

Nichino America, Inc. Torac® Insecticide

1. IDENTIFICATION

Product Name: Torac Insecticide
General Use: Insecticide
Product Description: Emulsifiable Concentrate
EPA Reg. No.: 71711-31

Manufacturer
Main Headquarters: Nihon Nohyaku Co., Ltd., Kyobashi OM Building, 19-8
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Emergency and Health and Safety Inquiries: (800)-348-5832 (24-hours)
In case of fire or spills: (800) 424-9300 (24 hours)
In case of international shipments: (703) 527-3887 (24 hours)

2. HAZARD(S) IDENTIFICATION

Emergency Overview: Warning: May be fatal if swallowed. Causes skin irritation. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing spray mist. Do not get into eyes, on skin or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Very highly toxic to fish and aquatic invertebrates.

Physical Hazards: None.

Potential Health Effects: Primary route(s) of entry: Ingestion, eye skin, and inhalation

Ingestion: May be fatal if swallowed.

Eye: Causes substantial but temporary eye injury.
Skin: Harmful if absorbed through skin.
Inhalation: Harmful if inhaled.
Chronic (cancer information): The active ingredient is not classified as a carcinogen by NTP, IARC, or OSHA.

Refer to Section 11 for detailed toxicological information on tolfenpyrad and the other ingredients.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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|------------------------------|--------------------------------|--------------|
| Chemical Ingredients: | Active Ingredient: tolfenpyrad | 15.0% |
| | Other Ingredients*: | <u>85.0%</u> |
| | Total: | 100.0% |

*Contains petroleum distillates

Specific chemical identity of other ingredient(s) and percentage of composition withheld as trade secret.

Chemical Name of Active Ingredient (CAS): 1H- Pyrazole-5 –carboxamide, 4-chloro-3-ethyl-1-methyl-N-[[4-(4-methylphenoxy) phenyl]methyl]-

CAS Registry No.: 129558-76-5

4. FIRST AID MEASURES

Ingestion 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.

Eye Contact Hold eye open and rinse slowly and gently with water

for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact

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.

Inhalation

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

5. FIRE FIGHTING MEASURES

Flash Point:

96° C (205° F)

Fire and Explosion Hazards:

No known explosion characteristics.

Extinguishing Media:

Water, foam, dry powder, or carbon dioxide.

Special Fire-Fighting Procedure:

Firefighters should wear positive pressure, self-contained breathing apparatus. Avoid permitting extinguishing media, such as water, foam, and dry chemicals, flow into ponds, rivers, and lakes.

Hazardous Combustion Products:

Carbon dioxide, carbon monoxide, and nitrogen oxides

6. ACCIDENTAL RELEASE MEASURES

General and Disposal: Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with federal or local disposal regulations (see Section 13). Notify the appropriate authorities immediately (see Section 15 for any applicable Reportable Quantity (RQ)). Report to authorities if water enters watercourse or sewer.

Land Spill or Leak: Liquid spills on the floor or other impervious surfaces should be contained or diked and then absorbed with sawdust, sand, bentonite, or other absorbent clay. Collect contaminated absorbent, and place it in a metal drum. Thoroughly scrub the floor or other impervious surface with a strong industrial-type detergent and rinse with water.

Liquid spills that soak into the ground should be dug up and placed in metal drums. When a large spill or leakage is found, wear protective clothing and respirator to avoid exposure.

Avoid contaminated absorbents or water flow into ponds, rivers, and lakes, due to the danger of acute toxicity to aquatic organisms.

7. HANDLING AND STORAGE

Handling Precautions:

- Open container with care.
- Use adequate ventilation.
- Avoid handling near an open flame or heat source or ignition source.
- Do not contaminate water by cleaning of equipment or disposal of waste.
- Avoid contact with skin, eyes, or clothing.
- Do not eat, drink, smoke, or chew gum or tobacco while handling this product and until hands and face are thoroughly washed with soap and water.
- Do not use the toilet before thoroughly washing hands.
- Remove and wash contaminated clothing before reuse.

