiting, abdominal cramps, and loss of coordination.

POTENTIAL HEALTH HAZARDS:

EYE - Moderately irritating to the eyes. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN - Prolonged or repeated skin contact may cause irritation.

INHALATION - Slightly irritating to respiratory tract

INGESTATION - May be harmful if swallowed.

SECTION 4 - FIRST AID MEASURES

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 center 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 center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Treat symptomatically. No specific antidote available. Consideration should be given to overexposure to other products.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT (method): > 93 C (165 F) (TCC)

FLAMMABLE LIMITS (LFL-UFL): Unknown.

FIRE AND EXPLOSION HAZARD: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

FIRE FIGHTING EQUIPMENT: Full fire fighting turn-out gear (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS: Oxides of nitrogen and carbon.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Section 8 of this document.

Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

SMALL SPILL: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water. This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Do not reuse this container.

STORAGE: Keep away from food, feed and drinking water.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS (8 HOUR TWA): (Refer to Section 3)

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - Safety glasses with side shields.

CLOTHING - Long-sleeved shirt and long pants, Shoes plus socks, Chemical resistant apron when cleaning equipment, mixing, or loading.

GLOVES - Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), viton

RESPIRATOR – When handling in enclosed areas where exposure limits may be exceeded, use a NIOSH approved respirator with any N, R, P or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Off-white viscous liquid.

ODOR: Slight.

Molecular Weight (Iprodione): 330.17

Molecular Formula (Iprodione): C₁₃H₁₃Cl₂N₃O₃

Molecular Weight (Thiophanate Methyl): 342.4

Molecular Formula (Thiophanate Methyl): C₁₂H₁₄N₄O₄S₂

DENSITY: 1.145 g/l (9.55 lbs./gl)

pH: 5.5 - 6.0

VAPOR PRESSURE: Unknown.

% VOLATILE: < 5%.

WATER SOLUBILITY: Dispersible.

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable, however may decompose if heated.

CONDITIONS TO AVOID: Avoid temperatures above 150°F and below 20°F.

INCOMPATIBILITY WITH OTHER MATERIALS: Alkaline and acidic conditions, Oxidizing materials, and some copper compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen, and carbon.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY for Thiophanate Methyl:

Oral LD ₅₀ (rat)	-	> 5,000 mg/Kg
Dermal LD ₅₀ (rat)	-	> 2,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 1.8 mg/L/4 hour
Eye Irritation (rabbit)	-	Slight
Skin Irritation (rabbit)	-	Slight
Sensitization (guinea pig)	-	Non-sensitizer

ACUTE TOXICITY for Iprodione:

Oral LD ₅₀ (rat)	-	> 2,000 mg/Kg
Dermal LD ₅₀ (rat)	-	> 1,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 3.5 mg/L/4 hour
Eye Irritation (rabbit)	-	Slight
Skin Irritation (rabbit)	-	Slight
Sensitization (guinea pig)	-	Non-sensitizer

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Inhalation may aggravate existing tendency to respiratory or bronchial infections and existing skin sensitivities.

CARCINOGEN STATUS:

OSHA	-	Not listed.
NTP	-	Not listed.
IARC	-	Not listed.

MUTAGENIC DATA: No evidence of effects during *in vivo* or *in vitro* studies.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is toxic to fish and invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish in adjacent areas. Do not contaminate water when disposing of equipment washwaters.

Fish Toxicity for Thiophanate Methyl (Technical):

96 hour LC₅₀, Rainbow trout – 7.8 ug/L

Avian Toxicity for Thiophanate Methyl (Technical):

Oral LD₅₀, Bobwhite Quail - >5,000 mg/kg

Fish Toxicity for Iprodione (Technical):

96 hour LC₅₀, Rainbow trout – 6.7 ug/L

96 hour LC₅₀, Bluegill – 2.2 ug/L

Avian Toxicity for Iprodione (Technical):

Oral LD₅₀, Bobwhite Quail - 930 mg/kg

BEE TOXICITY: Non-toxic to bees.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Pesticide wastes are toxic/acutely hazardous. Dispose of in accordance with applicable Federal, state and local laws and regulations.

CONTAINER: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Agricultural Fungicide, Liquid, N.O.I.B.N.

DOT HAZARD CLASS: N/A

UN NUMBER: N/A

DOT PACKING GROUP: N/A

DOT PRIMARY/SECONDARY LABEL: N/A

DOT PRIMARY/SECONDARY PLACARD: N/A

DOT EMERGENCY RESPONSE GUIDE #: N/A

SECTION 15 - REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated

CERCLA REPORTABLE QUANTITY: N/A

SARA TITLE III STATUS:

302 Extremely Hazardous Substance

- No

311/312 Hazard Categories

- Yes, Immediate, Delayed

313 Toxic Chemicals

- Thiophanate Methyl (CAS # 23564-05-8)

CALIFORNIA PROP 65 STATUS: Listed (cancer), Developmental toxin.

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Cleary Chemical Corporations knowledge. Cleary makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

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