

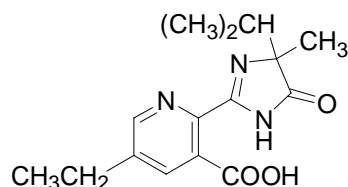
Material Safety Data Sheet

Imazethapyr 98% Technical

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Name: Imazethapyr 98% Technical

Structural formula:



Molecular formula: C₁₅H₁₉N₃O₃

Molecular Weight: 289.3

Chemical Abstracts name:

(±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid

IUPAC name

(R,S)-5-ethyl-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl) nicotinic acid

Company Identification:

Manufacturer: Shanghai Tenglong Co., Ltd.

Address: Yangpu building 24B, No.2005, Huangxing Road, Yangpu Shanghai, China

Telephone: +86 21 5506 3225

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Purity (% w/w)
Imazethapyr	81335-77-5	98 Min.
Inert ingredients		2 Max.

3. HAZARDS IDENTIFICATION

Emergency overview:

Thermal decomposition and burning may form toxic by-products.

For large exposures or fire, wear personal protective equipment.

Highly to slightly toxic to fish and aquatic organisms.

Keep out of drains and water courses.

Potential health effects:

Effects from overexposure result from coming into contact with the skin and eyes. Symptoms of overexposure include nasal discharge.

4. FIRST-AID MEASURES

Inhalation: Remove person from contaminated atmosphere. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

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Skin contact: Remove contaminated clothing while washing with copious quantities of water and soap for 15 minutes. If skin is irritated refer for medical advice.

Eyes contact: Flush with plenty of water (eyelids may have to be held open). Get medical attention if irritation occurs and persists.

Ingestion: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

Notes for the physician: This product has low oral, dermal and inhalation toxicity. It is non-irritating to the eyes and skin. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Fire/explosion hazards: Slightly combustible. This material may support combustion at elevated temperatures.

Fire fighting procedures: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Hazardous decomposition products: Carbon monoxide and/or carbon dioxide, oxides of nitrogen, chlorine and hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear waterproof overalls, safety goggles, rubber boots and nitril rubber or PVC gloves. Respiratory protection must be used depending on the concentrations in the environment or on the extension of the spill/release. In this case, choose self-contained breathing apparatus.

Environmental precautions: Avoid contamination of surface waters sealing the entrance of the rain water galleries (culverts). Do not allow the residues of the released product reach water collections.

Cleaning methods: To clean and neutralize spill areas, spray the area with a 20% solution of potassium hydroxide in methanol. Cover the treated area with plastic and let stand for 24 hours. Remove the covering and place in a drum for later disposal. Wash the area, three times, with a strong soap and rinse with water. If spill occurs on a wooden surface, repeat the entire process again. Absorb, as above, any excess liquid and add to the drums of waste already collected.

7. HANDLING AND STORAGE

Handling and Storage:

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. For re-circulation directions, refer to the product label under "Mixing and Handling" instructions, for "Bulk/Mini-Bulk Containers". Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes and face protection: For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

Protective clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Hygiene measures: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

Respiratory: For splash, mist or spray exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light brown to yellowish crystal

Specific gravity: 1.10 to 1.12 g/ml at 21°C

Melting point: 169-173°C

Boiling point: decomposition at 180°C

Vapour Pressure: <0.013mPa (60°C)

Flash point: >93°C

pH: 3.0-5.0

Flammability Limits: Not determined

Kow: 11 at pH 5; 31 at pH 7; and 16 at pH 9

Solubility in water: (distilled) 0.14 g/ml at 25°C

Solubility in other solvents: Soluble in dimethyl sulfoxide, methanol, methylene chloride; moderately soluble in acetone and 2-propanol; slightly soluble in toluene; very slightly soluble in heptane.

10. STABILITY AND REACTIVITY

Conditions to avoid: Excessive heat and fire

Chemical stability: The product is stable under normal temperature and storage conditions.

Polymerization: Will not occur

Hazardous decomposition products: Carbon monoxide and/or carbon dioxide, oxides of nitrogen, chlorine and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD₅₀ in rats: > 5,000 mg/kg

Dermal LD₅₀ in rats: > 5,000 mg/kg

Inhaling LC₅₀: 3.27mg/L

Local Effects:

Skin irritation in rabbits: The product is considered slightly irritating.

Eye irritation rabbits: The product is considered slightly irritating

Chronic toxicity:

Mutagenicity: The product is considered non-mutagenic.

Carcinogenicity: The product is considered non-carcinogenic.

Teratogenicity: The product is considered non-teratogenic.

Reproductive effects: The product is considered as having no reproductive effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Not toxic to fish. LC₅₀ (96 hr) for rainbow trout is 340 mg/L.

LC₅₀ (96 hr) for bluegill sunfish is 420 mg/L.

LC₅₀ (96 hr) for channel catfish is 240 mg/L.

Acute toxicity – Daphnia: EC₅₀ (48 hr) is >1000 mg/L.

Acute toxicity – Other Organisms: Not toxic to birds. LD₅₀ for quail is >2150 mg/kg.

Not toxic to bees. LD₅₀ >100 µg/bee.

13. DISPOSAL CONSIDERATIONS

All drums may be returned to the manufacturer provided they are clean, serviceable, have bungs and plugs in place and are free of surface chemical residues. Unserviceable drums should be triple rinsed with water, have the liner removed (where applicable) and be crushed to prevent re-use. Disposal of drums and liners may be permitted into a tip after approval from the local authority.

Treatment and disposal methods:

Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

Empty container: Non-returnable containers that held this material should be cleaned, prior to disposal, by triple rinsing. Containers which held this material may be cleaned by being triplerinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

14. TRANSPORT INFORMATION

UN Number: N/A

Risk Class: 9

WHO: III

THE PRODUCT IS NOT CLASSIFIED AS DANGEROUS GOODS

15. REGULATORY INFORMATION

Regulations:

Information on risk and safety according to the label:

Avoid eyes, skin or clothing contact with the product.

Avoid inhale vapors or mixtures.

Handle the product only under appropriate ventilation

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Store in an appropriate packaging, duly closed.
Immediately remove and wash contaminated clothing.
Do not eat, drink or smoke during product handling.
When opening a packaging, do it in a way to avoid leaks.
Do not use damaged and/or defective PPE and applying equipment.
Do not wash packaging in lakes, fountains, rivers and other water courses. Avoid water contamination.
Discard the packaging and residues of the product correctly.

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.