



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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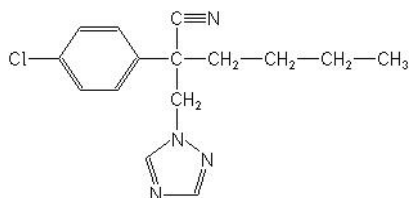
1. Chemical Product Identification

Product Name: Myclobutanil 25% EC

Molecular Formula: C₁₅H₁₇ClN₄

Molecular Weight: 288.78g/mol

Structural Formula:



Chemical Name:

(RS)-2-(4-chlorophenyl)-2-(1H-1,2,4-triazol-1-ylmethyl)hexanenitrile (IUPAC)

Form: liquid

Colour: Pale yellow

Odour: Strongly pungent

CAS No.: 88671-89-0

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration(%)
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Myclobutanil	88671-89-0	25.0
Other Ingredients		75.0

3. HAZARD IDENTIFICATION

Primary Routes Of Exposure: Eye contact, skin contact, inhalation

Inhalation: Repeated or prolonged inhalation of dust is possibly harmful.

Eye Contact: Direct contact with material can cause the following: substantial irritation

Skin Contact: Prolonged or repeated skin contact can cause the following: slight skin irritation

Ingestion: Material is possibly harmful if swallowed.

Delayed Effects: Repeated overexposure to the active ingredient in this material can cause the following: adverse reproductive effects and embryofetotoxic effects.

4. FIRST AID MEASURES

Inhalation: Move subject to fresh air.

Eye Contact: Flush eyes with a large amount of water for at least 15 minutes. See a physician.

Skin Contact: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

Ingestion: If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

Note to physician: If swallowed, careful evacuation of the stomach is advisable.

5. FIRE-FIGHTING MEASURES

Flash Point: 42°C(solvent)

Extinguishing Agents: Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical, or water spray.

Personal Protective Equipment: Wear self-contained breathing apparatus and full protective gear.



6. ACCIDENTAL RELEASE MEASURES

Personal cautions:

Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders. Soak up liquid with absorbent and shovel into waste container. Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Cleaning methods:

Generously cover the contaminated areas with common, household detergent. Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming slurry.

Land spill or leak:

Remove as much as possible by absorbing with inert material. Remove any contaminated soil. Place in closed, labeled containers and store in a safe place to await disposal. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Deactivating Chemicals: Bentonite, Fuller's Earth.

7. HANDLING AND STORAGE

Handling: Do not breathe spray mist. Take all precautions to avoid personal contact. Wear suitable protective clothing.

Store: Do not store this material near food, feed or drinking water. Store in a well ventilated

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: If needed, use local exhaust to keep exposures to a minimum.

Eye/face protection: Chemical tight goggles, full faceshield in addition if splashing is possible.

Skin protection: Protective clothing as needed, impervious gloves, apron and arm covers. User should verify impermeability under normal conditions of use prior to general use.

Respiratory protection: Use MSHA-NIOSH approved respirator for pesticides. Where potential exposure under the use conditions necessitates higher level of protection, use a full-face positive pressure air supplied respirator.

Other/general protection: Eyewash station and safety shower in work area.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale yellow liquid

pH : 4-8.

Specific Gravity : 1.08g/cm³.

Vapor Density (AIR = 1): Not Applicable

Melting Point: Not available.

Boiling Point: approx 100 °C.

Vapor pressure : 0.213mPa@25°C

Partition coefficient : Not Applicable

Solubility In water: 124mg/L@25°C

10. STABILITY AND REACTIVITY

Stability: Stable at room temperature.

Incompatibility Materials: strong oxidizing agents, particularly concentrated nitric acid

Hazardous reaction: Will not occur.

Conditions to avoid: Avoid contact with strong oxidizing agents, particularly concentrated nitric acid.

Combustion products of dry material: Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride.; possible trace amounts of nitrogen oxides, and other toxic and noxious fumes.

11. Toxicological Information (Based on active ingredient)

Oral LD50 – rat: 2290 mg/kg (female); 1600 mg/kg (male)

Oral LD50 – mouse: 1910 mg/kg (male; 1840 mg/kg (female)

Dermal LD50 – rabbit: >5000 mg/kg

Inhalation LC50 – rat: >5.1 mg/L for 4 hr.

Skin Irritation – rabbit: no irritation.

Eye irritation – rabbit: severe irritation

Sensitization–Guinea pig: Not a sensitizer

The following data is based on the active ingredient.

Reproductive/Developmental Effects

No evidence of teratogenicity was observed in studies with rats and rabbits.



Embryotoxicity was observed at 94 mg/kg/day and above in the rat developmental toxicity study; maternal toxicity was observed at 313 mg/kg/day and above. The overall NOEL was 31 mg/kg/day in rats.

Embryotoxicity was observed at 200 mg/kg/day in the rabbit developmental toxicity study; maternal toxicity was observed at 60 mg/kg/day and above. The overall NOEL was 20 mg/kg/day in rabbits.

Systemic toxicity was observed at 200 and 1000 ppm in the rat two-generation reproduction study; minimal reproductive effects and testicular atrophy were observed at 1000 ppm (50 mg/kg/day). The NOEL for reproductive effects was 200 ppm (1mg/kg/rats).

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity (Technical Grade).

Bluegill sunfish (*Lepomis macrochirus*), 96 Hour LC50: 2.2 mg/l

Rainbow trout (*Salmo gairdner*), 96 Hour LC50: 3.9 mg/l

Daphnia magna, 48 Hour LC50: 10.2 mg/l

Eastern oyster, 96 Hour EC50: 0.72 mg/l

Mysid shrimp (*Mysidopsis bahia*), 96 Hour LC50: 240 pg/l

Algae (*Selenastrum capricornutum*), 120 Hour EC50: 0.91 mg/l

Algae (*Scenedesmus subspicatus*), 96 Hour EC50: 2.6 mg/l

Bobwhite quail, Dietary LC50: >5000 ppm

Bobwhite quail, LD50: 510 mg/kg

Mallard duck, Dietary LC50: >5000 ppm

Honeybee, LD50: >362 pg/bee

13. DISPOSAL CONSIDERATIONS

Triple or (preferably) pressure rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on-site. If recycling replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.



14. TRANSPORT INFORMATION

Proper shipping name: Myclobutanil, fungicide, solid, toxic

TDG hazard class: 6.1

UN number: 2922

Packing group: III

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.