

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name:	REGLONE
Design Code:	A1412P
Recommended Use:	For use as a desiccant in Barley, Green Beans, Lentils, Lucerne, Peas, Red Clover, Soya Beans, Wheat and White Clover and haulm destruction in Potatoes.
Company Details:	Syngenta Crop Protection Limited
Address:	Tower II, Level 7, 110 Symonds Street Private Bag 92618, Symonds Street AUCKLAND NEW ZEALAND
Telephone number:	(weekdays) 09 - 306 1500
Emergency Telephone number:	(24 Hours) 0800 734 607
National Poisons & Hazchem Information Centre :	0800 POISON (0800 764 766)
Date of Preparation:	6 March, 2013

Section 2: HAZARDS IDENTIFICATION

Hazard classification:	6.1C, 6.3A, 6.9A, 8.1A, 9.1A, 9.3C
Priority Identifier:	DANGER KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers:	<p>6.1C = May be fatal if swallowed, inhaled or absorbed through the skin.</p> <p>6.3A = May cause skin irritation</p> <p>6.9A = May cause eye damage from repeated oral exposure at high doses.</p> <p>8.1A = This product is corrosive to metal.</p> <p>9.1A = Very toxic to aquatic organisms.</p> <p>9.3C = Harmful to terrestrial vertebrates.</p>

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<i>Pure Substance:</i>	
Chemical Identity of pure substance:	6,7-dihydrodipyrido[1,2-a:2',1'-c]pyrazinedium dibromide
Common Name:	Diquat dibromide
Synonyms:	PP901
CAS number:	85-00-7

<i>Mixture:</i>		
Chemical Identity of ingredients:		
Ingredient	CAS no.	Content (% w/v)
Diquat (present as diquat dibromide)	85-00-7	17%
other ingredients determined not to be hazardous	-	to 100%

Section 4: FIRST AID MEASURES

Necessary First Aid measures:	<p>For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.</p> <p>Swallowed: If swallowed DO NOT induce vomiting.</p> <p>Eye: If concentrate or spray solution enters the eyes wash it out immediately with water. Remove contact lenses.</p> <p>Skin: If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with running water.</p> <p>Inhaled: If inhaled move the victim to fresh air immediately</p>
Poisoning symptoms:	<p>Inflammation of the mouth, throat and oesophagus, gastrointestinal discomfort, diarrhoea.</p>
Workplace facilities:	<p>No specific facilities required. Standard emergency equipment must be available.</p>
Hygiene Practices:	<p>Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When mixing or applying, wear protective clothing, including face shield, impervious gloves and footwear. If clothing becomes contaminated with product, remove clothing immediately. DO NOT eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work.</p>
Notes for Medical Personnel:	<p>Administer either activated charcoal (100 g for adults or 2 g/kg body weight in children) or Fuller's Earth (15% solution; 1 litre for adults or 15mL/kg body weight in children). NOTE: the use of gastric lavage without administration of an adsorbent has not shown any clinical benefit.</p> <p>Eye contact:-Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.</p>

Section 5: FIRE-FIGHTING MEASURES

Type of Hazard:	This product is not combustible.
Fire Hazard Properties:	Combustion products are toxic and or irritant. Measures have to be taken to prevent the contaminated extinguishing agent from seeping into the ground or from spreading uncontrollably.
Regulatory Requirements:	not required
Extinguishing Media and methods:	Extinguish warehouse and factory fires using dry chemical extinguisher, foam, carbon dioxide or fine-water spray. DO NOT use direct jet of water.
Hazchem Code:	2X
Recommended Protective Clothing:	When fighting a major fire wear an air-supplied respirator. Wear protective equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Emergency Procedures: Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
Environmental Precautions:	Washings must be prevented from entering surface water drains or waterways.
Procedure for spill:	<ol style="list-style-type: none">(1) Keep all bystanders away.(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, 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.(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.
Procedure for Disposal:	Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements. It is suggested: <ul style="list-style-type: none">• For quantities up to 50 litres of product bury in a secure approved landfill site.• For quantities greater than 50 litres seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.

Section 7: HANDLING AND STORAGE

Handling:	
Precautions for safe handling:	Avoid skin and eye contact and the inhalation of vapour and mist. Wear overalls, face shield, elbow length impervious gloves, splash apron and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If inhalation risk of vapour or spray mist exists wear organic vapour respirator meeting the requirements of Standards Association with Australia/ New Zealand.
Regulatory Requirements:	This product must be tracked.
Handling practices:	Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.
Approved Handlers:	This product must be controlled by an Approved Handler,.
Storage:	
Conditions for Safe Storage:	Keep out of reach of children. Keep in original containers and tightly closed. Keep away from food, drink and animal feeding stuffs. Store in a cool, dry, well ventilated place and protect from sunlight.
Store Site Requirements:	Signage and secondary containment will be required at sites holding 100 litres or more of any product classified as 9.1A (eg REGLONE).
Packaging:	Store in original container, tightly closed, away from foodstuffs.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

Workplace Exposure Guidelines:	
Workplace Exposure Standards:	Diquat dibromide 8 hr TWA: 0.5 mg/m ³ 15 min STEL 1 mg/m ³
Application in the workplace:	Not required
Exposure standards outside the workplace:	Not required
Engineering controls:	No special requirements. Product is used outdoors. Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.
	Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of Agrichemical NZS8409.

