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

PRODUCT NAME: **YIELD**
 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: Quaternary USE: Biocide

2. HAZARDS IDENTIFICATION:

6.1C; Toxic - may be fatal if swallowed, inhaled or absorbed through the skin.
 6.5A; Toxic - may cause respiratory sensitisation. Avoid inhalation of vapours/mist.
 6.5B; Harmful - may cause skin sensitisation from prolonged skin contact. Avoid skin contact.
 6.9B; Harmful - may cause organ damage from repeated oral exposure at high doses.
 8.2C; Danger - this product is corrosive to the skin and may cause skin burns.
 8.3A; Danger - this product is corrosive and may cause eye damage.
 9.1A; Very toxic to aquatic organisms.
 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:
Benzalkonium Chloride	8001-54-5	50	Class 6, 8, 9.
Inerts		<1	
Water		Balance	

4. FIRST - AID MEASURES:

EYE CONTACT: 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. Continue for at least 15 minutes. Wash clothing before reuse. Seek medical attention.
 INHALATION: If ill-effects occur, move the victim to fresh air. If there is difficulty breathing, seek medical attention.
 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: >100 HAZCHEM CODE: 2X
 FLAMMABLE LIMITS: Not available.
 EXTINGUISHING MEDIA: Dry chemical, water spray (fog), foam or carbon dioxide.
 THERMAL DECOMPOSITION PRODUCTS: Includes oxides of carbon and nitrogen.
 SPECIAL FIRE FIGHTING METHODS: Addition of water may cause excessive foaming. Vapours may be toxic. Self contained breathing apparatus required. Do not allow contaminated runoff to enter drains.
 UNUSUAL FIRE OR EXPLOSION HAZARDS: None.

6. ACCIDENTAL RELEASE MEASURES:

Use appropriate protective equipment. Clear area of unnecessary personnel. Spills may be slippery and should be cleaned up immediately.
 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.
 Warning this substance is very toxic to aquatic organisms. Avoid contamination of any water supply with this substance or empty container.

7. HANDLING AND STORAGE:

Toxic - Keep out of reach of children.
 Store in original container, tightly closed and under lock and key. Keep away from food, food related materials, animal feedstuffs, seed or fertilizer. Store in accordance with the current version of NZS 8409 - Management of Agrichemicals.
 Wear eye protection. Impervious gloves should be worn at all times. Wear other personal protective equipment appropriate to the situation when handling product. Wash protective clothing daily after work.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE LIMITS: No exposure limits (WES, TEL, or EEL's) have been specifically assigned for this products
 EYE PROTECTION: Chemical goggles or face shield when handling.
 RESPIRATORY PROTECTION: Air respirator with organic vapour canister or self contained breathing apparatus when exposed to vapours from heated material.
 PROTECTIVE CLOTHING: Wear protective clothing such as impervious gloves, waterproof hat, coat and trousers (worn outside rubber boots) when using. Wash protective clothing daily after work.
 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.

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9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE / STATE / ODOUR: Clear pale liquid. Amine odour.

BOILING POINT:	>100 °C	pH:	6.8 - 7.8
DENSITY:	0.984	SETTING POINT:	Not available.
DECOMPOSITION TEMP:	Not available.	AUTOIGNITION TEMP:	Not applicable.
FLASHPOINT:	>100 °C	VAPOUR DENSITY:	Not available.
EXPLOSION PROPERTIES:	Not applicable.	VAPOUR PRESSURE:	Not available.
SOLUBILITY:	Mixes readily with water.		
OTHER DATA:			
OCTANOL / WATER PARTITION COEFFICIENT:	Not available.		

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: None.
MATERIALS TO AVOID: None.
HAZARDOUS DECOMPOSITION: None.

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: LD50 Male rats: 975 mg/Kg.
ACUTE DERMAL: LD50 Male rats: > 1000 mg/Kg.
ACUTE INHALATION: Not reported
OTHER TOXICITY INFORMATION:

May be fatal if swallowed, inhaled or absorbed through the skin.
Corrosive to the skin and eyes, may cause skin burns and eye damage.
May cause respiratory sensitisation. Avoid inhalation of vapours/mist.
May cause skin sensitisation from prolonged skin contact. Avoid skin contact.
May cause organ damage from repeated oral exposure at high doses.

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Striped bass: LC50 = 1.5 mg/L
Soil Toxicity: Not toxic to worms.
Terrestrial Vertebrates - Birds: Toxic to birds.
Terrestrial Invertebrates - Bees: Not toxic to bees.

Very toxic to aquatic organisms. Avoid contamination of any water supply with this product or empty container.
Toxic to terrestrial vertebrates [birds]

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 an 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, ACIDIC, ORGANIC, N.O.S. (Benzalkonium chloride)
UN Number: 3265 UN Hazard Class: 8
Packing Group: III Hazchem Code: 2X

Additional Information: Do not carry more than 1 L of this product on a passenger service vehicle.

15. REGULATORY INFORMATION:

The supply and use of this product is restricted to workplaces only where a COMPETENT or AUTHORISED PERSON will accept responsibility for the product. Application or use of this product must be by a QUALIFIED PERSON. However a person other than a qualified person (person A), may apply the substance if a qualified person—

- has provided guidance to person A in respect of the application of the substance at the place; and
- is available at all times to provide assistance, if necessary, to person A while person A is applying the substance.

RECORD KEEPING: A written record of each application 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: HSR000822 See <www.epa.govt.nz> for controls.
Registered pursuant to the ACVM Act 1997. ACVM Pesticide No: P004927. 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.