Storage Precautions:

- Keep container closed. Store in original container.
- Do not store near heat or open flame.
- Keep container at room temperature or store in a cool, dry place.
- Avoid storage in direct sunlight, excessive heat or cold.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

(Local exhaust): Ventilation may be necessary under certain confined conditions. If practical, use ventilation at the source of air

contamination. Control airborne contaminants below the exposure guidelines (see below for any applicable OSHA/ACGIH exposure limits).

Personal Protective Equipment (PPE):

Eye/Face Protection: Wear protective eyewear (safety glasses for chemical workers, goggles or face shield) to prevent eye contact.

Skin Protection: Wear long-sleeved shirt and long pants, chemical-resistant footwear plus socks, and chemical-resistant gloves made of material such as barrier laminate or Viton. Remove and wash contaminated clothing before reuse.

Respiratory Protection: Ensure good ventilation. Avoid breathing spray mist. If ventilation is inadequate, use approved respiratory protection equipment (combination or gas/vapor respirator) when handling large quantities or handling large spills.

Exposure Limits:

| Ingredient: | ACGIH TLV | OSHA PEL |
|---------------------|--|--------------------------------|
| 1-methylnaphthalene | TWA: 0.5 ppm skin notation | None |
| 2-methylnaphthalene | TWA: 0.5 ppm skin notation | None |
| Naphthalene | TWA: 10 ppm STEL: 15 ppm; skin notation | 10 ppm (50 mg/m ³) |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|----------------------------|---|
| Appearance: | Pale yellow liquid |
| Odor: | Hydrocarbon odor |
| Physical state: | Liquid |
| pH: | 6.1 (as a 1% w/w solution) |
| Vapor pressure | 4 x 10 ⁻⁵ Pa at 25°C (technical active ingredient) |
| Density | 1.03 g/cm ³ at 20°C |
| Kinematic Viscosity | 12.9 cSt at 20°C and 6.52 cSt at 40°C |

10. STABILITY AND REACTIVITY

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|----------------------------|--|
| Stability | Stable under ambient temperatures (1°C to 26° C) for two years |
| Conditions to avoid | None known |

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|---------------------------------|-------------------|
| Auto ignition | No data available |
| Hazardous polymerization | No data available |

11. TOXICOLOGICAL INFORMATION

The following data were developed using **tolfenpyrad 15% EC**:

Acute Studies:

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|--|---|
| Oral LD₅₀ (rat): | 102 mg/kg (male) 83 mg/kg (female) |
| Dermal LD₅₀ (rat): | >2000 mg/kg |
| Inhalation LC₅₀ (rat): | 542 mg/m ³ (0.542 mg/L) (4 hrs.) |
| Eye irritation (rabbit): | Causes substantial but temporary eye injury |
| Skin irritation (rabbit): | Causes skin irritation |
| Skin sensitization (guinea pig): | Not sensitizing |

The following data were developed using **tolfenpyrad technical**:

Subchronic and Chronic Effects:

In a 13-week sub-chronic oral toxicity study in rats, the no effect level was 1.0 mg/kg/day. Low body weight and increased relative liver and kidney weights were observed as were some hematological and blood chemistry parameters. These effects dissipated after withdrawal of treatment.

In a 13-week dietary toxicity study in mice, the no effect level was 46.2 mg/kg. Effects observed were decreases in food consumption.

In a long term study in beagle dogs, the NOAEL was 5 mg/kg. Effects observed were emesis and decreases in body weight. Liver effects were also observed.

Cancer Effects:

Tolfenpyrad was tested in life-time studies in rats and mice. There was no evidence of carcinogenicity in the rat or mice at the doses tested.

In the two-year chronic oral study in rats, the NOAEL was 0.6 mg/kg/day, based on decreased body weight. Liver and kidney effects were observed.

In the 78-week dietary oncogenicity study in mice, the NOAEL was 2.2 mg/kg/day, with decreases in body weight observed.

Teratogenicity (Birth Defects):

Tolfenpyrad is not a developmental toxicant.

Reproductive Effects:

Tolfenpyrad is not a reproductive toxicant.

Neurotoxicity:

There was no evidence of neurotoxicity after oral exposure in acute or subchronic studies conducted with tolfenpyrad.

