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**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY:**

PRODUCT NAME: **DYNAMO**  
 MANUFACTURER: Lonza NZ Ltd  
 SUPPLIER NAME: Lonza NZ Ltd  
 SUPPLIER ADDRESS: 13-15 Hudson Rd, Bell Block, New Plymouth, New Zealand  
 SUPPLIER PHONE: +64 6 7559234 SUPPLIER FAX: +64 6 7551174  
 EMERGENCY PHONE: 0800 243 622, 0800 CHEMCALL INTERNATIONAL EMERGENCY PHONE: +64 4 917 9888  
 CHEMICAL FAMILY: Benzothiadiazinone and Sulfonylurea USE: Herbicide

**2. HAZARDS IDENTIFICATION:**

6.1D; Harmful - may be harmful if swallowed, inhaled or absorbed through the skin.  
 6.5B; Harmful - may cause skin sensitization from prolonged skin contact. Avoid skin contact.  
 6.8A; Toxic - may cause reproductive/developmental damage from repeated oral exposure.  
 6.9A; Toxic - may cause organ damage from repeated oral exposure at high doses.  
 8.1A; Warning - this product is corrosive to metal.  
 8.2C; Danger - this product is corrosive to the skin and may cause burns.  
 8.3A; Danger - this product is corrosive and may cause eye damage.  
 9.1A; Very toxic to aquatic organisms with long-lasting effects.  
 9.2C; Harmful to the soil environment. [Selective herbicide].  
 9.3B; Toxic to terrestrial vertebrates [birds].  
 Refer to Section 15 for NZ EPA Requirements.

**3. COMPOSITION / INFORMATION ON INGREDIENTS:**

COMMON NAME:	CAS NUMBER:	CONCENTRATION %:	HAZARD CLASSIFICATIONS:
Bentazone	25057-89-0	<45	Xn, R22,36,43,52/53, S2,24,37,61
Dimethylformamide	68-12-2	< 25	T, R61,20/21,36, S53,45
Monoethanolamine	141-43-5	<15	Xn, R41,52,20/22,37/38, S20,23,38,46,24/25,36/39
Flumetsulam	598967-40-9	<2	
Inerts		Balance	

**4. FIRST - AID MEASURES:**

EYE CONTACT: Hold eyelids open and immediately flush eyes with flowing water for at least 15 minutes. Get prompt medical attention.  
 SKIN CONTACT: Immediately flush with plenty of water while removing contaminated clothing. DO NOT scrub the skin. Continue for at least 15 minutes. Wash clothing before reuse.  
 INHALATION: Avoid inhalation of spray or mists which are likely to be highly irritating. Remove to a source of fresh air and seek medical advice.  
 INGESTION: If swallowed, rinse mouth with water immediately. DO NOT induce vomiting. Seek medical attention.  
 NOTES TO DOCTOR: No specific antidote. Treat symptomatically.

**5. FIRE FIGHTING MEASURES:**

FLASHPOINT: >105 °C HAZCHEM CODE: 2X  
 FLAMMABLE LIMITS: Not available  
 EXTINGUISHING MEDIA: Water spray (fog), Foam, Carbon dioxide or Dry chemical.  
 THERMAL DECOMPOSITION PRODUCTS: Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen.  
 SPECIAL FIRE FIGHTING METHODS  
 UNUSUAL FIRE OR EXPLOSION HAZARDS:

**6. ACCIDENTAL RELEASE MEASURES:**

Spills may be slippery and should be cleaned up immediately. Clear area of unnecessary personnel. Use appropriate protective equipment.  
 Large spill: Dike and pump as much as possible to a salvage container. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Minimise runoff into waterways or drains. It may be disposed of as an industrial waste in a manner acceptable to good waste management practice at an approved disposal facility and in compliance with all regulations.

**7. HANDLING AND STORAGE:**

Harmful - Keep out of reach of children.  
 Store in original container, tightly closed away from food, food related materials, animal feedstuffs, seed or fertilizer. Store in accordance with NZS 8409 - Management of Agrichemicals.  
 Product is corrosive to skin, eyes and metals, avoid skin or eye contact. Wear a face shield or full chemical workers goggles when there is a risk of a splash. Wear impervious gloves and other personal protective equipment appropriate to the situation when handling product. Wash protective clothing daily after work.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION:**

