


Material Safety Data Sheet

Duality

Date of issue: 16th June, 2008

1) Identification of Substance:		
Product name:	Duality	
Active Ingredient(s):	150g/litre picloram (as the monoethanolamine salt) + 225g/litre clopyralid (as the monoethanolamine salt)	
ACVM Approval:	P7670	
ERMA Approval:	HSR000762	
Distributed by:	Adria Crop Protection P.O. Box 535 Kumeu 1250, Auckland Ph: 09-412-9817 Fax: 09-412-9807 www.adriacp.co.nz	
Emergency Number:	National Poisons Centre 0800 POISON 0800 764 766	
2) Hazards Identification:		
HSNO Classifications:	6.4A, 9.1A, 9.2A, 9.3C	
Risk and safety phrases:		
3) Composition Details:		
Chemical identity:	Picloram + Clopyralid	
Chemical identity of ingredients:		
Ingredient:	CAS No.:	Content (%w/v)
Picloram	1918-02-1	15.00
Clopyralid	1702-17-6	22.5
4) First Aid Measures:		
General Information:		
Skin contact:	After contact with skin, wash immediately with soap and water.	
Eye contact:	If product or spray enters eyes, wash out immediately and continue rinsing with clean water for at least 15 minutes. Obtain medical attention.	
Ingestion:	If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre on 0800 POISON (0800 764766) or a doctor immediately.	
Inhalation:	Keep patient calm. Remove to fresh air and seek medical attention.	
Further Information:	Treatment: Treat according to symptoms (decontamination, vital functions). No known specific antidote.	

5) Fire-Fighting Measures:	
Specific hazards:	If involved in a fire, it will toxic fumes.
Extinguishing media and methods:	Dry chemical, water spray, foam, carbon dioxide.
Recommended protective clothing:	Wear SCBA and chemical-protective clothing.
6) Accidental Release Measures:	
Personal precautions:	Use protective clothing. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately.
Environmental precautions:	Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.
Spill procedures:	Wear appropriate protective clothing and prevent material from entering waterways. Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material.
Disposal procedures:	Dispose of waste safely, according to local Council regulations.
7) Handling & Storage:	
Handling:	Avoid contact with skin and eyes. Ventilation required. Keep away from: sparks, open flame and direct sunlight.
Storage:	Keep away from heat and protect from sunlight. Protect against freezing.
8) Exposure Control / Personal Protection:	
Engineering measures:	
Respiratory protection:	Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles.
Eye protection:	Safety goggles with side-shields.
Hand protection:	Suitable chemical resistant safety gloves (e.g. nitrile rubber (.4mm)).
Other protective equipment:	Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.
General Safety & Hygiene measures:	Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use. Wash hands and face before breaks and after work.
9) Physical & Chemical Properties:	
Form:	Liquid
Colour:	Brown
Odour:	Charateristic
Melting point/boiling point:	> 100 °C
Density:	1120 – 1160 g/L

Surface tension:	N/A
pH:	8.0 – 10.0
Flash point:	N/A
Ignition Temperature:	N/A
Explosive Limits:	N/A
10) Stability & Reactivity:	
Conditions to avoid:	Stable under normal conditions.
Materials to avoid:	Strong acids, bases and oxidisers.
Hazardous reactions:	Oxides of nitrogen, chlorine and carbon (including carbon monoxide and carbon dioxide).
11) Toxicological Information:	
Acute oral toxicity:	> 5 000 mg/kg
Acute inhalation toxicity:	> 1 g/L (4 hrs)
Acute dermal toxicity:	> 2 000 mg/kg
Skin irritation:	Not likely to cause skin irritation
Eye irritation:	May cause moderate eye irritation
Sensitisation:	Not likely to cause sensitisation
12) Ecological Information:	
Acute fish toxicity:	Picloram: LC50 (96 h) for rainbow trout 5.5, bluegill sunfish 14.5 mg/l Clopyralid: LC50 (96 h) for rainbow trout 103.5, bluegill sunfish 125.4 mg/l
Toxicity for daphnia:	Picloram: LC50 34.4 mg/l Clopyralid: EC50 (48 h) 225 mg/l. EC50 (21 d) immobilisation 69, reproduction 80 mg/l; NOEC 17 mg/l
Toxicity to algae:	Picloram: EC50 for Selenastrum 36.9 mg/l Clopyralid: EC50 (96 h) for Selenastrum capricornutum, cell count 6.9, cell volume 7.3 mg/l
13) Disposal Considerations:	
Disposal: 	Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.
Empty container precautions:	Avoid contamination of any water supply with chemical or empty container.
14) Transportation Information:	
Rail/road (RID/ADR):	Not regulated for transport
Sea (IMDG code):	Not regulated for transport
Air (ICAO/IATA):	Not regulated for transport
15) Regulatory Information:	
Approved handlers:	This product must be under the care of an approved handler during use.
ACVM controls:	See www.nzfsa.govt.nz/acvm/ for registration conditions.