

CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Nufarm Rifle® 440

Herbicide

Active constituent: 440 g/L PENDIMETHALIN
Solvent: 501 g/L LIQUID HYDROCARBON

GROUP D HERBICIDE

For the control of wireweed, annual grasses (including annual ryegrass)
and certain broadleaf weeds in various crops as shown
in the Directions for Use table.

**IMPORTANT: READ THE ATTACHED BOOKLET
BEFORE USING THIS PRODUCT.**

Contents: 5 Litres

10 Litres

20 Litres

55 Litres

110 Litres

200 Litres

500 Litres

800 Litres

1000 Litres

Nufarm Australia Limited
ACN 004 377 780
103-105 Pipe Road
Laverton North Victoria 3026
Tel: (03) 9282 1000
Fax: (03) 9282 1001



® Rifle is a registered Trade Mark of Nufarm Australia Limited.

STORAGE AND DISPOSAL**All pack sizes:**

Store in the closed, original container in a dry, cool well-ventilated area. Do not store for prolonged periods in direct sunlight.

Do not store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve.

5L, 10L, 20L, 200L only:

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.

Refillable containers (55L, 500L, 800L, 1000L only):

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

Envirodrum 110 L Mini Bulk Returnable Container:

Store the original sealed Envirodrum in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Do not tamper with the Micro Matic valve or the security seal. Do not contaminate the Envirodrum with water or any other foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase. The Envirodrum remains the property of Nufarm Australia Limited.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes, nose, throat and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves and face shield (or goggles), and contaminated clothing.

FIRST AID

If poisoning occurs, contact a Doctor or Poisons Information Centre (Phone 13 11 26). If swallowed, DO NOT induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET (MSDS)

For further information refer to the Material Safety Data Sheet (MSDS), which can be obtained from your supplier or the Nufarm website - www.nufarm.com.au

CONDITIONS OF SALE

"Any provisions or rights under the Trade Practices Act 1974 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

APVMA Approval No: 54599/0108

In case of emergency: Phone 1800 033 498

Ask for shift supervisor. Toll free 24 hours.

Batch No:

Date of Manufacture:

Barcode:



(5L, 10L, 20L, 200L only)



(110L only)

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DIRECTIONS FOR USE**RESTRAINTS**

DO NOT sow sensitive summer crops such as sorghum and millets within 12 months of application of Rifle 440.

DO NOT apply to a poorly prepared seedbed.

DO NOT use Rifle 440 mixed with atrazine on heavy clay soils.

DO NOT apply Rifle 440 where waterlogging is likely to occur.

PRE-PLANT INCORPORATION (DOUBLE INCORPORATION):

NOTE: For all crops listed in the double incorporation table below:
 Incorporate Rifle 440 into the soil within 24 hours of application. Refer to the Notes on Incorporation under the heading General Instructions. Where a range of application rates are provided, use the higher rate on heavy textured soils or those high in organic matter and the lower rate on light to medium textured soils. Application to soil types with poor structural characteristics or that are poorly worked may result in insufficient or uneven incorporation and, subsequently less than satisfactory weed control. Heavy soils, which are cloddy or have a surface crust or surface seal, are to be avoided. Attempting to incorporate Rifle 440 when soils are very wet or very dry may also result in poor weed control due to insufficient mixing. Refer to the General Instructions, especially "Cereal Seed Dressings" and "Weather Conditions at Planting" for further information on emergence.