Immunotoxicity:

No significant treatment-related effects on the immune system were observed in a developmental immunotoxicity study in rats.

Mutagenicity (Genetic Effects):

Tolfenpyrad was not mutagenic or genotoxic.

Toxicity of other components:

Solvent naphtha (petroleum), heavy aromatic

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs.

Naphthalene

Naphthalene caused cancer in laboratory animal studies but the relevance of these findings to humans is uncertain. Naphthalene is listed as "reasonably anticipated to be a human carcinogen" by NTP and "possibly carcinogenic to humans (Group 2B)" by IARC.

N-Methyl-2-pyrrolidone

Human experience has demonstrated severe dermatitis (e.g., blisters, cracking, edema, and redness) upon prolonged or repeated contact. Prolonged contact may induce defatting of skin which may result in redness and/or cracking. Reproductive / developmental effects were observed in rats and rabbits. These effects occurred in the presence of maternal toxicity. The relevance of these findings to humans is unknown.

12. ECOLOGICAL INFORMATION

Ecological data were developed using tolfenpyrad technical.

Environmental Precautions:

Tolfenpyrad technical is very highly toxic to fish and aquatic invertebrates.

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees or other pollinating insects are visiting the treatment area. Application must be made at least 8 hours prior to bees foraging.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having medium to high potential for reaching both surface water and aquatic sediment via runoff for several weeks after application. A level, well-maintained vegetative filter (buffer) strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

13. DISPOSAL CONSIDERATION

General Disposal Guidance:

Any disposal practice must be in compliance with all federal, state/provincial, and local laws and regulations. State (provincial) and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Chemical additions, processing, storage or otherwise altering this material may make the waste disposal information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

Refer to appropriate federal (RCRA: 40 CFR.261), state/provincial, or local requirements for proper classification information. For regulatory information on the ingredient components, see Section 15.

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining content into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or reconditioning if appropriate 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.

14. TRANSPORT INFORMATION

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|--------------|---|
| DOT: | UN 2902: Pesticides, liquid , n.o.s. (tolfenpyrad) Class 6.1, PG III |
| IATA: | UN 2902, Pesticides, liquid, toxic, n.o.s., (tolfenpyrad), Class 6.1, PG III |
| IMDG: | UN 2902, Pesticides, liquid, toxic, n.o.s.(tolfenpyrad), Class 6.1, PG III, MARINE POLLUTANT, EMS: F-A, S-F |

15. REGULATORY INFORMATION

U.S. Federal Regulatory Information

EPA Registration Number: 71711-31

TSCA Inventory: Registered pesticide; exempt from TSCA

SARA Title III Notification and Information

Section 302 (EHS) Ingredients: None

**Section 304 (EHS)
or CERCLA Ingredients (RQ):**

| Name | CAS # | Final Reportable Quantity |
|---------------------------------|------------|---------------------------|
| Calcium dodecylbenzenesulfonate | 26264-06-2 | 1,000 lbs. (454 kg) |
| Naphthalene | 91-20-3 | 100 lbs. (45.4 kg) |

Section 313 Ingredients: Naphthalene CAS # 91-20-3
N-methyl-2-pyrrolidone CAS #872-50-4

U.S. State Regulatory Information:

U.S. State Right-to-Know (RTK) Ingredients:

- N-methyl-2-pyrrolidone
- 2-ethyl hexanol
- Naphthalene

California Proposition 65 List:

- N-methyl-2-pyrrolidone: *This product contains a chemical known in the state of California to cause developmental effects.*
- Naphthalene: *This product contains a chemical known in the state of California to cause cancer.*

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| 16. OTHER INFORMATION |
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HMIS® Hazard Rating:

Health: 3*

Fire: 1

Physical Hazard: 0

*indicates both acute and chronic health hazard

NFPA Hazard Rating:

Health: 3
Fire: 1
Reactivity: 0
Specific Hazard: None

Prepared by: Regulatory Affairs

Date: 2/2/2015

Reason for Editing: Updated the trademark [™] symbol to the registered [®] symbol for Torac[®].

Disclaimer of Expressed and Implied Warranties:

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with FIFRA label instructions.