



MATERIAL SAFETY DATA SHEET **Rempo 25 EC**

IDENTIFICATION OF THE SUPPLIER:

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PRODUCT IDENTIFICATION:

Common Name: Beta- cyfluthrin 2.5% w/v
Trade Name: Rempo 25 EC
Type of formulation : Emulsifiable Concentrate (EC)
Chemical Name: cyano(4-fluoro-3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate
Chemical Formula: C₂₂H₁₈Cl₂FNO₃
Molecular Weight: 434.3

PRODUCT COMPOSITION:

<i>Active Ingredient:</i>	<i>% w/v</i>	<i>CAS #</i>
Beta-cyfluthrin	2.5 %	[68359-37-5]
<i>Inert ingredient:</i>		
Emulsifier	7 %	--
Solvent	Up to 100%	--

HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

HAZARDOUS SUBSTANCE- DANGEROUS GOOD

Flammable liquid. Contact with skin or eyes may be painful. Dangerous to aquatic organisms and bees.





Risk phrases: Harmful by inhalation and if swallowed.

Irritating to skin.

Risk of serious damage to eyes.

ADG classification: Classified as “Dangerous goods” for transport by road or rail, FLAMMABLELIQUID, (contains Xylene) .

FIRST-AID MEASURES:

Inhalation: If inhaled, remove to fresh air and keep at rest. Obtain medical advice if at worried. If breathing stops or failing, start artificial respiration.

Skin contact: Carefully remove contaminated clothing and footwear. Wash affected areas with soap and water. Apply Vitamin E cream, toilet milks or local anesthetic creams to reduce pain. Seek medical advice if at all worried. Launder contaminated clothing before re-use.

Eye contact: Rinse eyes immediately clean water for at least 15 minutes and obtain urgent medical aid.

Ingestion: Wash out mouth with water. DO NOT induce vomiting. Give a glass of water. Do not give anything by mouth if the patient is semi-conscious or unconscious. Keep patient at rest . Do not apply mouth-to-mouth resuscitation if the material has been ingested.

First Aid Facilities: Ensure eyewash and safety shower facilities are available in the workplace.

Medical attention: Rempo 25 EC contains beta-cyfluthrin, which is a synthetic Pyrethroid. It also contains Xylene as the solvent.

Symptoms

Local: Skin irritation and severe eye irritation. Skin and eye paraesthesiae, which may be severe. Usually transient with resolution within 24 hours. Irritation of mucous membranes.

Systemic: Dizziness, headache, drowsiness, listlessness, nausea, anorexia and vomiting, epigastric pain, muscular fasciculation of limbs, anaesthesia or other CNS effects; also, blurred vision, tremors, shallow and rapid breathing, pulmonary oedema, unconsciousness, convulsions, coma with very high doses/exposures.





FIRE-FIGHTING MEASURES: -

Extinguishing media: Foam, dry agent, carbon dioxide, sand, water spray.

Hazards from: In a fire, formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon.

Combustion products: monoxide and nitrogen oxides can be expected.

Precautions for fire fighters: The product is a flammable liquid- flash point $>28^{\circ}\text{C}$. Liquid and vapour of Xylene are flammable and the vapor will form explosive mixtures with air. The vapour is heavier than air and may travel along the ground so that distant ignition is a possibility.

Firefighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Avoid spraying directly into containers due to danger of boilover. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safety later. Do not release contaminated water into the environment.

ACCIDENTAL RELEASE:

Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove all possible sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8-PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labeled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.





HANDLING AND STORAGE:

Handling: Keep out of reach of children. Will damage eyes and skin. Avoid inhaling vapour or spray mist. If product in eyes, wash it out immediately with water. If clothing becomes contaminated with product, remove clothing immediately. If product on skin, immediately wash area with soap 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 and contaminated clothing.

Storage: Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Keep away from excessive heat, open flames and other sources of ignition.

Flammability: Flammable liquid.

PERSONAL PROTECTION/SAFTETY:

Exposure standards: The NOHSC Occupational Exposure Limits for Xylene are:

TWA: 80 ppm, 350 mg/m³.

STEL: 150 ppm, 655 mg/m³.

Definitions:

Exposure standard- Time Weighted Average (TWA) means the average airborne concentration of a particular substance where calculated over a normal eight-hour working day, for a five-day working week.

Exposure standard- Short term exposure limit (STEL) means a 15 minute TWA exposure which should not be exceeded at any time during the working day.

Biological limit values: None allocated.

