

FERSOL PERMETHRIN 384 CE

Product and Company's Identification

Name of the product: PERMETRIN FERSOL 384 CE
Application: Cleaning Inseticide

Emergency phone:
(0XX11)5012-5311
08007713133 RENACIAT (National Association of Toxicology Information and Assistance)

2. HAZARD IDENTIFICATION

Most important dangers: the product might be toxic to humans and to the environment if not used as recommended.

Product Effects:

Adverse Effects to Human Health: the product can be absorbed via airways, or orally, causing stimulation of the central nervous system. The contact with the product can provoke skin and eye aggravation.

Environment Effects: The product is toxic to fishes and water organisms, and also toxic to bees.

Physical/ Chemical Hazards: The product is flammable.

Specific Hazard: There aren't any other risks regarding the product.

Main Symptoms: It's a pyrethroid and might cause sensations to the skin as well as aggravations to the outdoor workers, symptoms that normally disappear in 24 hours. Between the most often skin symptoms, we have found Tingling, itching and burning. The intoxication symptoms may include respiratory allergies and also neurological problems, in serious cases, convulsions and trembling.

Peril classification of the product:

High Toxicity – Oral: Category 5.

High Toxicity – Skin: Category 5.

Peril to the aquatic environment: Category 1.

Chronic Aquatic Hazard – Category 1.

Appropriate Elements for labeling:

Pictogram	
Warning	Danger

Danger Phrases:

High Toxicity – Oral: Might be harmful if ingested.

High Toxicity – Skin: Might be harmful in contact with the skin.

Hazardous to Aquatic Environment: Very toxic to water environment.

Chronic Aquatic Hazard: Very toxic to water environment, with long term effects.

Precaution premises:

Keep it away from heat, sparks and do not smoke...

Keep it only in its original recipient.

At use, do not smoke, eat or drink.

Wash your hands entirely after manipulation.

In case of accident or sickness, seek immediate medical orientation and show the label as often as possible.

If ingested seek immediate medical attention.

Do not dispose in the environment.

Do not let this chemical product damage the local environment.

This product and its recipient must be disposed in a safe way.

3. COMPOSITION AND INFORMATION ON THE INGREDIENTS

Chemical Nature: "This product is a mixture".

Ingredients or impurities that might contribute to a possible hazard:

Chemical Name	CAS Number	Concentration	Molecular Formula	Synonyms
3- phenoxybenzyl 1(RD)-cis- trans3-(2,2 dichlorovinyl)- 2,2- Carboxylate cyclopropane dimethyl	52645-53-1	38,4& p/p	C ₂₁ H ₂₀ Cl ₂ O ₃	Permethrin

4. FIRST AID MEASURES

First Aid Measures: Take the infected to a ventilated place. Take off the infected clothes. Wash the infected parts of the body with abundant water and soap. If the infected is unconscious and not breathing anymore, perform artificial respiration or oxygenation. Forward this form to the nearest medical service.

Inhalation: Move the contaminated person to a ventilated place. If not breathing, perform artificial respiration. If the contaminated person has difficulties in the breathing, attend to a doctor immediately.

Contact with the skin: Wash infected area immediately with abundant water and soap. Remove infected clothes. In case of effects/ symptoms, attend to a doctor. Wash contaminated clothes before reusing them and dispose contaminated foot wear.

Contact with the eyes: Wash them immediately in abundant water. Consult a doctor.

Ingestion: Do not induce vomiting, however, it is possible it occurs spontaneously without being avoided; lay the patient by his sides to avoid residual breathing. Seek immediate medical attention. **WARNING:** Never give anything orally to an unconscious patient.

Actions to be avoided: Do not apply mouth to mouth in case the patient has ingested the product. Make use of an intermediary to perform this procedure.

Protection to first aid providers: Avoid skin and inhalational contact with the product during the procedure.

Medical notes: There is no specific antidote. In case of recent ingestion of big quantities, gastric lavage procedures might apply. Activated carbon and saline laxatives will be useful to prevent absorption of the active ingredient. The symptomatic treatment must above all, give options of measuring support like correction of hydroelectrolytical and metabolic disturbances, as well as respiratory support and control measures of convulsive crisis (in case of occurrence) with phenobarbitones and benzodiazepines. Monitoring of liver and renal functions must be maintained. In case of ocular contact, proceed to saline washing and forward the patient ophthalmologic assessment.