Personal Protection:	Avoid skin and eye contact and the inhalation of vapour and mist. Wear overalls, face shield, elbow length impervious gloves, splash apron and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If inhalation risk of vapour or spray mist exists wear organic vapour respirator meeting the requirements of Standards Association with Australia/ New Zealand.
General Hygiene:	Change work clothes daily. Can cause to the eyes. Avoid contact with eyes and skin. Do not inhale spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Odour: Boiling / Melting Point: Flashpoint: Explosive properties: Density: pH value Oxidising properties: Vapour Pressure: Water solubility: Combustibility: Corrosiveness Volatility:	Dark red brown viscous liquid Non specific >100°C Does not flash not explosive 1.2 g/cm ³ at 20°C 4-5.5 not oxidising 10 ⁻⁹ mmHg (for the active ingredients) soluble Not combustible Corrosive Not volatile
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Section 10: STABILITY AND REACTIVITY

Stability of the Substance: Conditions to Avoid: Material to Avoid: Hazardous decomposition products Hazardous polymerisation Specific Data	Corrosive in contact with metals. Corrosive in contact with metals. The concentrated material is corrosive to most metals including aluminium, mild steel and iron. This product contains corrosion inhibitors that protect application equipment at field rates. Combustion or thermal decomposition will evolve toxic and irritant vapours. not known not applicable
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Section 11: TOXICOLOGICAL INFORMATION

HSNO Classifications:
6.1C = May be fatal if swallowed, inhaled or absorbed through the skin.
6.3A = May cause skin irritation
6.9A = May cause eye damage from repeated oral exposure at high doses.

Acute Effects (Undiluted product)	
Swallowed:	LD ₅₀ approx. 550 mg/kg (rat)
Dermal absorption:	LD ₅₀ >5000 mg/kg (rat)
Inhaled:	LC ₅₀ (4 h) 0.64 mg/l (rat)
Irritation	
Eye:	IRRITANT (HSNO Classification)
Skin:	IRRITANT (rabbit)
Sensitization	
	NOT A SENSITISER (guinea pigs)

Chronic / Long Term Effects (Active Ingredient)

Diquat technical has been extensively tested on laboratory mammals and in test-tube systems. Ingestion studies in animals have shown that repeated doses of diquat produce cataracts in test animals (dog, rat). The no-effect level was 5 ppm in the diet (approx. 0.25 mg/kg body weight per day) for the rat in a two year study. For the dog the no effect level was 0.5 mg cation per kg per day in a one year study. These effects have not been seen in occupationally exposed humans. Diquat has not been shown to be carcinogenic or teratogenic. The ADI (Acceptable Daily Intake) for humans (diquat dibromide) is 0.002 mg/kg/day.

Section 12: ENVIRONMENTAL INFORMATION

HSNO Classifications:	
9.1A =	Very toxic to aquatic organisms.
9.3C =	Harmful to terrestrial vertebrates.
Environmental Risk and Safety Phrases:	Avoid contamination of any water supply with chemical or empty container

The information presented below calculated from data available on the components of the formulation. A thorough review of environmental information is not possible in this document.

Ecotoxicity Effects	
Acute toxicity to fish:	LC ₅₀ (96 h) = >100 mg/L (Rainbow trout)
Growth inhibition, Algae:	EC ₅₀ (96 h)= 66 µg/L (green algae)
Toxicity to aquatic Invertebrates:	LC ₅₀ (48h) = 7 mg/L (Daphnia magna (water flea))

The information presented below is for the active ingredient, diquat. A thorough review of environmental information is not possible in this document.

Ecotoxicity Effects	
Toxicity to Birds:	LD ₅₀ = 155 (mallard duck) LD ₅₀ = 295 mg/kg (partridges)
Toxicity to soil dwelling organisms:	LC ₅₀ (14 days) = 243 mg/kg (earthworms)
Toxicity to Bees:	LD ₅₀ (120 h, oral) = 22 µg/bee

Environmental Fate

The information presented here is for the active ingredient, diquat dibromide.
 Distribution and Persistence: diquat is rapidly absorbed and deactivated by soil. There is no mobility in soil or water. There is evidence of photodegradation in water and plants. Diquat has low potential to bioaccumulate.

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal: Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

Container Disposal: Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose..

Section 14: TRANSPORT INFORMATION

Rail / Road (RID/ADR)	UN-No:	1760
	Class:	8
	Packaging Group:	III
	Proper shipping name:	CORROSIVE LIQUID, N.O.S. (Diquat)
Sea (IMDG-Code)	UN-No:	1760
	Class:	8
	Packaging Group:	III
	Proper shipping name:	CORROSIVE LIQUID, N.O.S. (Diquat)
Air (ICAO/IATA)	UN-No:	1760
	Class:	8
	Packaging Group:	III
	Proper shipping name:	CORROSIVE LIQUID, N.O.S. (Diquat)

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR000446
HSNO Controls (inc. Tracking and Record Keeping):	See http://www.epa.govt.nz/search-databases/Pages/controls-search.aspx for controls.
ACVM Registration:	P 0001
ACVM Controls:	See www.foodsafety.govt.nz/industry/acvm for registration conditions.

Section 16: OTHER INFORMATION

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

CONTACT POINT: Business Manager - Crop Protection: (09) 306 1503
24 HOURS EMERGENCY CONTACT: 0800 734 607

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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DISCLAIMER

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.