



Product Name: NAADCO S-METOLACHLOR 960 HERBICIDE
APVMA Approval No: 91523/132517

Label Name:	NAADCO S-METOLACHLOR 960 HERBICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 960 g/L S-METOLACHLOR
Mode of Action:	GROUP 15 HERBICIDE
Statement of Claims:	For the control of certain annual grasses and broadleaf weeds in certain crops as specified in the Directions for Use table.
Net Contents:	10 L - 1000L
Restraints:	DO NOT apply to waterlogged soils. DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 day of application. DO NOT irrigate to the point of runoff for at least 2 days after application.
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	Canola: DO NOT GRAZE TREATED FIELDS FOR 10 WEEKS AFTER APPLICATION. Green Beans: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 10 WEEKS AFTER APPLICATION.

	<p>Pastures: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 13 WEEKS AFTER APPLICATION.</p> <p>Sweet Potatoes: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 23 WEEKS AFTER APPLICATION.</p> <p>Wheat, Barley Oats, Triticale: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 8 WEEKS AFTER APPLICATION.</p> <p>FORAGE - All Other Crops (Except Sweet Potatoes): DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 13 WEEKS AFTER APPLICATION.</p>
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP 15 HERBICIDE NAADCO S-Metolachlor 960 Herbicide is a member of the α-Chloroacetamide group of herbicides. NAADCO S-Metolachlor 960 Herbicide has the inhibition of very long chain fatty acid synthesis (VLCFA inhibitors) mode of action. For weed resistance management, NAADCO S-Metolachlor 960 Herbicide is a Group 15 herbicide.</p> <p>Some naturally occurring weed biotypes resistant to NAADCO S-Metolachlor 960 Herbicide and other Group 15 herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by NAADCO S-Metolachlor 960 Herbicide or other Group 15 herbicides.</p> <p>Since the occurrence of resistant weeds is difficult to detect prior to use, New Australia Agricultural Development Company Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant weeds.</p> <p>Advice as to strategies and alternative treatments that can be used should be obtained from your local supplier, consultant, local Department of Agriculture, Primary Industries Department or New Australia Agricultural Development Company Pty Ltd.</p>
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Precautions:	DO NOT enter treated area until spray has dried.
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Protections:	<p>PROTECTION OF CROPS NATIVE AND OTHER NON-TARGET PLANTS DO NOT plant crops other than maize, sweet corn, tobacco, cotton, soybeans, sunflowers, peanuts, broccoli, brussels sprouts, cabbages, cauliflowers or Concep II treated Sorghum within 6 months of application of NAADCO S-METOLACHLOR 960 HERBICIDE.</p> <p>DRIFT WARNING DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.</p> <p>PROTECTION OF LIVESTOCK DO NOT graze or cut sweet potato leaves for stock food.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT TOXIC TO FISH. DO NOT contaminate streams, rivers or waterways with the chemical or used containers. DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto adjacent areas, particularly wetlands, waterbodies or watercourses.</p>
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Storage and Disposal:	Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Triple 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 deliver empty packaging to an approved waste management facility. If an approved management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product. For refillable containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.
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Safety Directions:	Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each days use, wash gloves, face shield or goggles and contaminated clothing.
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First Aid Instructions:	If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.
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First Aid Warnings:	
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DIRECTIONS FOR USE