5. FIRE COMBAT MEASURES.

Appropriate extinguishment measures: foam, CO₂ chemical powder and water in extreme cases.

Non-appropriate extinction measures: Water based extinguishers must be avoided not to cause the product to spread out to other regions.

Special Procedures: Inflammable product. Evacuate the area and fight fire from a safe distance. Make use of dams to contain the water used in combat. Position yourself with the back turned to the wind. Use water in fog form to cool exposed equipments near to the fire.

Special Protection Equipments for Fire Combat: Breathing equipment and appropriate clothes.

6. CONTROL MEASURES FOR SPILLAGE OR LEAKS:

Personal Precaution: Make use of waterproof jumpsuit, protective glasses, rubber boots and nitrile rubber gloves or any other waterproof material. Respiratory protection must be done depending on the concentration present at the environment or on the extent of the spillage/leak, and for that, semi facial masks with filters.

Removal of ignition sources: Interrupt electric energy and turn of generating sources of sparks. Remove all material that may cause fire from the site.

Dust control: Not applicable as it is liquid.

Inhalation, skin and eye contact prevention: Make use of clothes and accessories described above.

Environment precaution: Avoid contamination of water courses by sealing them. Make sure the product do not make any contact with water by building sand, earth and any other absorbing material dams.

Cleaning methods: Contain and retract spilling with non-flammable absorbing material (i.e. sand, earth, etc). Put the residues in a recipient for elimination according to local rules. Perform cleaning preferably with detergent; avoid use of solvents.

Secondary Hazard Prevention: Prevent the product from reaching rivers, lakes, water sources, sewers and galleries.

7. HANDLING AND STORAGE

Handling:

Technical Measures: Use product according to the recommendations of the manufacturer.

Worker Exposure Prevention: Do not eat, drink or smoke during the handling of the product. When opening the recipient, avoid leaking. Do not use damaged individual protection equipments. Do not handle or carry damaged recipients.

Explosion and Fire Prevention: Keep the product away from heat, sparks, flames and other ignition sources.

Secure Handling Precautions: Avoid direct contact with the product. Avoid spilling or equipment contamination during its apply.

Storage:

Appropriate technical measures: Keep the product in its original recipient. Keep the eventual leftovers of the products in their original recipients properly sealed.

Storage Conditions:

Appropriate: Keep the recipient properly closed, checking the local temperature and light. Stock it in a properly identified and exclusive place for toxic products. Lock the place and avoid access of non-authorized people and children.

Avoid: Humid places with heat sources.

Incompatible material and products: Do not stock it with food and drink, including the ones directed to animals.

Secure material for storage:

Recommended: Product already packed in an appropriate recipient.

8. INDIVIDUAL PROTECTION AND EXPOSURE CONTROL

Engineering control methods: When applicable, use appropriate exhaustion system in order to have appropriate ventilation in the working place (NR9).

Specific control parameters:

Occupational exposure limits:

Chemical Name	Exposure Limit	Type	Notes	References
Permethrin	Not established	TLV- TWA		ACGIH 1998

Biological indicators:

Chemical Name	Biological Limit	Type	Notes	References
Permethrin	Not established	BEI		ACGIH 2003

Individual Protection Equipments:

Respiratory Protection: Use combined masks with chemical and mechanic filters, or rubber masks or silicone with filter for pesticides, covering nose and mouth.

Hand protection: Use nitrile rubber gloves or any other waterproof material.

Eye protection: Use security glasses for chemical products.

Skin and Body Protection: Use long-sleeved waterproof jumpsuits and PVC boots.

Special Precautions: Keep the IPEs properly cleaned and in appropriate condition for use, doing periodical inspections and possible substitutions of damaged equipments.

Hygiene Procedures: Shower and change clothes after the use of the product. Wash contaminated clothes separately, avoiding contact with other personal use accessories.

9. PHYSICOCHEMICAL PROPERTIES

Physical Form: Liquid. Low viscosity.

Color: Yellow

Odor: Characteristic

pH (5%/25C solution): 7,12

Specific temperatures or temperature rates that alter the physical form of the product:

Fusion point: 29-32 C (Technical Product)

Flashpoint: 29°C Flammable product.