EXPOSURE LIMITS: WES set for Ethanolamine [CAS 141-43-5] - 8h TWA: 3 ppm - 7.5 mg/m<sup>3</sup>, STEL: 6 ppm - 15 mg/m<sup>3</sup>.  
 WES set for Dimethylformamide [CAS 68-12-2] - 8h TWA (skin): 10 ppm - 30 mg/m<sup>3</sup>.  
 No EEL exposure limits have been specifically assigned for this product.  
 EYE PROTECTION: Avoid contact with eyes. Wear a face shield or full chemical workers goggles when there is a risk of a splash.  
 RESPIRATORY PROTECTION: Avoid breathing in vapours or aerosol from the product. Use an appropriate respirator if exposed to the vapours or aerosol from the product.  
 PROTECTIVE CLOTHING: Wear protective clothing if skin contact or contamination of clothing is likely, impervious gloves, waterproof hat, coat, trousers and boots should be worn.  
 Wash protective clothing daily after work.

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VENTILATION: General (mechanical) room ventilation is considered satisfactory. Use in a well ventilated area.  
HYGIENE PRECAUTIONS: Do not eat drink or smoke while working with this product. Remove clothing that becomes soaked or contaminated and wash before reuse. Wash hands before breaks and after work. The use of a skin barrier cream is useful to give additional skin protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE / STATE / ODOUR:	Hazy brown liquid		
BOILING POINT:	Not available	pH:	6.5 - 8.5
DENSITY:	1.16	SETTING POINT:	Not available
DECOMPOSITION TEMP:	Not available	AUTOIGNITION TEMP:	Not available
FLASHPOINT:	>105 °C	VAPOUR DENSITY:	Not available
EXPLOSION PROPERTIES:	Not available	VAPOUR PRESSURE:	Not available
SOLUBILITY:	Dispersible in water		
OTHER DATA:			
OCTANOL / WATER PARTITION COEFFICIENT:	Not available		

## 10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: Product is stable under normal temperatures and pressures.  
MATERIALS TO AVOID: Corrosive to metals, do not store in metal containers.  
HAZARDOUS DECOMPOSITION: Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen.

## 11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL:  
ACUTE DERMAL:  
ACUTE INHALATION:  
OTHER TOXICITY INFORMATION:  
Product is corrosive to skin and eyes, avoid skin and eye contact. Bentazone and Flumetsulam have low to moderate toxicity and bentazone is a weak acid, moderately irritating to skin and eyes.

## 12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: LC50 (96h) fish & daphnia; >100 mg/L (Bentazone tech).  
EC50 (72h) green algae; 47 mg/L (Bentazone tech).  
Soil Toxicity: Soil DT50; 25 days (Flumetsulam tech).  
In animal studies, Flumetsulam is rapidly cleared via urine and faeces with no metabolites and Bentazone is poorly metabolised. In soils Bentazone firstly forms short-lived hydroxy compounds which rapidly undergo further degradation. The availability of Flumetsulam is principally dependant upon soil pH and organic matter and herbicidal activity increases as pH increases and organic matter decreases.

## 13. DISPOSAL CONSIDERATIONS:

Triple rinse empty container and add rinsate to the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot. Alternatively crush and bury in a approved landfill.  
Dispose of product only by using according to this label, or at an approved disposal facility.  
Avoid contamination of any water supply or stream with product or empty container.

## 14. TRANSPORT INFORMATION:

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (Bentazone & Flumetsulam)  
UN Number: 1760 UN Hazard Class: 8  
Packing Group: III Hazchem Code: 2X  
Additional Information: Do not carry more than 1 litre of this product on a passenger service vehicle.  
Corrosive to metal.

## 15. REGULATORY INFORMATION:

APPROVED HANDLER: The product must be under the personal control of an approved handler when:  
a) the product is applied in a wide dispersive manner; or  
b) used by a commercial contractor.  
However, it may be handled by a person who is not an approved handler if:  
- an approved handler is present at the facility where the substance is being handled; and  
- the approved handler has provided guidance to the person in respect to the handling of the product; and  
- the approved handler is available at all times to provide assistance if necessary.

This product shall NOT be applied onto or into water.

RECORD KEEPING: A written record of each application or discharge must be kept where -  
a) members of the public may lawfully be present; or  
b) the substance is likely to enter the air or water supply and leave the area where it is under control.  
The information must be kept for a minimum of three [3] years.

Approved pursuant to the HSNO Act 1996. NZ EPA Approval Code: HSR100817 See <www.epa.govt.nz> for controls.  
Registered pursuant to the ACVM Act 1997. ACVM Pesticide No: P008912 See <www.nzfsa.govt.nz> for registration conditions.

## 16. OTHER INFORMATION:

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.