



MATERIAL SAFETY DATA SHEET

Forbaz 10 EC

IDENTIFICATION OF THE SUPPLIER:

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PRODUCT IDENTIFICATION:

Common Name: penconazole
Trade Name: Forbaz 10 EC
Chemical Name: 1-(2,4-dichloro- β -propylphenethyl)-1H-1,2,4-triazole
Chemical Formula: C₁₃H₁₅Cl₂N₃
Molecular Weight: 284.2

PRODUCT COMPOSITION:

<i>Active Ingredient:</i>	% w/v	CAS #
penconazole	10 % w/v	[66246-88-6]
<i>Inert ingredient:</i>		
Inert material	up to 100%	





HAZARD INFORMATION:

Hazard Classification: Classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
Risk Phrases: R36/38 Irritating to eyes and skin
Safety Phrases: –

FIRST AID MEASURES

Ingestion: If swallowed, seek medical advice immediately and show this container or label. DO NOT induce vomiting.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.

Symptoms: Poisoning symptoms in laboratory animals were non-specific

Medical Advice: No specific antidote, Treat symptomatically.

FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Extinguishing media - small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide extinguisher. DO NOT use direct jet of water.
Extinguishing media - large fires Use alcohol-resistant foam

Hazards from Combustion Products: This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion.



Exposure to decomposition products may be a hazard to health. Flash back possible over considerable distance.

**Special
Protective
Precautions and
Equipment for
Fire Fighters:**

Wear full protective clothing and self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

**Emergency
Procedures:**

In case of spillage it is important to take all steps necessary to

- Avoid eye and skin contact
- Avoid contamination of waterways

**Methods and
Materials for
Containment and
Clean Up:**

Procedure for spill

- (1) Keep all bystanders away
- (2) Wear full length clothing and PVC gloves
- (3) Reposition any leaking containers so as to minimise further leakage
- (4) Dam and absorb spill with an absorbent material (eg sand or soil)
- (5) Shovel the absorbed spill into drums
- (6) Disposal of the absorbed material will depend upon the extent of the spill
 - For quantities up to 50 L of product bury in a secure landfill site
 - For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established
- (7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable





HANDLING AND STORAGE:

Precautions for Safe Handling:

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. When preparing the spray wear:

- cotton overalls buttoned to the neck and wrist,
- a washable hat,
- elbow-length PVC gloves,
- a face shield or goggles.

If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each days use wash gloves, face shield, or goggles and contaminated clothing.

Conditions for Safe Storage:

Store in closed original container in a dry, well ventilated place cool as possible out of direct sunlight.

EXPOSURE CONTROLS / PERSONAL PROTECTION:

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

	Component	Exposure limit	Value type
National Exposure Standards:		No exposure standard allocated	
Syngenta Exposure Standards:	Penconazole	7 mg/ m ³	
Biological Limit Values:		No biological limits allocated	
Engineering Controls:		No special requirements. Product is used outdoors.	
Personal Protective Equipment:		Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not	





inhale spray mist. When preparing the spray wear:

- cotton overalls buttoned to the neck and wrist,
- a washable hat,
- elbow-length PVC gloves,
- a face shield or goggles.

If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each days use wash gloves, face shield, or goggles and contaminated clothing.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: yellow liquid

Odor: aromatic odor

PH: 4 - 8

Density: 1.03g/ml (at 20° C)

Flash Point: 45° C

Explosive Properties: non explosive

Flammability: Non-flammable

Corrosiveness: Non-corrosive

STABILITY AND REACTIVITY:

Chemical Stability:

Stable under standard conditions.

Conditions to Avoid:

None known.

Incompatible Materials:

None known.

Hazardous Decomposition

Combustion or thermal decomposition will evolve toxic and irritant vapours.

Products:

Hazardous Reactions:

None known. Hazardous polymerization does not occur.



TOXICOLOGICAL INFORMATION:

Acute: Oral toxicity:	LOW TOXICITY Tests on rats indicate this product has a low toxicity following single doses of a similar formulation. (LD50 = 2,574 mg/kg)
Dermal toxicity:	LOW TOXICITY Tests on rabbits indicate this product has a low toxicity following skin contact with a similar formulation. (LC50= >4000 mg/kg)
Inhalation:	LOW TOXICITY Tests on rats indicate this product is not harmful due to inhalation of a similar formulation. (LC50 (4h) = >5.294 mg/L air)
Skin irritation:	Slight irritant
Eye irritation:	Moderate irritant
Sensitisation:	Not a sensitiser
Chronic:	Penconazole technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic neurotoxic or reproductive effects.

ECOLOGICAL INFORMATION:

Ecotoxicity:	
Toxicity to fish:	Moderately toxic to fish <i>Oncorhynchus mykiss</i> (rainbow trout): LC50 = 4.6 - 6.8 mg/L, 96 h (Based on studies with a similar formulation)
Toxicity to daphnia and other aquatic invertebrates:	Slightly toxic to aquatic invertebrates <i>Daphnia magna</i> (Water flea): EC50 = 36 mg/L, 48 h (Based on studies with a similar formulation)
Toxicity to algae:	Practically non-toxic to algae <i>Pseudokirchneriella subcapitata</i> (green algae): EC50 = 3.9 mg/L, 72 h (Based on studies with a similar formulation)
Toxicity to soil dwelling organisms:	Slightly toxic to earthworms <i>Eisenia foetida</i> (earthworm): LC50 >1000 mg/kg, 14 d (Based on studies with a similar formulation)



Bees:	Slightly toxic to bees <i>Apis mellifera</i> (honey bee): LC50 oral = approx 7 µg/bee (Based on studies with a similar formulation)
Persistence and Degradability:	Penconazole is persistent in water, but not in soil
Mobility	Penconazole has very high mobility in soil
Environmental Fate (Exposure):	Fully degraded and incorporated into organic molecules
Bioaccumulative Potential:	Penconazole does not bioaccumulate

DISPOSAL INFORMATION:

Disposal Methods and Containers:

Triple or preferably pressure rinse containers before disposal. Add rinsings to 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.