

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: AXIAL 100 EC Selective herbicide
Other Names: Product code: A12303C
Recommended Use: For the control of key grass weeds in Barley and Wheat
Company Details: Syngenta Crop Protection Pty Limited
ABN 33 002 933 717
Address: Level 1, 2-4 Lyon Park Road
NORTH RYDE NSW 2113
AUSTRALIA
Telephone Number: (02) 8876 8444
Emergency Telephone Number: 24 hours - 1800 033 111

Section 2: HAZARDS IDENTIFICATION

Hazard Classification: Hazardous according to the criteria of NOHSC Australia
Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin
R65 Harmful: May cause lung damage if swallowed
Safety Phrases: -

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE

Chemical Identity of Pure Substance: Pinoxaden / Cloquintocet-mexyl
Synonym: NOA 407855 / CGA 185072
CAS Number: 243973-20-8 / 99607-70-2

MIXTURE

Chemical Identity of Ingredients	CAS No	Proportion (% w/v)
Pinoxaden	243973-20-8	10
Cloquintocet-mexyl	99607-70-2	2.5
Tetrahydrofurfuryl alcohol	97-99-4	30-60
Solvent naphtha (petroleum), highly aromatic	64742-94-5	30-60
Other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:	<p>In case of poisoning by any exposure route contact a doctor or Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p>Ingestion: If swallowed seek medical advice immediately. DO NOT induce vomiting</p> <p>Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required</p> <p>Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before re-use</p> <p>Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poison Information Centre immediately</p>
Poisoning Symptoms:	No cases of human poisoning are on record. Poisoning symptoms observed for laboratory animals were non-specific
Medical Advice:	There is no specific antidote available. Treat symptomatically

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	<p>Small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide</p> <p>Large fires Use alcohol-resistant foam water spray DO NOT use a solid water stream as it may scatter and spread fire Cool closed containers exposed to fire with water spray</p>
Hazards from Combustion Products:	<p>As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. DO NOT allow run-off from fire fighting to enter drains or water courses</p>
Special Protective Precautions and Equipment for Fire Fighters:	In the event of fire, wear self-contained breathing apparatus

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	In case of spillage it is important to take all steps necessary to <ul style="list-style-type: none">• Avoid eye and skin contact• Avoid contamination of waterways
Methods and Materials for Containment and Clean Up:	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) Re-position any leaking containers so as to minimise further leakage(4) Dam and absorb spill with an absorbent material (eg sand or soil)(5) Shovel the absorbed spill into drums(6) Disposal of the absorbed material will depend upon the extent of the spill<ul style="list-style-type: none">• For quantities up to 50 L of product bury in a secure landfill site• For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established(7) Decontaminate spill area using hydrated lime

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	Will irritate the eyes, nose, throat and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When opening the container and preparing spray wear: <ul style="list-style-type: none">• cotton overalls buttoned to the neck and wrist• a washable hat• elbow-length PVC gloves• goggles• disposable fume mask covering mouth and nose If product on skin, immediately wash the area with soap and water. If product in eyes, wash it out immediately with water. After each day's use, wash gloves, goggles and contaminated clothing.
Conditions for Safe Storage:	Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

National Exposure Standards:	No exposure standards allocated						
Syngenta Exposure Standards:	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Cloquintocet-mexyl</td> <td style="text-align: right;">10 mg/m³</td> </tr> <tr> <td>Solvent naphtha (petroleum), highly aromatic</td> <td style="text-align: right;">100 mg/m³</td> </tr> <tr> <td colspan="2" style="text-align: right;">(8 hour time weighted average)</td> </tr> </table>	Cloquintocet-mexyl	10 mg/m ³	Solvent naphtha (petroleum), highly aromatic	100 mg/m ³	(8 hour time weighted average)	
Cloquintocet-mexyl	10 mg/m ³						
Solvent naphtha (petroleum), highly aromatic	100 mg/m ³						
(8 hour time weighted average)							
Biological Limit Values:	No biological limit allocated						
Engineering Controls:	DO NOT use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.						
Personal Protective Equipment:	<p>Will irritate the eyes, nose, throat and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When opening the container and preparing spray wear:</p> <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist • a washable hat • elbow-length PVC gloves • goggles • disposable fume mask covering mouth and nose <p>If product on skin, immediately wash the area with soap and water. If product in eyes, wash it out immediately with water. After each day's use, wash gloves, goggles and contaminated clothing.</p>						

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, yellow to orange liquid	Boiling Point/Range:	Not available
Odour:	Aromatic	Freezing/Melting Point:	Not available
pH:	3-7 at 1% w/v	Solubility:	Miscible in water
Vapour Pressure:	Not available	Specific Gravity or Density:	1.03 g/mL at 20°C
Vapour Density:	Not available	Viscosity, dynamic:	8.34 mPa.s at 20°C 4.41 mPa.s at 40°C
Surface tension:	36.6 mN/m at 25°C		