Situation/Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Cotton	See Weed Table A	Qld and NSW only	2.25L	Use a combine with trailing harrows and chain or offset or tandem discs or Lilliston cultivators, set to work to a depth of 2-5 cm. Subsequent planting operations in irrigated cotton may remove the Rifle 440 treated soil from hills leaving an untreated band over the row, requiring a further application of Rifle 440 or other herbicides in that band. When the seedbed is rough, a second incorporation is necessary. Rifle 440 may be applied by aerial or ground rig. In the Macquarie area, only apply by air when ground is too wet for ground application.
Soybeans, Peanuts, Navy Beans, Cow Peas, Mung Beans and Pigeon Peas		Qld, NSW and NT only	1.9 to 2.25L	
Sunflowers		Qld, NSW, Tas, Vic and SA only		
Wheat and Barley	Annual ryegrass (<i>Lolium rigidum</i>), Wireweed (<i>Polygonum aviculare</i>) Suppression only of Wild Oats (<i>Avena spp.</i>)	All States	900mL	Use weighted harrows at 8-13 km/hr, followed by a cross working with a combine set to work at a depth of 2-5 cm at 8-13 km/hr. Wheat and barley seed must be sown approximately 1 cm beneath the chemically treated band or reduced emergence may occur. If wild oats are expected to be a problem use a wild oat herbicide.
Field Peas		Southern NSW, Vic, Tas, SA and WA only	1.5L/ha	Use weighted harrows at 8-13 km/hr, followed by a cross working with a combine set to work at a depth of 2-5 cm at 8-13 km/hr. Seed should be sown below the chemical band. Use cover harrows behind the combine. Use a wild oat herbicide if wild oats are expected to be a problem. *Lupins: in Tasmania, use only on the species <i>Lupinus angustifolius</i> . DO NOT use on <i>L.albus</i> .
Chickpeas, Faba Beans, Safflower and Lupins.		Qld, Northern NSW and Tas* only	1.9 to 2.5L/ha	
Wheat and Barley	Annual ryegrass (<i>Lolium rigidum</i>), Wireweed (<i>Polygonum aviculare</i>) Suppression only of Wild Oats (<i>Avena spp.</i>)	All States	1.4L/ha	All Crops (except canola) Where full (double) incorporation is impractical and where the seedbed tilth is fine and free of large stones and trash, apply Rifle 440, or in the case of lupins, Rifle 440 plus Nufarm Simazine 900DF or Flowable Simazine, up to 24 hours prior to sowing. Incorporate with the combine set to sow to a depth of 3-5 cm. Use trailing harrows. (Refer to "Incorporation" under the heading "General Instructions"). Wheat and barley seed must be sown at least 1 cm beneath the chemically treated band or reduced emergence may occur. If wild oats are expected to be a problem use a wild oat herbicide. <i>continued over</i>

Situation/Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Canola	Annual Ryegrass (<i>Lolium rigidum</i>), Wireweed (<i>Polygonum aviculare</i>)	Southern NSW, Vic, Tas, SA, and WA only	1.4 to 2.25L/ha	continued Refer to critical comments on previous page plus: Canola: Apply Rifle 440 up to 24 hours prior to sowing. Incorporate with the combine set to sow the seed below the chemical band. Use the higher rates on medium to heavy textured soils and the lower rates on light textured soils. NOTE: Development in water-logged conditions after the application of Rifle 440 may retard the emergence of canola
	Suppression only of Wild Oats (<i>Avena spp.</i>)		1.5 to 2.25L/ha	
Chickpeas, Faba Beans, Safflower, Lupins and Field Peas	Annual Ryegrass (<i>Lolium rigidum</i>), Wireweed (<i>Polygonum aviculare</i>)	Southern NSW, Vic, SA and WA only	1.5 to 2.25L/ha	If wild oats are expected to be a problem use a wild oat herbicide. Application to heavier soil types which have poor structural characteristics or are poorly worked may result in insufficient and uneven incorporation and unsatisfactory weed control. Heavy soils which are cloddy or have a surface crust or surface seal should be avoided. Attempting to incorporate Rifle 440 when soils are very wet or very dry may also result in insufficient mixing and therefore poor weed control.
Lupins	Suppression only of Silver Grass (<i>Vulpia spp.</i>) and Wild Oats (<i>Avena spp.</i>)	WA only	1.5L/ha plus 560g/ha Nufarm Simazine 900DF or 1L/ha Nufarm Flowable Simazine	
		NSW, Vic and SA only	1.5L/ha plus 1.7kg/ha Nufarm Simazine 900DF or 3L/ha Nufarm Flowable Simazine	