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Barley, Oats	Suppression of Annual Ryegrass	NSW, ACT, Vic, Tas, SA, WA only	370 to 490 mL/ha	Apply to moist soils immediately after planting and before crop and weeds emerge. Use the lower rate on light soils. Application should be made to a moist seedbed and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Damage may occur if crop is sown too shallow (less than 4 cm). Damage can occur on light sandy soil types after heavy rain. See General Instructions for use in zero-tillage systems.
Barley, Oats, Triticale, Wheat	Toad Rush		145 to 245 mL/ha	Apply at or immediately after planting and before crop and weeds emerge. Application should be made to a moist seedbed and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Use rates towards the higher end of the range in wet areas or when longer residual control is required or in situations where crop competition is minimal. When mixed with a Triasulfuron Herbicide apply pre-sowing and incorporate by sowing operation (for Wheat only). See General Instructions for use in zero-tillage systems.
Broccoli, Brussels Sprouts, Cabbages, Cauliflowers	Barnyard Grass, Blackberry Nightshade, Chickweed (suppression), Deadnettle, Fat Hen, Lovegrass, Pigeon Grass, Pigweed (suppression), Potato Weed, Shepherd's Purse, Stinging Nettle, Summer Grass, Wireweed (suppression)	QLD, NSW, ACT, Vic, Tas, NT only	1.45 to 2 L/ha	Apply immediately after transplanting. Sufficient irrigation to wet the top 3 to 4 cm of soil should be applied within 24 hours. Use rates towards the higher end of the range where Blackberry Nightshade, Chickweed, Fat Hen, Lovegrass, Pigeon Grass, Pigweed, Potato Weed and Wireweed are the major problem. See Warning — Brassica crops.
	Crowsfoot Grass, Fierce Thornapple (suppression), Liverseed Grass, Winter Grass	NSW, ACT only		Apply immediately after transplanting. Sufficient irrigation to wet the top 3 to 4 cm of soil should be applied within 24 hours. Use rates towards the higher end of the range where Apple of Peru, Common Sowthistle, Fierce Thornapple, Liverseed Grass, Redroot Amaranth, Twiggy Turnip and Nettleleaf Goosefoot are the major problems. Warning: Qld only - stunting and reduced yield may occur in broccoli in red soils and light alluvial soils. See Warning — Brassica crops.
	Apple of Peru, Awnless Barnyard Grass, Fierce Thornapple (suppression), Liverseed Grass, Yellow Weed, Redroot Amaranth (suppression)	QLD only		
	Annual Ryegrass, Common Cotula Common Sowthistle (suppression), Crowsfoot Grass, Fiddle Dock, Italian Ryegrass, Liverseed Grass, Nettleleaf Goosefoot (suppression), Twiggy Turnip (suppression), Winter Grass	Vic, TAS only		
Canola	Toad Rush	QLD, NSW, ACT, Vic, Tas, SA only	145 to 245 mL/ha	Apply at or immediately after planting and before crops and weed emerge. Apply to moist soil. Use rates towards the higher end of the range where longer residual control is required.
		WA only		Apply before crops and weeds emerge. Apply to moist soil. To avoid crop injury use rates towards the lower end of the range on light sandy soils.

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Cotton	Barnyard Grass, Crowsfoot Grass,	Qld, NSW,	975 mL/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated using a low

	Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	WA only		volume boom sprayer applying 60 to 120 L of mixture per hectare. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate chemical to a depth of 3 to 4 cm. Use rates towards the higher end of the range on heavy soils or where a heavy grass population is expected. DO NOT throw untreated soil onto treated areas as this will reduce weed control. DO NOT use on soils where the sand content exceeds 70%. Use lower rate where the sand content of the soil is within the range 50% to 70%. See Warning — Cotton.
Green Beans, Navy Beans	Blackberry Nightshade, Common Sowthistle, Fat Hen, Potato Weed, Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass and suppression of Pigweed	Qld, NSW, ACT, Vic, SA only	1.45 to 2 L/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate chemical to a depth of 3 to 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control.
	Powell's Amaranth	Tas only	2L/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated. For sufficient Amaranth control the NAADCO S-Metolachlor 960 Herbicide application should be followed by 1L/ha Basagran* (2 leaf Amaranth) or 2 L/ha Basagran (4 leaf Amaranth). Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate chemical to a depth of 3 to 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control.
Maize (not Waxy Maize), Sweet Corn	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew	Qld, NSW, ACT, Vic, Tas, SA, NT only	975mL to 2 L/ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated using a low volume boom sprayer applying 60 to 120 L of mixture per hectare. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate chemical to a depth of 3 to 4 cm. Use rates towards the higher end of the range on heavy soils or where a heavy grass population is expected. DO NOT throw untreated soil onto treated areas as this will reduce weed control. DO NOT use on soils where the sand content exceeds 70%. Use lower rate where the sand content of the soil is within the range 50% to 70%.
	Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth		975mL to 2 L plus 2.5 L of Atrazine (500 g/L) Flowable per ha	
Pastures - Trikkala Sub-Clover, Haifa White Clover, Maral Persian Clover, Paradana Balansa Clover, Redquin Red Clover, Phalaris and Cocksfoot	Toad Rush	NSW, ACT, Vic, SA, NT only	195 to 245 mL/ha	Apply at or immediately after planting and before pasture species and weeds emerge. Application should be made to a moist seed bed. Sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Use rates towards the higher end of the range in wet areas or when longer residual control is required. DO NOT use in soils where prolonged waterlogging is anticipated otherwise unacceptable crop retardation will occur. Avoid damage to pasture species by avoiding overlaps and double spraying in headlands where White, Persian and Balansa Clovers are sown and if the 375 mL rate is being used.
CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Peanuts	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass,	Qld, NSW, NT only	975 mL to 2 L/ha	Apply before pre-irrigation where soil crusting is likely. Apply before, at or immediately after planting and before weeds germinate. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate
Soybeans,		Qld,		