Flash Point:	79°C at 1001 mbar	Explosive Properties:	Not explosive
Upper and Lower Flammable (Explosive) Limits in Air:	Not available	Oxidising Properties:	Not oxidising
Ignition Temperature:	Not available	Combustibility:	Combustible C1
		Corrosiveness:	Not corrosive

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under standard conditions
Conditions to Avoid:	None known
Incompatible Materials:	None known
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapours
Hazardous Reactions:	None known Hazardous polymerisation does not occur

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:		
Acute:	Oral toxicity:	Low toxicity LD ₅₀ = 3,129 mg/kg (female rat)
	Dermal toxicity:	Low toxicity LD ₅₀ = >2,000 mg/kg (male and female rat)
	Inhalation:	Low toxicity LC ₅₀ (4 hours) = >5 mg/L (male and female rat)
	Skin irritation:	Moderate irritant (rabbit)
	Eye irritation:	Moderate irritant (rabbit)
	Sensitisation:	Not sensitising (guinea pig)
Chronic :	<p>Pinoxaden technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of carcinogenic, mutagenic, teratogenic or reproductive effects was obtained.</p> <p>Cloquintocet-mexyl technical has been extensively tested and no evidence of mutagenic, carcinogenic, teratogenic, or reproductive effects was obtained.</p> <p>The aromatic hydrocarbon mixture may cause central nervous system depression and narcosis.</p>	

SEA TRANSPORT IMDG			
UN Number:	3082	Packing Group:	III
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (solvent naphtha)	Special Precautions for User:	None
Class:	9	Hazchem Code:	None allocated
Subsidiary Risk:	None allocated	Marine Pollutant:	Marine pollutant

AIR TRANSPORT ICAO / IATA			
UN Number:	3082	Packing Group:	III
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (solvent naphtha)	Special Precautions for User:	None
Class:	9	Hazchem Code:	None allocated
Subsidiary Risk:	None allocated		

Section 15: REGULATORY INFORMATION

APVMA Product Number:	59024
Poisons Schedule (SUSDP):	S5

Section 16: OTHER INFORMATION

Date of preparation or last revision: April 2006

Source of Data: The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. 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.

Note: This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions

CONTACT POINT: Regulatory Affairs Manager, Syngenta Crop Protection Pty Limited
(02) 8876 8444

24 HOURS EMERGENCY CONTACT: 1800 033 111

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 SDS 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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SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	ADIGOR® Spray Adjuvant
Other Names:	Product code: A12127R
Recommended Use:	Adjuvant to assist in the performance of AXIAL® 100 EC Selective Herbicide and other crop protection products
Company Details:	Syngenta Crop Protection Pty Limited ABN 33 002 933 717
Address:	Level 1, 2-4 Lyon Park Road NORTH RYDE NSW 2113 AUSTRALIA
Telephone Number:	(02) 8876 8444
Emergency Telephone Number:	24 hours - 1800 033 111

Section 2: HAZARDS IDENTIFICATION

Hazard Classification:	Classified as hazardous according to NOHSC criteria
Risk Phrases:	R43 May cause skin sensitisation by skin contact
Safety Phrases:	—

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
Chemical Identity of Pure Substance:	Methyl esters of canola oil fatty acids
Synonym:	CA 2205
CAS Number:	67762-26-9

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (w/v)
Methyl esters of canola oil fatty acids	67762-26-9	440
Ethoxylated alcohols, C16-18 and C18 unsaturated	68920-66-1 / 37335-03-8	10 – <30
Solvent naphtha (petroleum), highly aromatic	64742-94-5	10 – <30
Other ingredients determined not to be hazardous		to 100

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:	<p>In case of poisoning by any exposure route contact a doctor or Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p>General: Remove the affected person from the danger zone to a well ventilated room or to fresh air, and protect from undercooling.</p> <p>Ingestion: Repeatedly administer medicinal charcoal in a large quantity of water. Note: Never give anything by mouth to an unconscious person. Do not induce vomiting</p> <p>Eye contact: Rinse eyes with clean water for several minutes and immediately call a physician</p> <p>Skin contact: Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water, including hair and under fingernails</p> <p>Inhalation: Immediately remove to fresh air</p>
Poisoning Symptoms:	Poisoning symptoms in laboratory animals were non-specific
Medical Advice:	No specific antidote is known. Treat symptomatically

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Dry chemical extinguisher, foam, carbon dioxide or waterspray (do not use direct jet of water)
Hazards from Combustion Products:	<p>Combustion products: carbon dioxide, carbon monoxide, nitrogen oxides, sulfur dioxide</p> <p>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</p>
Special Protective Precautions and Equipment for Fire Fighters:	Use self contained breathing apparatus. Wear protective equipment