**POST-PLANT PRE-EMERGENCE APPLICATION (OVERALL BAND SPRAYING):
NON-MECHANICAL INCORPORATION**

Situation/Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Cotton	See Weed Table B	Qld and NSW only	3.4L/ha	Where incorporation prior to sowing is impractical and where the seedbed tilth is fine and free of large stones and trash, Rifle 440 should be applied within 48 hours after sowing.
Sunflowers		Qld, NSW and SA only		Where incorporation prior to sowing is impractical and where the seedbed tilth is fine and free of large stones and trash, Rifle 440 should be applied after sowing and before the emergence of the crop and weeds. Where Fat Hen or Blackberry Nightshade is expected to be a major problem, pre-plant incorporation is preferred. Refer to the relevant sections under the heading "Incorporation" in "General Instructions".
Maize	See Weed Table B	Qld, NSW, and NT only	3.4L/ha	Use Rifle 440 after planting and before emergence of the crop or weeds, especially where grasses are expected to be the major problem. DO NOT incorporate. Avoid application in dry weather as this may cause pruning of aerial roots and lodging. Refer to the relevant sections under "Incorporation" in the "General Instructions".
	See Weed Table C	Qld, NSW, and NT only	2.25L/ha plus 1.1kg/ha Nufarm Nu-trazine 900DF or 2L/ha Nufarm Flowable Nu-trazine	Rifle 440 should be applied in a tank mix with Nu-trazine after planting and before the emergence of crop and weeds, where Thornapple, Noogoora Burr, Bathurst Burr, Caltrop, Paddy Melon or Mintweed are expected to be a major problem. DO NOT incorporate this mixture. Follow directions on atrazine label carefully. This treatment should not lead to soil residue problems with atrazine as the application rate is low. DO NOT use Rifle 440 mixed with atrazine on heavy clay soils, as weed control may not be adequate. Refer to the section on "Incorporation" under the heading "General Instructions".

Situation/Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Carrots	See Weed Table D	Qld, NSW, Vic, SA, WA and Tas only	1.5-2.25L/ha	MINIMUM PLANTING DEPTH: Carrots: 15mm. Processing peas and French beans: 30mm. Seed should be sown with press wheels or rollers behind the planter in order to ensure coverage of the seed and compaction of the seed bed. Apply Rifle 440 to a fine seedbed free of ridges, clods and trash within two days after sowing. Use the higher rates on heavier textured soils or those with a higher organic matter content. Incorporate with 12-25 mm of spray irrigation or rainfall within one day of application for optimum performance. DO NOT disturb the soil by rolling or harrowing after Rifle 440 has been applied. DO NOT apply where heavy rainfall or irrigation is likely to lead to water logging. DO NOT use Rifle 440 on soils with an organic matter content above 6% or inconsistent weed control may occur. FRENCH BEANS: For use in the Lockyer and Fassifern Valleys only. DO NOT apply to French Beans sown during the autumn, winter or early spring or which are likely to be stressed by cold weather.
	Weed Table D plus Wild Radish (<i>Raphanus raphanistrum</i>), and Sowthistle (<i>Sonchus oleraceus</i>)		1.5L/ha plus linuron at 1.0 kg ai/ha	
Processing Peas	See Weed Table D	Qld, Vic only	1.5-3L/ha	
		Tas only	3L/ha	
French Beans		Qld only	2.25-3L/ha	
Onions	Hogweed (Wireweed) (<i>Polygonum aviculare</i>)	Tas only	0.56-0.75L/ha	Apply in conjunction with other herbicides as advised by a qualified crop advisor to ensure an adequate level of weed control is achieved in adverse conditions. Pre-Emergence: DO NOT use on sandy soils MINIMUM PLANTING DEPTH: 15mm. Apply from immediately after sowing until just prior to emergence. Apply Rifle 440 to a fine, firm seedbed free of clods and trash. Use the higher rates on heavy textured soils or those with a high organic content. For optimum performance incorporate with 12 to 25mm of spray irrigation within one day of application. DO NOT exceed 0.56 L/ha if soil conditions are wet and cold.
			0.75 to 1.5L/ha	Post-Emergence: Apply Rifle 440 from the first true leaf until the 3 leaf stage. Repeat applications may be made after the 1 leaf up to the 3 leaf stage providing total usage of Rifle 440 on crop does not exceed 2.25L/ha. Avoid applying Rifle 440 to areas where water logging is likely to occur.

