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MATERIAL SAFETY DATA SHEET

DELTA FORCE PLUS

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:

DELTA FORCE PLUS

RECOMMENDED USE:

A residual INSECTICIDE (synthetic pyrethroid) for control of spiders, cockroaches, ants, fleas, flies, mosquitoes and other insects in domestic situations.

COMPANY IDENTIFICATION:

Environmental Health Products
42B Ellice Rd, Glenfield
Phone: +64 9 440 9994
Fax: 09 443 5083

EMERGENCY TELEPHONE NUMBERS:

24 hour Emergency Service Phone: - 0800 ChemCall (0800 243 622)
National Poisons Centre: - 0800 764 766

2. HAZARDS IDENTIFICATION

HSNO CLASSIFICATION

6.1D, 6.9B, 9.1A, 9.3C, 9.4A

HAZARDS:

Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.
Harmful to terrestrial vertebrates.
Very toxic to terrestrial invertebrates.

EYES: Can be irritating to eyes

SKIN: May irritate the skin, especially the face. May result in initial stinging or burning sensations followed by numbness which may persist for a few hours.

INHALED: Inhalation of spray may cause transient irritation of mucous membranes (Nose, throat and respiratory tract) for up to 24 hours.

INGESTION: Product is harmful. Symptoms include headache, dizziness, drowsiness, nausea, vomiting.

SYSTEMIC (OTHER TARGET ORGAN): No Data Available

CANCER INFORMATION: Not considered carcinogenic.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL ENTITY	CAS NUMBER	PROPORTION
Deltamethrin	52918-63-5	10g/L
Tetramethrin	796-12-0	10g/L
Piperonyl Butoxide	51-03-6	80g/L
Water	7732-18-5	VHigh
Other ingredients determined non-hazardous.		VLow

Proportion (% weight per weight): VHIGH >60, HIGH 30-60, MED 10-29, LOW 1-9, VLOW <1

4. FIRST AID MEASURES

Consult the National Poisons Information Centre 0800 POISON (0800 764 766) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately. Show this Material Safety Data Sheet to a doctor.

EYE CONTACT: Rinse immediately with plenty of water for at least 15 minutes, holding eye open and taking care to rinse under eyelids as well. If irritation persists seek medical attention.

SKIN CONTACT: Wash off skin immediately with soap and plenty of water. Remove all contaminated clothing and shoes. Seek medical advice if irritation persists. Launder contaminated clothing before re-use.

INGESTION: Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice.

INHALATION: Remove victim to fresh air. Seek medical advice if symptoms are experienced.

NOTE TO PHYSICIAN / FIRST AIDERS: Treat Symptomatically. Induction of vomiting is preferably performed under trained medical supervision. Skin contacted by Deltamethrin must be carefully cleaned with cleansing milk. Symptoms can be alleviated by the application of a moisturising cream or anaesthetic ointment.

5. FIRE FIGHTING MEASURES

FLASH POINT: N/A

FLAMMABLE LIMITS: N/A

EXTINGUISHING MEDIA: Water spray, carbon dioxide, foam, dry chemical. Do not use water jet from a fire hose.

FIRE AND EXPLOSION HAZARDS: Heating / combustion will generate oxides of carbon and nitrogen, and other irritant and toxic fumes.

FIRE-FIGHTING EQUIPMENT: Fire fighters should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS:

In case of spills it is important to take all steps necessary to: Avoid eye and skin contact. Avoid contamination of waterways.

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 (e.g. sand or soil).
5. Shovel the absorbed spill into drums and top with hydrated lime.
6. Disposal of the absorbent material will depend on the extent of the spill. For quantities up to 50L of product bury in a secure land fill site. For quantities greater than 50L seek advice from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.
7. Decontaminate spill area with hydrate lime scattered over the spill prior to rinsing off with water.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in a cool dry place away from direct sunlight. Store away from food and food stuffs for animal or human consumption. Store in its original container well sealed. Keep out of reach of Children. Protect from frost. Avoid Alloys and iron.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Exposure values at the TWA (Time Weighted Average) means the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. A time weight average (TWA) concentration for an 8 hour day, and 5 day week has not been established for any of the ingredients in this product. There is a blanket recommendation of 10mg/m³ for inspirable dusts or mists when limits have not otherwise been established.

ENGINEERING CONTROLS:

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Avoid skin and eye contact and inhalation of vapour. Wear overalls, eye protection and impervious gloves. Use adequate ventilation. Eye washing and shower facilities available.

EYE / FACE PROTECTION: Face and eye protection should be worn.

SKIN PROTECTION: Wear chemical resistant PVC or nitrile gloves. Wear cotton overalls and washable cotton hat. Wear boots.