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Pay attention to protective clothing and safety measures
Methods and Materials for Containment and Clean Up:	Soak up with absorptive material such as sand, soil, diatomaceous earth, etc. Prevent material from spreading, eg by damming in with absorptive material. Collect material in specially marked, tightly closing containers. Wash away the remainder with plenty of water and a wetting agent. Spilled product cannot be used further and must be disposed of. If safe disposal is not possible, contact the manufacturer, dealer or local representative. Do not contaminate waters and sewers.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid contact with eyes and skin. When using the product wear: <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length PVC gloves • goggles
Conditions for Safe Storage:	Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

National Exposure Standards:	No exposure standard allocated
Biological Limit Values:	No biological limit allocated
Engineering Controls:	No special requirements. Product is used outdoors
Personal Protective Equipment:	Avoid contact with eyes and skin. When using the product wear: <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length PVC gloves • goggles

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow to yellow liquid	Boiling Point/Range:	> 230°C (1,013.25 hPa)
Odour:	None	Freezing/Melting Point:	Solidification point <0°C
pH:	4-8 (1% in deionised water)	Solubility:	Not known
Vapour Pressure:	Not known	Specific Gravity or Density:	0.91-0.95 g/mL (20°C)
Vapour Density:	Not known	Miscibility with Water:	Miscible
Surface Tension:	32.4 mN/m (undiluted, 25°C) 31/5 mN/m (0.9% in water, 20°C) 32.1 mN/m (0.1% in water, 20°C)	Dynamic Viscosity:	15.1 mPa.s (20°C, 10-200 s ⁻¹) 8.05 mPa.s (40°C, 10-200 s ⁻¹)

Flash point:	127°C (766 mmHg)	Explosive properties:	Not explosive Not shock sensitive Not thermally sensitive
Upper and Lower Flammable (Explosive) Limits in Air:	Not known	Oxidising properties:	Not oxidising
Ignition Temperature:	Not known	Combustibility:	Combustible at elevated temperatures
		Corrosiveness:	Not known

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under standard conditions
Conditions to Avoid:	None known
Incompatible Materials:	None known
Hazardous Decomposition Products:	Combustion products are toxic and/or irritant. Carbon dioxide, carbon monoxide, nitrogen oxides, sulphur dioxide
Hazardous Reactions:	None known

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:		
Acute:	Oral toxicity:	Low toxicity following single doses of undiluted product LD ₅₀ = >5,000 mg/kg (female rat)
	Dermal toxicity:	Low toxicity following skin contact with undiluted product LD ₅₀ = >5,000 mg/kg (rat)
	Skin irritation:	Non irritant (rabbit)
	Eye irritation:	Non irritant (rabbit)
	Sensitisation:	Sensitising (guinea pig)
Chronic :	Not known	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Acute toxicity to fish	LC ₅₀ = 9.6 mL (96 hours, static, Rainbow Trout, <i>Oncorhynchus mykiss</i>)
	Growth inhibition to algae	EbC ₅₀ = 0.51 mg/L ErC ₅₀ = 1.22mg/L (72 hours, Green algae, <i>Pseudokirchneriella subcapitata</i>)
	Toxicity to aquatic invertebrates	EC ₅₀ = 7.1 mg/L (48 hours, static, Water flea, <i>Daphnia magna</i>)
	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment	
Persistence and Degradability:	Not known	
Mobility	Not known	
Environmental Fate (Exposure):	Not known	
Bioaccumulative Potential:	Not known	

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods and Containers:	Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
Special Precautions for Landfill or Incineration:	Not applicable

Section 14: TRANSPORT INFORMATION

LAND TRANSPORT ADG	Not a dangerous good in Australia		
UN Number:	None allocated	Packing Group:	None allocated
UN Proper Shipping Name:	None allocated	Special Precautions for User:	None allocated
Class:	None allocated	Hazchem Code:	None allocated
Subsidiary Risk:	None allocated		

SEA TRANSPORT IMDG			
UN Number:	3082	Packing Group:	III
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (solvent naptha)	Special Precautions for User:	None
Class:	9	Hazchem Code:	Not applicable
Subsidiary Risk:	Not applicable	Marine Pollutant:	Yes

AIR TRANSPORT ICAO / IATA			
UN Number:	3082	Packing Group:	III
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (solvent naptha)	Special Precautions for User:	None
Class:	9	Hazchem Code:	Not applicable
Subsidiary Risk:	Not applicable		

Section 15: REGULATORY INFORMATION

APVMA Product Number:	60114
Poisons Schedule (SUSDP):	Exempt

Section 16: OTHER INFORMATION

Date of preparation or last revision: March 2006

Source of Data: The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. 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.

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