POST-PLANT, PRE-EMERGENCE TREATMENT (INCORPORATED OR NON-INCORPORATED)

Sugar Cane	Summer Grass (<i>Digitaria ciliaris</i>), Awnless Barnyard Grass (<i>Echinochloa colona</i>), Crowsfoot Grass (<i>Eleusine indica</i>), Guinea Grass (<i>Panicum maximum c.v Hamil and c.v Guinea</i>), Green Summer Grass (<i>Brachiaria subquadrifera</i>)	Qld, NSW and WA only	2.25-3.4L/ha	Rifle 440 should be applied as soon as possible after planting and before weed emergence. Consolidation (cutaway operation) of the planting furrow prior to application, to prevent soil movement into the base of the drill, is recommended. Expect poor grass control in soils, which contain a high percentage of organic matter. (Refer to "Incorporation" under "General Instructions"). Use the higher rate where longer weed control is required, or where incorporation by irrigation or rainfall is likely to be delayed more than 5 days. NOTE: INCORPORATION: Under dry conditions or where some cultivation is expected after application Rifle 440 should be thoroughly incorporated by finger rakes to a shallow depth. In subsequent tillage operations, cultivation depth should not exceed the depth of incorporation. WATER INCORPORATION:
	Blue Top (Blue Billygoat Weed) (<i>Ageratum houstonianum</i>)		2.25L/ha plus 1.7kg/ha Nufarm Nu-trazine 900DF or (3L/ha Nu-trazine Flowable) or 1.7kg/ha Nufarm Diuron 900DF or 3L/ha Flowable Diuron	Incorporate using 12 to 25mm of spray irrigation or when suitable rainfall is expected within 10 days of application. The area should not be disturbed by cultivation for the expected duration of weed control where this method of application is used. If excessive irrigation or rainfall occurs after the application of Rifle 440, resulting in the movement of soil from the top to the bottom of the planting drill, weed control will be reduced. For other broadleaf weeds higher rates of Nu-trazine or diuron can be tank mixed with Rifle 440 - see the relevant Nu-trazine or diuron labels for details.

POST-PLANT AND FLUSHING

Situation/Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Combine sown rice	Barnyard Grass (<i>Echinochloa spp.</i>), Silvertop Grass (Brown Beetle Grass) (<i>Diplachne reptatrix</i>), Starfruit (<i>Damasonium minus</i>)	Qld, NSW and NT only	2.25L/ha plus propanil at 1.8 kg ai/ha	Apply tank mixture up to the 2 leaf stage of Barnyard Grass and 1 leaf stage of Silvertop, either by ground rig in 70-100 L/ha or by aircraft in 25-30 L/ha total spray volume. WATER MANAGEMENT: Flush immediately after sowing to enable a good even germination of rice and to ensure the soil surface is sealed. Apply a second flush or permanent flood after 2 days but not later than 5 days after the application. To assist in the control of Barnyard Grass, permanent water should be applied as soon as the rice can tolerate it and levels maintained for optimum growth. RICE STAGE: After the first flushing irrigation, the stage of rice at application of this tank mixture is not critical. Timing should be based on the stage of weed growth and water management. However, DO NOT apply to rice in a weakened condition as a result of soil salts, moisture stress, over watering, or any other cause. Some transient leaf burn of the rice may result after the application but no long-term effects will result. Rice seed should be covered with at least 1 cm of water after the first flushing irrigation before Rifle 440 plus propanil is applied to germinating rice seed.
Combine sown rice and pasture sod sown rice	As above plus Suppression of Annual Sedges. (<i>Cyperus spp.</i>)	Qld, NSW and NT only	2.25 or 3.4L/ha plus 800mL/ha Nuquat 250	Use the higher rate when sowing into pasture sod sown rice for Annual Sedge Control or when more than 10 days is expected between treatment and permanent water. Apply up to the 3 leaf stage of Barnyard Grass, Silvertop and Sedges, before rice emergence. Apply by ground rig in 70-100 L/ha of water total spray volume. WATER MANAGEMENT: Flush immediately after sowing to enable a good even germination of rice. The soil surface must be sealed by a flushing irrigation or rainfall before the application of Rifle 440 plus Nuquat 250. Apply a second flush or permanent flood after 1 day but not later than 5 days after the application of Rifle 440 plus Nuquat 250. To assist in the control of Barnyard Grass, permanent water should be applied as soon as the rice can tolerate it and levels maintained for optimum growth of rice. RICE STAGE: After the first flushing irrigation, Rifle 440 plus Nuquat 250 must be applied before rice emergence. DO NOT apply to rice in a weakened condition from causes such as soil salts, moisture stress, over-watering, or any other cause.