Sunflowers	Wandering Jew	NSW, ACT, Vic, SA, NT only		chemical to a depth of 3 to 4 cm. DO NOT throw untreated soil onto treated areas as this will reduce weed control. Use rates toward the higher end of the range on heavy soils or where a heavy grass population is expected.
Sorghum treated with Concep II Sorghum Seed Safener	Blackberry Nightshade, Caltrop, Common Thornapple, Mintweed, Needle Burr, Noogoora Burr, Pigweed, Redroot Amaranth, Slim Amaranth	Qld, NSW, ACT, NT only	1 to 2 L plus 2.5 L of Atrazine (500 g/L) Flowable per ha	Pre-emergent: Apply before, at, or immediately after planting and before crops and weeds have germinated using a low volume boom sprayer applying 60 to 120 L of mixture per hectare. DO NOT apply to Sorghum seed not previously treated with Concep II Sorghum Seed Safener. Rain or irrigation is necessary within 10 days of spraying to thoroughly wet the top 3 to 4 cm of soil. If rain does not occur or irrigation is unavailable incorporate chemical to a depth of 3 to 4 cm. Use rates toward the higher end of the range on heavy soils or where a heavy grass population is expected. DO NOT throw untreated soil onto treated areas as this will reduce weed control. Use the lower rate on sandy soils.
	Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrass, Pigeon Grass, Summer Grass, Wandering Jew		975mL to 2L/ha	
Sugar Cane (plant and ratoon)	Awnless Barnyard Grass, Barnyard Grass, Bellvine, Billygoat Weed (Blue Top), Blackberry Nightshade, Caltrop, Common Sowthistle (Milk Thistle), Common Thornapple, Crowsfoot Grass, Green Summer Grass, Guinea Grass, Mexican Clover, Mintweed, Needle Burr, Passionfruit Vines, Pigeon Grass, Pigweed, Redroot Amaranth, Square Weed, Star of Bethlehem, Summer Grass, Wild Rose	Southern Qld only (Bundaberg South)	1 to 1.45 L plus 2.7 to 3.6 L Atrazine (500 g/L) Flowable or 1.5 to 2 kg of Atrazine (900 g/kg) WDG	Apply as a pre- or post-emergent application to crop. Apply once per year only. Application should be made to a moist soil before weeds and grasses have germinated. If conditions remain dry for a period of 10 days after spraying, irrigation or a shallow cultivation (2.5 cm) may assist results. DO NOT throw untreated soil on to treated areas as this will reduce weed control. In Southern Queensland, use rates toward the higher end of the range on heavy soils where a high grass population is expected. In Northern Queensland, application must be made to moist soil and rainfall or irrigation should occur within 24 hours of application. Use rates toward the higher end of the range where high Green Summer Grass population is expected. Where broadleaf weeds and grasses have emerged and are in the 2 to 4 true leaf stage, knockdown herbicides such as a flowable Ametryn (500 g/L) (2 L/ha), a flowable diuron (500 g/L) at 1 L/ha or paraquat at label rates, applied as a post directed spray, can be added. Where broadleaf weeds only have emerged and are at the 2 to 4 true leaf stage then a 500 g/L 2,4-D amine at 2 L/ha should be added. In all cases add a non-ionic surfactant. Follow all instructions and restrictions on the Atrazine labels.
		Northern Qld only (Mackay North)	1.4 to 1.8 L plus 3.6 to 4.5 L Atrazine (500 g/L) Flowable or 2 to 2.5 kg of Atrazine (900 g/kg) WDG	
Sweet Potato	Black Pigweed, Red Shank, Potato Weed, Barnyard Grass, Crowsfoot Grass, Liverseed Grass, Lovegrasses, Pigeon Grass, Summer Grass, suppression of Evening Primrose	Qld, NSW, ACT, Vic, SA, NT only	1.45 L/ha	Pre-emergent: Apply immediately after transplanting before weeds have germinated. Sufficient irrigation to wet the soil through the weed zone should be applied within 24 hours. Further weed germination may occur following rehilling due to exposure of untreated soil.

