

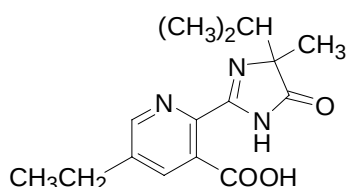
Material Safety Data Sheet

Imazethapyr 10% SL

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Name: Imazethapyr 10% SL

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 Agrochem Co., Ltd.

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

Telephone: +86 21 5506 3225

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Purity (% w/v)
Imazethapyr	81335-77-5	10 Min.
Inert ingredients		Up to 1L.

3. HAZARDS IDENTIFICATION

Flammability: Non-flammable

Chemical hazard: Imazethapyr

Biological hazard: Not applicable

Reproductive hazard: Not applicable

Health effects: eyes: Mild irritant to rabbit eyes (reversible).

Health effects: skin: Mild irritant to rabbit skin. Not a skin sensitizer. Dermal LD₅₀ (calculated) for rabbits >2000 mg/kg.

Health effects: ingestion: Harmful if swallowed. Acute oral LD₅₀ for rats >5000 mg/kg.

Health effects: inhalation: Unlikely to cause harmful effects under normal conditions and use.

Carcinogenicity: Not carcinogenic

Mutagenicity: Not mutagenic

Neurotoxicity: Not neurotoxic

4. FIRST-AID MEASURES

Product in eye: Flush eyes with clean water for at least 15 minutes, holding eyelids apart and call a physician. Use safety goggles.

Product on skin: Strip off all contaminated clothing and thoroughly wash body with soap and water. Get medical attention if irritation occurs. Persons providing first aid must wear gloves to avoid self-contamination.

Product ingested: Induce vomiting by tickling the back of the throat. NOTE: Never give anything by mouth to an unconscious person. Immediately call a physician.

Product inhaled: Remove patient to well ventilated area and loosen clothing around the neck.

Further medical treatment: No specific antidote is known!

Ingestion of in excess of 60 ml in a child and 240 ml in an adult may produce signs and symptoms of ethylene glycol poisoning, including severe metabolic acidosis, oxaluria, hypocalcemia and renal failure due to crystaluria. Treat symptomatically. Persons providing first aid must wear gloves to avoid self-contamination. Treatment with intravenous bicarbonate to combat acidosis and ethanol to inhibit the metabolism of the glycol to oxalate may be necessary.

Symptomatic treatment and supportive therapy as indicated.

5. FIRE-FIGHTING MEASURES

Extinguishing media: For small fires, use foam, carbon dioxide, dry powder or halon extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Water can be used for cooling of unaffected stock, but avoid the accumulation of polluted run-off from the site. Contain fire control water for later disposal.

Specific fire fighting methods: (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with spray water.

Special hazards: Generating poisonous and corrosive fumes. Keep upwind.

Protective clothing: Fire may produce irritating or poisonous vapours, mists or other products of combustion. Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear protective clothing according to operator safety during removal of spillage. Wear eye protection, chemically resistant gloves, boots and coveralls.

Cleaning procedure: Soak up with absorptive material such as sand, soil, diatomaceous earth, etc. Prevent product from spreading and collect into specially marked, tightly closing containers. Treat contaminated areas with water containing soda or detergent. Collect washings to avoid any contamination of surface and ground



water, water supplies and drains. Heavily contaminated soil layers should be removed and disposed of in an approved way.

Disposal: Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Ventilation required. Keep away from: sparks, open flame and direct sunlight.

Storage: Protect from temperatures above: 40 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures:

Respiratory protection: Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles.

Eye protection: Safety goggles with side-shields.

Hand protection: Suitable chemical resistant safety gloves (e.g. nitrile rubber (.4mm)).

Other protective equipment: Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.

General Safety & Hygiene measures: Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use. Wash hands and face before breaks and after work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light yellow transparent liquid

Odor: Slight amine odor

pH: 6.8-7.5

Density: 1.03 g/l at 20 °C

Flash point: Non flammable

Flammability Limits: Not determined

Solubility in Water: Emulsifiable

10. STABILITY AND REACTIVITY

Conditions to avoid: Avoid excessive temperatures.

Materials to avoid: Acts as a mild oxidant in the presence of zinc, brass, aluminium and cold rolled steel.

Hazardous reactions: No hazardous reactions if stored and handled as prescribed/indicated.

11. TOXICOLOGICAL INFORMATION

Toxicity: The acute oral LD₅₀ for technical Imazethapyr was reported to be >5000 mg/kg for rats. The acute inhalation LC₅₀ for rats exposed to Imazethapyr is 3.27 mg/L. The dermal LD₅₀ for rabbits exposed to technical Imazethapyr was >2000 mg/kg. It was found to be slightly irritating to the rabbit eye, with complete recovery in 7 days. The technical material was found to be slightly irritating to the skin of male rabbits.

Formulated product: The oral LD₅₀ of a 110g/L liquid formulation of Imazethapyr was also >5000 mg/kg for the rat and rabbit. The LC₅₀ was >2.67 mg/L. The dermal LD₅₀ was >5000 mg/kg. The liquid formulation was non-irritating to the rabbit eye and skin.

Chronic Toxicity: 90-day dietary subchronic toxicity studies in rats and dogs had a No Observable Effect Level (NOEL) of 10,000 ppm, the highest dose tested. A 1-year feeding study in dogs fed diets containing of 0, 1,000, 5,000, or 10,000 ppm reported a NOEL of 1,000 ppm (25 mg/kg/day). It appears that Imazethapyr has no reproductive effects, or teratogenic, mutagenic or carcinogenic properties.

Organ Toxicity: No information was found.

Fate in Humans and Animals: No information was found.

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on Birds: not harmful to birds studied either in acute or 8 day studies.

Effects on Aquatic Organisms: Does not appear to be harmful to either fish or Daphnia magna (water flea).

Effects on Other Animals (Nontarget species): The contact LD₅₀ for honey bees was >100µg/bee.

ENVIRONMENTAL FATE

Breakdown of Chemical in Soil and Groundwater: The formulated product does not leach through the soil. It is weakly to moderately adsorbed and is not lost from the soil through volatilization. Low mobility, low risk of underground water contamination and low bioaccumulation potential.

Half life: 60-90 days in the field and 158 days in laboratory conditions. Degradation is mainly by photolysis and microbial action.

Breakdown of Chemical in Surface Water: No information was found.

Breakdown of Chemical in Vegetation: The formulated product is readily absorbed through the roots and foliage. It is translocated in both xylem and phloem tissues and accumulates in growing points.

For Imazethapyr:

LD₅₀ Bird: mallard: >2150mg/kg LD₅₀ bobwhite quail: >2150mg/kg

LC₅₀ Fish: bluegill sunfish: 420mg/L LC₅₀ rainbow trout: 340mg/L

EC₅₀ Algae: Selenastrum capricornutum >1000mg/L

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

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.

Tenglong Agrochem