PRE-TRANSPLANT TREATMENT

Transplanted cabbage, cauliflower and broccoli	See Weed Table D	Qld, NSW, Vic, Tas, SA and WA only	1.5-2.25L/ha	Apply Rifle 440 to a firm seedbed free of ridges, clods and trash between 2-7 days before transplanting. Use the higher rates on heavier textured soils or those with a higher organic matter content. For optimum performance incorporate with 12 to 25 mm of spray irrigation (or when rainfall is expected within one day) and ensure minimal mechanical disturbance to the seed bed at transplanting. DO NOT apply after transplanting as damage will occur. DO NOT apply where water logging is likely to occur after transplanting or crop stunting will result. DO NOT use Rifle 440 on soils with an organic matter content above 6% as inconsistent weed control will occur. Ramrod* may be tank mixed with Rifle 440 prior to transplanting or applied separately after transplanting.
	See Weed Table D plus Wild Radish (<i>Raphanus raphanistrum</i>), Indian Hedge Mustard (<i>Sisymbrium orientale</i>), Turnip Weed (<i>Rapistrum rugosum</i>), Wild Turnip (<i>Brassica tournefortii</i>), Potato Weed (<i>Galinsoga paviiflora</i>), Sowthistle (<i>Sonchus oleraceus</i>), Dwarf Amaranthus (<i>Amaranthus macrocarpus</i>), Green Amaranthus (<i>Amaranthus vindis</i>), Winter Grass (<i>Poa annua</i>), Annual Nettles (<i>Urtica spp.</i>)		1.5-1.9L/ha plus 9L/ha Ramrod* SC	
Transplanted lettuce	See Weed Table D	Qld, NSW, Vic, SA and WA only	1.5-3L/ha	