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Tobacco (transplanted in field)	Barnyard Grass, Lovegrass, Pigeon Grass, Summer Grass and suppression of Common Thornapple (<i>Datura stramonium</i>) and Nightshades (<i>Solanum sarrachoides</i> and <i>S. nigrum</i>)	NSW, Vic only	1.45 L/ha	Apply by low volume boom spray prior to transplanting and before weeds and grasses germinate. The seed bed should be fine and free of large clods. Thoroughly incorporate within 7 days of spraying using a rotary hoe or similar equipment set to work to a depth of 7.5 cm. DO NOT use disc cultivating implements. An even coverage of the herbicide is essential. The herbicide needs to be activated by moisture through to the top 3 to 4 cm of soil at the time of application or within 4 days of incorporation. This can be achieved by applying to moist soil, irrigating soon after incorporation or irrigating immediately after transplanting. Avoid boom overlaps as double treatment may cause growth suppression. Temporary crop retardation may be observed when soil conditions remain dry after application or where Black Root Rot may occur.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL
UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.**

GENERAL INSTRUCTIONS

USES

The product is a short residual, pre-emergent herbicide for the control of many important annual grasses and broadleaf weeds in the crops nominated. The product does not control the important broadleaf weeds in maize, sweet corn and Concep* II treated Sorghum, but when mixed with Flowable Atrazine controls of many important annual weeds and grasses is obtained without the problem of carryover of herbicides affecting succeeding crops. The product acts mainly through shoot (coleoptile) absorption. Its effectiveness depends on the occurrence of rainfall or irrigation to move it down into the top 3 to 4cm of soil, where it must be present at the time of weed germination.

MIXING

Add the required amount directly to the spray tank, fill with water and mix well.

COMPATIBILITY

NAADCO S-Metolachlor 960 Herbicide is compatible with Ametryn 500, Atrazine, Prometryn 500, Triasulfuron, Paraquat and Glyphosate.

Warning — Cotton: Heavy rain following an application of NAADCO S-Metolachlor 960 Herbicide, together with below average soil temperatures, can result in crop injury, due to the inability of the germinating plant being able to metabolise the herbicide. NAADCO S-Metolachlor 960 Herbicide should not be used in situations where these conditions are likely to occur.

Warning — Brassica crops: Crop retardation may occur where NAADCO S-Metolachlor 960 Herbicide is used on soils that have a low organic matter content and which contain more than 60% of fine sand and silt and less than 5% clay in the top 30cm. On these soil types, use rates of NAADCO S-Metolachlor 960 Herbicide towards the lower end of the rate range and apply onto moist soil. Irrigation after application should be limited to no more than 25mm.

Zero-tillage (Canola, Barley, Oats, Wheat, Triticale): When sowing using knife points and zero-tillage and leaving a seeding slot.

DO NOT apply post-seeding unless harrows (or similar) have tilled-in the seeding slot before application. Alternatively, apply NAADCO S-Metolachlor 960 Herbicide immediately before sowing,

DO NOT USE ON SOILS CONTAINING LESS THAN 5% CLAY IN THE TOP 30cm. DO NOT USE MORE THAN ONCE PER YEAR.