RESPIRATORY PROTECTION: Use in well-ventilated area.

APPLICATIONS AND ALL OTHER HANDLERS:

After handling this product always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White liquid

ODOUR: Faint to no odour

SOLUBILITY IN WATER: Readily disperses in water.

SPECIFIC GRAVITY: 1.014 at 20°C

BOILING POINT: 100°C

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions. React with oxidising agents.

INCOMPATIBILITY: Avoid strong oxidising agents, strong acids and alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS: This product is unlikely to spontaneously decompose.

HAZARDOUS POLYMERIZATION: This product is unlikely to spontaneously polymerise.

11. TOXICOLOGICAL INFORMATION

Product:	Oral LD50 (rat) > 10,000 mg/kg Dermal LD50 (rat) >10,000 mg/kg
Deltamethrin:	Oral LD50 (rat) 130 mg/kg Dermal LD50 (rabbit) >2,000 mg/kg Inhalation LC50 (rat) 2.2 mg/L (4Hours) Eye Irritation (rabbit) Slight irritant.
Tetramethrin:	Oral LD50 (rat): > 5,000 mg/kg Dermal LD50 (rat): >5,000 mg/kg Inhalation LC50 (rat): >1,180mg/L (3hr)
Piperonyl butoxide:	Oral LD50 (rat): 5,630 mg/kg Dermal LD50 (rabbit): >2,000 mg/kg Inhalation LC50 (rat):>5.9mg/L (4 hr)

CHRONIC: Deltamethrin is not mutagenic, carcinogenic or teratogenic. Piperonyl butoxide is not classified as a carcinogen. One reference indicates that exposure to large amounts of piperonyl butoxide may cause blood disorders or liver damage. Piperonyl butoxide is not mutagenic. No birth defects or adverse effects on reproductive parameters were found in studies with rats and rabbits. Piperonyl butoxide is not considered to be teratogenic.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Deltamethrin is highly toxic to fish and aquatic organisms. Deltamethrin is not persistent in the environment. It is destroyed by soil microorganisms and does not leave residues in the environment, or build up in the food chain. Do not contaminate streams, rivers or waterways with the product or used containers.

ECOTOXICOLOGY:

Deltamethrin:	LC ₅₀ (Fish) 96 hr: 0.001 – 0.01 mg/L LD ₅₀ (duck) >5,000 mg/kg LD ₅₀ (quail) > 10,000 mg/kg
Tetramethrin:	LD ₅₀ 8 day dietary (Mallard duck): >1,000mg/kg LD ₅₀ 8 day dietary (bobwhite quail): >1,000mg/kg
Piperonyl butoxide:	LC ₅₀ (24hour) carp: 5.3mg/L Acute oral LD ₅₀ starlings: >100mg/kg

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of empty, used containers by;

1. Triple rinsing with water. Add the rinsings to the tank mix or dispose of rinsate in a disposal pit away from desirable plants and roots, and watercourses. On-site disposal of undiluted product is unacceptable.
2. Breaking, crushing or puncturing the containers to prevent reuse.
3. Disposing of in a local authority, bury landfill site that does not burn its refuse. If there is no local authority landfill readily available in your area, bury the containers under at least 50cm of soil at a licensed/approved disposal site.

14. TRANSPORT INFORMATION

UN No:	UN3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, NOS (contains deltamethrin solution)
DG Class:	9
Packing Group:	III
Hazchem Code:	3Z

DANGEROUS GOODS SEGREGATION:

This product is classified as Dangerous Goods by Road and Rail. Please consult the Land Transport Rule: Dangerous Goods 2005, and NZS 5433:1999 Transport of Dangerous Goods on Land for further information.

15. REGULATORY INFORMATION

Country/ Region:	New Zealand
ACVM Approval Number:	Not applicable
ERMA Approval Number:	HSR100769
HSNO Classifications:	6.1D Acute Toxicity (Oral); 6.9B Target Organ Toxicant; 9.1A Aquatic Ecotoxicant; 9.3C Ecotoxicant: Terrestrial Vertebrate; 9.4A Ecotoxicant Terrestrial Invertebrate
HSNO Controls:	Trigger Quantities for this Material: Signage: 100 L Emergency Plan, Secondary Containment: 100L Tracking: Not required

The trigger quantities above must take into account any other hazardous substance that is present at that location. This represents a partial list of the controls for this material.

16. OTHER INFORMATION**NOTICE**

Information for this product is believed to be reliable, however buyer and user assume all risk of use, handling and storage whether in accordance with directions or not.

Environmental Health Products and its agents give no guarantee or warranty of any kind expressed or implied concerning the use of this product and will not accept any responsibility whatsoever whether in contract or tort for any loss including consequential loss arising out of the use of this product or caused by this product.