PERENNIAL CROPS

Crop	Weeds Controlled	State	Rate /Treated ha	Critical Comments
Avocados, bananas, citrus, deciduous fruits, grapevines, lychees, macadamia nut, mangoes, nuts	Dwarf Amaranth, Green Amaranth, Annual Ryegrass, Asthma Plant, (<i>Euphorbia hirta</i>), Barnyard Grass, Chickweed (<i>Stellaria media</i>), Crowsfoot Grass, Deadnettle (<i>Lamium amplexicaule</i>), Fat Hen (<i>Chenopodium album</i>), Pigeon Grass, Pigweed (<i>Portulaca oleracea</i>), Prickly Lettuce (<i>Lactuca serriola</i>), Sowthistle, Summer Grass, Winter Grass, Wireweed.	All States	6.75 to 9L/ha	Do NOT apply Rifle 440 to grapevines after bud swell. PRECAUTION: Rifle 440 or Rifle 440 plus simazine is likely to affect the emergence and growth of green manure crops such as oats or beans between rows of trees or vines, if they are sown into the treated band within 12 months of application. Use the higher rate on medium to heavy textured soils and the lower rate on light textured soils. Use a directed spray avoiding spray contact with green bark, fruit and foliage. If applied to freshly transplanted trees or vines, soils should be compacted prior to application of Rifle 440 to avoid contact with roots. Rifle 440 must be incorporated by a minimum of 5 mm of rainfall or spray irrigation as soon as possible but no later than 10 days after application or weed control may be reduced. For best results, soil surface should be free of weeds, surface litter and clods at the time of application. If small weeds are present at the time of application Rifle 440 should be tank mixed with a knockdown herbicide at the recommended rate. Use of simazine could lead to crop damage on vines younger than 3 years of age. Refer to the simazine label. DO NOT apply tank mixtures of Rifle 440 plus simazine to alkaline soils.
	As above plus Prairie Grass (<i>Bromus unioloides</i>) and Spotted Medic (<i>Medicago arabica</i>)		9L/ha	
Deciduous fruits, nuts, grape vines and citrus	Asthma Plant, Summer Grass (<i>Digitaria anguinalis</i>), Barnyard Grass (<i>Echinochloa spp.</i>), Crowsfoot Grass (<i>Eleusine indica</i>), Pigeon Grass (<i>Setaria spp.</i>), Winter Grass (<i>Poa annua</i>), Annual Ryegrass (<i>Lolium rigidum</i>), Chickweed (<i>Stellaria media</i>), Sowthistle (<i>Sonchus oleraceus</i>), Pigweed (<i>Portulaca oleracea</i>), Dwarf Amaranthus (<i>Amaranthus macrocarpus</i>), Green Amaranthus (<i>Amaranthus viridis</i>), Fat Hen (<i>Chenopodium album</i>), Wireweed (<i>Polygonum aviculare</i>), Prickly Lettuce (<i>Lactuca serriola</i>), Deadnettle (<i>Lamium amplexicaule</i>),	All States	6.75 to 9L/ha	
	As above plus Stinking Roger (<i>Tagetes minuta</i>), Cobbler's Pegs (<i>Bidens pilosa</i>), Curious Weed (<i>Schkuhria pinnata</i>)		6.75L/ha plus 900g/ha Nufarm Simazine 900DF or 1.6L/ha Flowable Simazine	
	As above plus Caltrop (<i>Tribulis terrestris</i>)		9L/ha plus 1.1kg/ha Nufarm Simazine 900DF or 2L/ha Flowable Simazine	
Established lucerne seed crops only	Summer Grass (<i>Digitaria anguinalis</i>), Fat Hen (<i>Chenopodium album</i>)	NSW and SA only	2.25L/ha	During the spring months prior to irrigation, the lucerne stand should be grazed down hard to produce a low trash soil surface. Apply Rifle 440 and incorporate treatment by 12-25 mm of spray irrigation or when rainfall is expected within one day of application.
	As above plus Pigeon Grass (<i>Setaria spp.</i>)		3.4L/ha	
Pyrethrum-newly transplanted "splits"	Seeding docks (<i>Rumex spp.</i>) Suppression of following weeds is also obtained: Capeweed (<i>Arctotheca calendula</i>), Erodium spp. (<i>Storks bill</i>), Spear Thistle (<i>Cirsium vulgare</i>)	Tas only	3.75L/ha	Apply immediately following transplanting before emergence of weeds. Repeat applications in any one year should only be made according to advice from crop advisers. Use lower rates on light soils. This product can be used in combination with other registered herbicides only as recommended by crop advisers.
Established pyrethrum (one year old or greater)				Apply in autumn or spring prior to weed germination. Note existing weeds must be controlled with a knockdown herbicide, as Rifle 440 will not control these weeds. Repeat applications in any one year should only be made according to advice from crop advisers. This product can be used in combination with other registered herbicides as recommended by crop advisers.