Low/ High Explosiveness Limit: The product is not explosive

Density: 1,04 g/ml (25° C)

Solubility: 0,44 ppm in water, soluble in acetone and methanol (Technical Product)

Corrosiveness: Not corrodible in copper/tin, iron and aluminum.

10. REACTIVITY AND STABILITY

Instability: The product is stable to the local temperature and air, under normal conditions of use and storage.

Dangerous reactions: There are no known dangerous reactions.

Decomposition Dangerous Products: A burnout can release carbon monoxides, dioxides and other non-identifiable organic substances.

11. TOXICOLOGICAL INFORMATION

High Toxicity:

Oral DL₅₀ in rats: > 2000mg/kg

Dermal DL₅₀ in rats: > 2000mg/kg

Local Effects:

Skin Aggravation in rabbits: The product is considered as non-irritating.

Ocular Aggravation in rabbits: The product is considered as non-irritating.

Sensitization: The product is considered as non-sensitive.

Chronic Toxicity:

Mutagenicity: (*Salmonella Typhimurium*): The product is considered as non-mutagenic.

Carcinogenicity: The active ingredient is considered as non-carcinogenic.

Teratogenicity: The active ingredient is considered as non-teratogenic.

Reproduction effects: The active ingredient is considered and non-inductor of reproductive effects.

12. ECOLOGICAL INFORMATION

Environment and Behavioral Effects and impacts of the product:

Mobility: The product shows low commute to neighboring areas.

Ecotoxicity:

Fish Toxicity: (*Pimephales promelas*) CL₅₀(l) (96h) = 0,01ppm

Worm Toxicity: (*Eisenia foetida*) CL(l)₅₀ (14d) = 8049 µL/kg

Algae Toxicity: (*Chlorella vulgaris*) CE₅₀(l) (96h) = 0,0562 ppm

Micro crustaceans Toxicity: (*Daphnia similis*) CE₅₀(l) (48h) = 0,009 ppm

13. CONSIDERATIONS ON TREATMENT AND STORAGE

Treatment and storage methods:

Product: Deactivate the product through incineration in ovens made for this kind of operation, equipped with gas washing chambers and approved by the local organizations.

Product Leftovers: Keep the eventual leftovers of the products with expired validation.

Used Recipients: The empty recipients must be submitted to a triple lavage and stored in a safe place for posterior return to the commercial establishment where it was acquired within the deadline of one year. Do not burn or bury the recipients. See the specific Municipal And Federal Legislations.

14. TRANSPORT INFORMATION

National and International Regulations:

Rodoviário, Brasil

Appropriate name for departure: PYRETHROID BASED PESTICIDE, LIQUID, **TOXIC, FLAMMABLE**, PFg higher than 23°C (Permethrin)

ONU Number: 3351

Division/Risk Number: 6.1

Subsidiary Risk: 3

Risk Number: 63

Package Group: II

IPE: 08

15. REGULATIONS

Regulations:

NBR – 14725:2009

16. OTHER INFORMATION

ABNT – Brazilian Association of Technical Norms

ACGIH – American Conference of Governmental Industrial Hygienists

ANTT – National Agency of Ground Transport

BEI – Biological Exposure Indicator

CAS – Chemical Abstracts Service

CL50 – Lethal Concentration 50%

DL50 – Lethal Dose 50%

EPI – Individual Protection Equipment (IPE)

NBR – Brazilian Norms

STEL – Short Term Exposure Limit

TLV – Threshold Limit Value

TWA – Time Weighted Average

ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS – ABNT. NBR 14725.

Adoção do GHS, Parte 2: 2009.

ESIS - EUROPEAN CHEMICAL SUBSTANCES INFORMATION SYSTEM.

Disponível em <http://ecb.jrc.ec.europa.eu/esis/>. Acesso em outubro de 2011.

NATIONAL INSTITUTE OF TECHNOLOGY AND EVALUATION – NITE.

Disponível em: http://www.safe.nite.go.jp/english/ghs_index.html. Acesso em outubro de 2011.

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION – OSHA. Disponível em: <http://www.osha.gov/>. Acesso em outubro 2011. .

RESOLUÇÃO N° 420. Ministério dos Transportes. Agência Nacional de Transportes Terrestres, Resolução n° 420 de 12 de fevereiro de 2004.