

MATERIAL SAFETY DATA SHEET

PRODUCT : Imazethapyr 10% SL

PRODUCT DESIGNATION : Herbicide

Section 1. Product & Company Identification

Common Name : Imazethapyr
Grade : Formulation
Active Ingredient : Imazethapyr
Chemical Name of Active : (RS)-5-ethyl-2-(4-isopropyl-4-methyl-5-oxo-2-
Ingredient (IUPAC) imidazolin-2-yl)nicotinic acid
Chemical Family of A. I. : imidazolinone
Molecular Formula of A. I. : C₁₅H₁₉N₃O₃
Molecular Mass of A. I. : 289.3 g/mol
Manufacturer & Supplier : **M/s United Chemicals**
Head office:B-371, 1st Floor, Meera Bagh, New Delhi,
Factory:15/1, 15/2, 15/3, Industrial Estate, Vidisha,
(M.P)
Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

<u>Name of Components</u>	<u>Concentration% w/w</u>
Imazethapyr	10.00% w/w
Inert Ingredients	90.00% w/w
TOTAL	100.00% w/w

Section 3. Hazards Identification

Likely routes of exposure: Ingestion, skin and eye contact.

Eye and Skin contact: May cause mild but temporary irritation to eyes, due to inert. Unlikely to cause more than mild discomfort, which should disappear once contact ceases. May cause slight irritation to the skin, due to inert.

Ingestion:

Harmful. The acute toxicity to imazethapyr for man is thought to be low. May cause mild irritation to respiratory tract. No hazards in normal use, is expected.

Section 4. First Aid Measures

Inhalation : Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Keep the affected person warm and at rest. Treat symptomatically and supportively. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately if effects persist.

Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, seek medical advice immediately.

Eye contact: Immediately flush contaminated eyes with gently flowing clean water for 20 minutes, occasionally lifting upper and lower lids until no evidence of chemical remains (approximately 15 to 20 minutes). Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention if irritation persists.

Ingestion: Seek medical advice immediately and show the container, label, or this Data Sheet. DO NOT induce vomiting. If the patient is alert and conscious, have the patient to rinse mouth thoroughly with water. Treat respiratory difficulty with artificial respiration and oxygen.

Advice to physician: No specific antidote is available. Treat symptomatically and supportively when required. If large amounts have been ingested, perform gastric lavage and administer activated charcoal.

Section 5. Fire Fighting Measures

Flash point: Not Applicable. This material is non-flammable.

Extinguishing Media: For small fires, use foam, carbon dioxide, dry powder or halon extinguishing agents. For large fires, use foam or water-fog; avoid use of water jet. Contain run-off water with, for example, temporary earth barriers.

Fire Fighting: Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways. Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment: Fire may produce irritating and/or toxic vapours, mists or other products of combustion (carbon dioxide, carbon monoxide, nitrogen dioxide, nitrogen oxide, hydrocarbons). Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus

Section 6. Accidental Release Measures

Personal Protection : Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection see Section 8. Tough.

Environmental Precautions: Imazethapyr is slightly toxic to fish and very toxic to aquatic plants. This product is an environmentally hazardous substance. Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill:

Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label

drums with its content and dispose it in accordance with local regulations. Open burning or dumping of this material is prohibited. Do not get water inside containers.

Section 7. Handling & Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid inhalation of spray and vapour. Use with adequate ventilation. Do not eat, drink or smoke while working. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Not to be stored next to feeds, food and water supplies. Local regulations should be complied with.

Section 8. Exposure Control, Personal Protection

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: It is usually safe to use the product without respirator. Where exposure through inhalation may occur when handling and or using the product, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

Clothing: Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves: Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection: The use of chemical resistant goggles or face shield.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

Section 9. Physical and Chemical Properties

Appearance / state	: Light brown viscous liquid.
Colour	: Light brown
Odour	: Ammonium like odour
Flash point	: Not flammable
Auto Ignition Temp	: Not flammable
Corrosiveness	: not corrosive
Density	: $1,035 \pm 0,05 \text{ g/cm}^3$.
Water solubility	: Soluble in water
pH	: 9.1 and 8.9 of 1% aqueous dilution

Section 10. Stability & Reactivity

Stability: Stable. Avoid strong oxidizing agents and sources of heating.

Storage stability: Stable for a period of 2 years under normal warehouse conditions.

Hazardous decomposition: Fire may produce carbon dioxide, carbon monoxide, nitrogen dioxide, nitrogen oxide and hydrocarbons.

Section 11. Toxicological Information

Acute Oral Toxicity LD₅₀ for rats : >5000 mg/kg

Acute Dermal Toxicity LD₅₀ Rabbit : >2,000 mg /kg

Acute Inhalation LC₅₀ (4h) for male and female rats : >3.27 mg/l air(Technical)

Eye Irritation Rabbit May cause mild but temporary irritation to eyes

Skin Irritant Rabbit : Slightly irritant

Skin sensitization Guinea pig : Not a skin sensitizer

Section 12. Ecological Information

Toxicity to Bird : LC50(5 d) dietary, Mallard duck : > 2150 mg/l

Toxicity to fish : LC50(96 h) Rainbow trout: > 340 mg/l

Daphnia magna : EC50 (48h) : >1000 mg/l

Toxicity to Algae : EC50 (5D) green : 50 mg/l

Toxicity to Honey bee : LD50 (48 h) Apis mellifera : > 24.6 µg/bee

Section 13. Disposal Consideration

PESTICIDE DISPOSAL: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. This product is considered a marine pollutant. Comply with local legislation applying to waste disposal.

CONTAINER DISPOSAL: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed. TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.

Section 14. Transport Information

IMDG Classification

Shipping name : Environmentally hazardous substance, Liquid, N.O.S.
(imazethapyr ammonium salt)

Class : 9

Packing group : III

UN number : 3082

Marine pollutant : Yes

Section 15. Regulatory Information

Risk phrases:

R 22 Harmful if swallowed.

R 36/38 Irritation to eyes and skin.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S 1/2 Keep locked up and out of the reach of children.

S 13 Keep away from food, drink and animal feedingstuffs.

S 20/21 When using do not eat, drink or smoke. **S 24/25** Avoid contact with skin and eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 35 This material and its container must be disposed of in a safe way.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION