


MATERIAL SAFETY DATA SHEET
DORCLAIM

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING




1.1	IDENTIFICATION OF THE PREPARATION	DORCLAIM (Emamectin Benzoate 12 EW)
1.2	CHEMICAL NAME	IUPAC: Emamectin benzoate (1'R,2R,3S,4'S,6S,8'R,10'E,12'S,13'S,14'E,16'E,20'R,21'R,24'S)-2-[(2S)-butan-2-yl]-21',24'-dihydroxy-12'-[(2R,4S,5S,6S)-4-methoxy-5-[(2S,4S,5S,6S)-4-methoxy-6-methyl-5-(methylamino)oxan-2-yl]oxy-6-methyloxan-2-yl]oxy-3,11',13',22'-tetramethylspiro[2,3-dihydropyran-6,6'-3,7,19-trioxatetracyclo[15.6.1.14,8.020,24]pentacos-10,14,16,22-tetraene]-2'-one
1.3	USE OF PREPARATION	Insecticide
1.4	COMPANY /UNDERTAKING IDENTIFICATION	Dor.Ky D&D LTD P.O.B. 232 Nes Ziona, 70400, Israel Tel: +972-8-933 3474 Fax: +972-8-933 0109
1.5	EMERGENCY TELEPHONE NUMBER	The Israeli Poisoning Centre Tel: +972-4-777 1900 Fax: +972-4-854 2029

2. HAZARDOUS IDENTIFICATION

2.1	Classification of the mixture based on active ingredients	
	Environmental hazards	Very toxic to aquatic life with long lasting effects (H400 + 410)
2.2	Label elements	
	Hazard pictograms	

	Signal words	Warning
	Hazard statements	(H302) - Harmful if swallowed. (H373) - May cause damage to organs through prolonged or repeated exposure. (H400 + 411) - Very toxic to aquatic life with long lasting effects.
2.3	Precautionary statements	
	Preventive	P260 - Do not breathe fume/gas/mist/vapors/spray. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
	Response	P391 - Collect spillage.
	Disposal	P501 - Dispose of contents/container in accordance with local regulation.
	Storage	P102 - Keep out of the reach of children.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1	Chemical nature	EW – Emulsion in Water.				
3.2	Information on hazardous ingredients:					
	Common name	CAS No.	Weight	EC Number	Symbol	Hazard
	Emamectin benzoate	155569-91-8	1-2%	605-015-1		H301, H311, H318, H331, H370, H372, H400, H410.
	Dimethyl amide of fatty acid	14433-76-2	4-6%	238-405-1		H315, H319, H335, H412
	Butylated Hydroxytoluene (BHT)	128-37-0	0-1%	204-881-4		H400, H410
	Non-hazardous ingredients		Up to 100%			
<i>For occupational exposure limits, see section 8</i>						

4. FIRST AID MEASURES		
4.1	General	In case of poisoning by any exposure route contact a doctor or Poisons Information Centre. When possible, have the product container or label with you when calling a poison control centre or doctor or going for treatment.
4.2	Description of first aid measures	
4.2.1	Eye contact	Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 15 minutes, and then continue rinsing eyes. Get medical attention if irritation develops and persists.
	Skin contact	Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
	Inhalation	If inhaled, move person to fresh air and keep at rest until recovered. If breathing is difficult, give artificial respiration, preferably mouth to mouth if possible. Call a physician.
	Ingestion	If swallowed, wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
4.2.2	Notes to physician	<p>This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure.</p> <p>Toxicity can be minimised by early administration of chemical absorbents (e.g., activated charcoal).</p> <p>If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged.</p> <p>Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.</p>

5. FIRE-FIGHTING MEASURES		
5.1	Firefighting media	Water spray, foam, carbon dioxide and sand.
5.2	Special hazards arising from the substance or mixture	In a fire, formation of nitrogen compounds can be expected.
5.3	Precautions for fire fighters	Self-contained breathing apparatus and total protection required in enclosed areas.

		Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bound area with sand to prevent contamination of drains or waterways. Dispose of fire control water, another distinguishing agent or spillage later on. Do not release contaminated water into the environment.
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6. ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions	Avoid contact with spilled material or contaminated surfaces. When dealing with spills do not eat, drink, or smoke and wear protective clothing and equipment as described in Section 8. Keep people and animals away.
6.2	Environmental precautions	Do not discharge into drains or the environment
6.3	Methods for cleaning up	Contain spills 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.

7. HANDLING AND STORAGE

7.1	Handling	Keep out of reach of children. Wash hands thoroughly with soap after handling and before eating, drinking, and smoking. After each day's use, wash gloves and contaminated clothing
7.2	Storage	Keep only in the original container. Keep in a cool, dry place away from direct sunlight. Avoid storage in temperatures below -5°C and above 45°C.
7.3	Flammability	Not flammable.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1	Control parameters	
	Industrial Hygiene measures	Ensure adequate ventilation, especially in confined areas. When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use. Contaminated work clothing should not be allowed out of the workplace.

	Personal protective equipment	Respiratory system	Respiratory protection is not required if good ventilation is maintained. However, if operating conditions result in airborne concentrations of this material, the use of an approved respirator is recommended.
		Skin and body	Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks and chemical-resistant gloves made of any waterproof material. Remove and wash contaminated clothing separately.
		Hands	Chemical resistant rubber (PVC –coated) or neoprene gloves to prevent skin contact.
		Eyes	Safety goggles or face shield (8 inch minimum).
8.2	Occupational Exposure Limits		No exposure standards have been set for the components of this product.
8.3	Re-entry Period		Under field conditions the spray should be allowed to dry on the foliage before re-entry into treated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1	Form	Milky Liquid.
9.2	Appearance	Milky liquid emulsion.
9.3	Color	Beige-white.
9.4	Odor	specific odor.
9.5	pH	4-6
9.6	Flash point	>80°C
9.7	Freezing Point	N.A.
9.8	Flammability	Non-flammable.
9.9	Corrosiveness	Non-corrosive.
9.10	Density	0.96-1.00 gr/cm ³
9.11	Water solubility	Soluble

10. STABILITY AND REACTIVITY

10.1	Reactivity	The product is not reactive under proper conditions of storage and handling.
10.2	Chemical stability	Stable under normal storage conditions (see Section 7 – storage conditions).
10.3	Incompatibilities	Strong acids and alkalis
10.4	Conditions to avoid	Extreme heat.
10.5	Hazardous polymerization	Will not occur.
10.6	Dangerous incompatibility with water	None under normal conditions.

11. TOXICOLOGICAL INFORMATION

11.1	Product toxicological data (based on active ingredients)	
11.1.1	Acute oral toxicity, rat Emamectin benzoate	LD ₅₀ – 5000 mg/kg
11.1.2	Acute dermal toxicity, rat Emamectin benzoate	LD ₅₀ > 2000 mg/kg
11.1.3	Acute inhalation toxicity, rat Emamectin benzoate	LC ₅₀ > 2.22 mg/L
11.1.4	Skin irritation, rabbit Emamectin benzoate	Not irritant
11.1.5	Eye irritation, rabbit Emamectin benzoate	Not irritating
11.1.6	Sensitization, guinea pig Emamectin benzoate	Not sensitizer
11.3	Emamectin benzoate toxicological data	
11.3.1	STOT (Specific target organ toxicity - single exposure)	Causes damage to organs (H370)
11.3.2	STOT (Specific target organ toxicity – repeated exposure)	Causes damage to organs through prolonged or repeated exposure (H372)
11.3.3	Germ Cell Mutagenicity	Not classified

11.3.4	Carcinogenicity	Not carcinogenic
11.3.5	Reproductive toxicity	Not toxic for the reproductive system
11.2.6	Aspiration hazard	No data available

12. ECOLOGICAL INFORMATION

12.1	Ecotoxicity		
12.1.1	Fish toxicity Emamectin benzoate	0.174 - LC ₅₀ (96 hours)	<i>Oncorhynchus mykiss</i>
12.1.2	Aquatic Invertebrates Emamectin benzoate	0.001 - EC ₅₀ (48 h) mg/L	<i>Daphnia magna</i>
12.1.4	Algae toxicity Emamectin benzoate	0.0072 EC ₅₀ (72 h) mg/L	<i>Pseudokirchneriella subcapita</i>
12.1.5	Bird toxicity Emamectin benzoate	Oral LD50 > mg/kg	Bobwhite quail (<i>Colinus virginianus</i>)
12.1.6	Bee toxicity Emamectin benzoate	0.0036 µg/bee (contact)	
12.2	Persistence/ degradability:		
12.2.1	Soil degradation Emamectin benzoate	Moderately persistent.	
12.2.2	Water degradation Emamectin benzoate	Moderately fast.	
12.2.3	Water / sediment Emamectin benzoate	>120 DT ₅₀ = days	
12.3	Bio-concentration factor Emamectin benzoate	No data available	
12.4	Mobility in soil Emamectin benzoate	leachability	

13. DISPOSAL CONSIDERATION

Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations. Do not flush to surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

Transportation must be done in adequate sealed containers.

UN number	3082
Transport hazard class	9
Marine Pollutant	Yes
Packaging group	PGIII
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EMAMECTIN BENZOATE)

15. REGULATORY INFORMATION

Ensure all national/local regulations are observed.

16. OTHER INFORMATION:

The information contained in the Safety data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage, and transportation and is not intended as warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.