

1: IDENTIFICATION

Chemical Name	Novaluron: N-[[3-chloro-4-[1,1,2-trifluoro-2-(trifluoromethoxy)ethoxy]phenyl]carbonyl]-2,6-difluorobenzamide Emamectin Benzoate: (4''R)-5-O-demethyl -4''-deoxy-4''-(methyl amino) avermectin A1a + (4''R)-5-Odemethyl-25-de (1-methylpropyl)-4''-deoxy-4''-(methyl amino)-25-(1-methylethyl) avermectin A1a (9:1); 4''-(methyl amino) avermectin B1		
Synonyms	Novaluron 5.25% + Emamectin Benzoate 0.9% SC	Trade Name	UNOSTAR
Uses	Insecticide	Molecular Formula	C ₁₇ H ₉ ClF ₈ N ₂ O ₄ + C ₂₆ H ₃₁ NO ₁₅
Manufacturer/Supplier	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
Emergency Contact	9503095030	E-mail	info@agrostar.in

2: COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Novaluron	116714-46-6	5.25%
Emamectin Benzoate	155569-91-8	0.90%

3: HAZARD IDENTIFICATION

Physical/Chemical Hazard:	May decompose at high temperature forming toxic gases
Human health Hazard:	Causes severe eye irritation; Irritating to skin; Inhalation can cause irritation to the respiratory tract; Ingestion results in central nervous system effects; Vapors may cause drowsiness and dizziness

4: FIRST AID MEASURES

General: This product is not likely to be hazardous but follow the below instruction in case is advisable. Have the product container, label or safety data sheet while seeking medical attention, a poison control center or physician, or going for treatment.

Inhalation: Move patients to fresh air and keep warm and at rest in a position comfortable for breathing. Treat respiratory difficulty with artificial respiration and oxygen. Immediately seek medical attention if symptoms are severe or persist

Ingestion: Rinse mouth with water thoroughly and give plenty of water to drink. Seek medical attention or poison control center immediately and show this container or label.

Skin Contact: In case of contact with product, gently wipe excess product and wash immediately skin area with plenty of water and soap. Remove and isolate contaminated clothing and shoes. Seek medical attention if irritation persists.

Eye Contact: Rinse immediately with plenty of water for several minutes. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15-20 minutes. Seek medical attention if irritation develops.

Note to Physician: This material believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patient with potentially toxic mectin exposure. Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

5: FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, alcohol-resistant foam, dry chemical powder or carbon dioxide

Unsuitable Extinguishing Media: Solid water stream, as it may scatter and spread the fire

Specific Hazards: As the entire product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be hazardous to health.

Hazardous Thermal (de)composition: No hazardous decomposition products are known.

Special Procedures: Collect extinguishing water separately and do not discharge into the drain or water bodies. If risk of water pollution occurs, notify appropriate authorities. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers with water spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Protection of Fire Fighters: Do not breathe a fumes. Wear full protective clothing and self-contained breathing apparatus.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing. Use personal protective equipment. Evacuate personnel to safe areas and keep them away from and upwind of spill/leak.

Environmental Precaution: Do not allow runoff to enter drains and public waters. Notify the authorities if product enters.

Methods for Cleaning-up: Pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer into waste disposal containers. Clean contaminated floors and objects thoroughly with water and detergents. Never return spills in original containers for re-use. Dispose of in accordance with local regulations. Wear suitable protective equipment.

7: HANDLING & STORAGE

Handling: Do not smoke, drink, or eat during handling. Wash hands and other exposed areas with mild soap and water before and after handling material. Wear protective equipments to avoid contact and/or inhalation with the product. Wash clothing and equipment before reuse. Good personal hygiene procedures must be practiced.

Specific Conditions: Good local exhaust ventilation. No special protective measures against fire required.

Storage: Store in dry, cool, well-ventilated area. Keep in original container and tightly closed when not in use. Keep product away from seeds, fertilizer, foods and animal feeds. Keep out of the reach of children.

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Measures: Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

General Protection: Avoid breathing dust, vapours or aerosols. Avoid contact with eyes and skin. While handling the product wear cotton overalls buttoned to the neck and wrist, elbow-length PVC gloves. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

Personal Protection: Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

Respiratory Protection: A particulate filter respiration may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in case of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection

Skin Protection: Wear suitable protective clothing, including long sleeved shirt, long pants, gloves, coveralls, and boots to avoid skin contact.

Hand Protection: Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or Viton.

Eye Protection: Safety glasses with side-shields. Safety showers and eyewash should be easily available.

Others: Wash clothing before reusing.

9: PHYSICAL/CHEMICAL PROPERTIES

Appearance : Suspension, Liquid

pH : 5.0- 8.0

Physical State: Liquid

Colour: Light yellow

Density[g/cc]: min 1.0

Viscosity : 500-800 @ Spindle-62

10: STABILITY & REACTIVITY

Stability: Stable under normal circumstances.

Conditions to Avoid: No data available

Hazardous Decomp. Products: Combustion or thermal decomposition will evolve toxic and irritant vapors

Materials to Avoid: No data available

11: TOXICOLOGICAL INFORMATION

Rat oral LD50 [mg/kg] : 5000

Rat inhalation LC50 [mg/l/4h] : >6.26

Skin irritation (rabbit): Non-irritant

Dermal (rat) LD50 [mg/kg] : >2000

Skin Sensitization (Guinea Pig): Non-sensitizer

Eye irritation (rabbit): Mild irritant

12: ECOLOGICAL INFORMATION

Ecotoxicity:

Crap LC50 (96 hrs)[mg/L]: 6.8

Daphnia magna EC50(48 hrs) [mg/L]: 0.08

Algae ErC50 (72 h) [mg/L]: 157

Bio-accumulation Potential: Emamectin benzoate -Not a bio accumulate

Persistence, Degradability and Mobility in soil:

Emamectin benzoate - Not persistent in water and soil, Immobile in soil

13: DISPOSAL CONSIDERATION

Waste-disposal Procedures: Dispose of this product only according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated Packaging: Empty remaining contents and the rinse containers thrice before disposal. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers unless they are specifically designed to be refilled

14: TRANSPORT INFORMATION

UN No. 3077

Proper Shipping Name: Environmentally Hazardous Substance, Liquid N.O.S

Land Transport (ADR/RID): Class-9, Packing Group-III

Sea Transport (IMO/IMDG): Class-9, Packing group-III

Air Transport (IATA/ICAO): Class-9 Packing group-III

15: REGULATORY INFORMATION

Hazard Symbol: Xn : Harmful; N : Dangerous for the environment

International WHO Toxicity : Classification - II Moderately hazardous

Risk Phrases: R22, R 23/25, R36, R48/22, R50/53, R68/20/21/22

Safety Phrases: S 2, S 13, S 20/21, S 35, S 36/37, S 57

16: OTHER INFORMATION

DISCLAIMER OF LIABILITY The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

----- END -----