Engineering controls: Control process conditions to avoid contact. Use local exhaust ventilation during manufacture and





spark proof equipment. Use in a well-ventilated area only.

Personal Protective It is important to protect eyes and skin, as contact with this product may cause pain.

Equipment

- * Wear face shield
- * Wear cotton overalls buttoned to the neck and wrist and a washable hat.
- * Wear elbow-length PVC or nitrile gloves.
- * If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear a respirator suitable for organic vapours-AS/NZS 1715/1716 approved.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Clear yellow liquid.
Odour: Aromatic chemical.
PH: 5.5 to 6.5 (1% in water).
Density: 0.88 g/ml

STABILITY AND REACTIVITY:

Chemical stability: Stable under normal conditions of use.
Conditions to avoid: Avoid sources of ignition and extreme heat.
Incompatible materials: Avoid oxidizing agents, strong acids and strong alkalis.
Hazardous decomposition products In a fire, formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon monoxide and nitrogen oxides can be expected.
Hazardous reactions: None.

TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS

Inhalation: Inhalation of product vapour may cause transient irritation of mucous membranes (nose, throat and respiratory tract), may headaches, nausea, dizziness, drowsiness, could be



anesthetic, and may have other central nervous system effects lasting up to 24 hours.

Skin contact: Irritating. Contact with the skin, especially the face, may result in initial stinging, burning or tingling sensations (fingertips, nose), followed by numbness or pain which may persist up to 24 hours. Xylene may cause defeating of the skin which can lead to dermatitis.

Eye contact: Risk of serious damage to eyes.

Ingestion: Poisonous if swallowed. Symptoms include burning sensations and numbness in the mouth and throat, headache, dizziness, drowsiness, nausea, vomiting, listlessness, stomach pain, muscular twitching of arms or legs, unconsciousness, convulsions, and coma (very high doses) Rempo also contains Xylene, a hydrocarbon liquid. Small aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

ANIMAL TOXICITY DATA- PRODUCT

Acute:

Oral toxicity	LD ₅₀ RAT: 630-757 mg/kg.
Dermal toxicity	LD ₅₀ rat: >5000 mg/kg.
Inhalation toxicity	LC ₅₀ rat: approx. 3mg/L (4h) aerosol.
Skin irritation	Severely irritating (rabbit).
Irritation of mucous Membranes	Severely irritating (rabbit).
Sensitisation	Non-sensitising (guinea pig) (Beta-cyfluthrin)

Chronic:

Beta-cyfluthrin is not mutagenic, carcinogenic or teratogenic and did not cause reproductive effects in animal studies.

There was no evidence of delayed neurotoxicity.

Repeated over-exposure to Xylene may cause liver and kidney damage.

Xylene is not mutagenic, not carcinogenic and does not impair fertility.

ECOLOGICAL INFORMATION:

Beta-cyfluthrin is very toxic to aquatic organisms. It is dangerous to bees. It has a low toxicity to birds, mammals and earthworms. DO NOT



contaminate streams, rivers or waterways with Rempo or the used containers.

Ecotoxicity Beta-cyfluthrin:

Fish toxicity: LC₅₀(96h):0.33 µg /L;golden orfe(Leuciscus idus)
LC₅₀(96h): 0.068 µg/L; ranbow trout
(Oncorhynchus mykiss)

Daphnia toxicity: EC₅₀(48h):0.29 µg/L;water flea (Daphnia magan)

Algal toxicity:

Growth rate: IC₅₀(72h): >10µg /L;green algae (Desmodesmus
subspicatus)

Toxicity to bacteria: EC₅₀: >10000 mg/L; activated sludge

Bird toxicity: Acute oral LD₅₀: >2000 mg/kg; Japanese quail

Xylene:

Fish toxicity: LC₅₀: > 1- < 10 mg/L

Aquatic invertebrate toxicity: EC₅₀: > 1-< 10 mg/L

Algae toxicity: IC₅₀: > 1-< 10 mg/L

Bacteria toxicity: EC₅₀: >10 - < 100 mg/L

Environmental fate, persistence and degradability, mobility:

The degradation of beta-cyfluthrin is rapid in different soils. Leaching behaviour can be classified as immobile. The bioconcentration factor (BCF) of beta-cyfluthrin is 506. It is ready biodegradable.

Xylene is readily biodegradable, and oxidizes rapidly in air by photochemical reactions. It is considered to be slightly bioaccumulative- BCF < 30.

DISPOSAL CONSIDERATIONS:

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 recyclers 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.

Dispose of waste product through a reputable waste contractor.

