



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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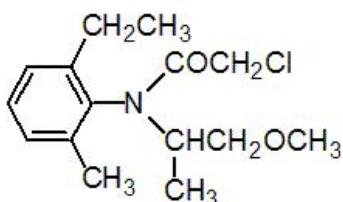
1. Chemical Product Identification

Common Name: Metolachlor 96% TC

Molecular Formula: C₁₅H₂₂ClNO₂

Molecular Weight: 283.8

Structural Formula:



Chemical Name: 2-chloro-*N*-(6-ethyl-*o*-tolyl)-*N*-[(1*RS*)-2-methoxy-1-methylethyl]acetamide

Form: Transparent liquid

Color: Yellow brown

Odor: Odorless

CAS No.: 51218-45-2

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Metolachlor	51218-45-2	96
Other ingredients	---	4

3. Hazards Identification

Risk Phrases:



R65: Harmful: may cause lung damage if swallowed.

Safety Phrases:

S2: Keep out of reach of children.

S13: Keep away from food, drink and animal feeding stuffs.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

4. First Aid Measures

Ingestion: If swallowed DO NOT induce vomiting. Wash mouth out with water and give water to drink. Do not give anything by mouth to a semi-conscious or unconscious person.

Obtain medical advice.

Skin: Immediately wash affected areas thoroughly with soap and water until chemical is removed. Remove contaminated clothing and launder before re-use.

Eye: If in eyes, hold eyelids open and wash with copious amounts of water until chemical is removed. Seek medical advice if irritation develops or persists.

Inhalation: Remove affected person to fresh air until recovered. Obtain medical assistance.

Advice to Doctor: If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or other lung damage. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-Fighting Measures

Extinguishing agents: Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

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 or poisonous vapours or gases (oxides of chlorine and sulphur) 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: Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection see Section 8.

Environmental precautions: Metolachlor is toxic to fish and very toxic to algae. 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.

7. Handling And Storage

Handling: Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing



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immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Seek medical advice. 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. Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

Storage: Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

8. Exposure Controls/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: An approved full-face respirator suitable for protection from spray or mists of pesticides is required. Limitations of manufacturer must be observed.

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.

9. Physical and Chemical Properties

Appearance: Grayish yellow crystals

Water content: $\leq 0.3\%$

Acidity (as H₂SO₄): $\leq 0.2\%$

Insoluble in acetone: $\leq 0.03\%$

Melting point: -62.1°C



Bulk density: 1.12 g/ml

Partition Coefficient: log P = 3.4 (at pH 7, 20°C)

Vapour pressure: 1.7 mPa (25°C)

Solubility: 530 mg/l in water (20°C); In organic solvents: miscible in acetone, benzene, hexane and xylene (all at 20°C).

10. Stability and Reactivity

Storage Stability: The product is stable at room temperature in normal warehouse conditions in original packaging.

Stability: Avoid extreme heat and contact with incompatible materials.

11. Toxicological Information

Acute oral LD50 for rat: 165 a.i.mg/kg

Acute dermal LD50 for rat: >2000 a.i.mg/kg

Inhalation LC50 (4 h) for rat: >4.63 a.i.mg/L

Skin irritation: Non-irritating to skin (rabbits)

Eye irritation: Non-irritating to eyes (rabbits)

Skin sensitization: Not a skin sensitiser (guinea pigs).

12. Ecological And Ecotoxicological Information

Effect on birds: moderate toxicity to birds, acute oral LD50 for Japanese quail is 677 a.i.mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC50 is 0.043 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC50 for Daphnia magna is 0.011 a.i.mg/L.

Effect on honeybees: moderate toxicity to honeybees, oral acute 48 hour LD50 is >3.27 a.i.µg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC50 is >60 a.i.mg/kg.

13. Disposal Considerations

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



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contaminate rivers, dams or any other water sources with the product or used containers. 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 draining 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 rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dump site. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

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 on 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 produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.