Crop	Weeds Controlled	State	Rate/ Treated Ha	Critical Comments
Teatree (<i>Melaleuca alternifolia</i>)	Weed Table B plus Dwarf Amaranth, Green Amaranth, Annual Ryegrass, Barnyard Grass, Chickweed (<i>Stellaria media</i>), Crowsfoot Grass, Deadnettle (<i>Lamium amplexicaule</i>) Fat Hen, Pigeon Grass, Pigweed, Prickly Lettuce (<i>Lactuca serriola</i>), Sowthistle, Summer Grass, Winter Grass, Wireweed	NSW, QLD, SA, and NT only	3.4-6.75L/ha	DO NOT tank mix with simazine as crop damage may result. For best results the soil surface should be free of weeds, surface litter and clods at the time of application. Pre-Transplanting: Apply 7 to 2 days prior to transplanting seedlings. Use the higher rates on heavier textured soils or soils with higher organic matter. Mechanical disturbances should be minimised during planting to optimise performance. Avoid contact of treated soil with seedling roots. Post-Planting: Apply immediately following planting and pre-emergence of weeds. If applied to freshly transplanted trees, soils should be compacted prior to application of Rifle 440 to avoid contact with roots. Weed control may be reduced if rainfall or irrigation does not occur within 10 days of application. Flood irrigation may reduce control.

ESTABLISHED TURF:

Crop	Weeds Controlled	State	Rate/ Treated Ha	Critical Comments
Turf: Warm Season Species: Kikuyu, Couch, Salt water Couch, Buffalo Grass, Bahia Grass, and Zoysia Grass Turf	Summer Grass (<i>Digitaria anguinallis</i>), Crowsfoot (<i>Crab grass</i>) (<i>Eleusine indica</i>), Winter Grass (<i>Poa annua</i>)	All States	3.4L/ha or 34mL/ 100 m ²	Incorporate by 10-15 mm of spray irrigation or when rainfall is expected, within one day of application. Apply once every 10 weeks from early September to the end of February.
Queensland Blue Couch, Hybrid Couch c.v. Tifdwarf			2.25L/ha or 22.5mL/100 m ²	
Turf: Cool Season Species: Kentucky Blue Grass			3.4L/ha or 34mL/100 m ²	The product should be incorporated by 10-15 mm of spray irrigation or rainfall as soon as possible within one day of application.
Perennial Ryegrass, Bent Grass			2.25L/ha or 22.5mL/100 m ²	Apply Rifle 440 only once per year to control weeds in Perennial Rye Grass and Bent Grass.

IRRIGATION CHANNELS:

Crop	Weeds Controlled	State	Rate/ Treated Ha	Critical Comments
Cotton Irrigation Banks, Channels and Drains	Barnyard Grass (<i>Echinochloa spp.</i>), Silvertop Grass (Brown beetle grass) (<i>Diplachne reptatrix</i>)	Qld and NSW only	3.4 to 6.75L/ha	Use the lower rate when short term control is required. Apply in late winter or early spring after regrading or clearing channels. The soil should be loose and free of large clods. If 25-50 mm of rainfall has not fallen within 14 days of application the channel should be filled with water and allowed to stand for 1 day. The water in the channel should then be drained off and used to pre-irrigate cotton fields. DO NOT use water in channel to irrigate or pre-irrigate susceptible crops.
			4.5L/ha plus 9kg/ha Nufarm Diuron 900DF or 16.2L/ha Flowable Diuron	Use this mixture where long term control is required or a broader weed spectrum is present. See diuron label for details. Water in the channel should NOT be used to irrigate or pre-irrigate susceptible crops.

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.

WEED TABLE A**IN COTTON, COW PEAS, MUNG BEANS, NAVY BEANS, PEANUTS, PIGEON PEAS, SOYBEANS, SUNFLOWERS - with pre-plant incorporated treatment (double incorporation).**

The following weeds are controlled:

Barnyard grass	<i>(Echinochloa spp.)</i>	Native millet	<i>(Panicum decompositum)</i>
Button grass	<i>(Dactyloctenium radulans)</i>	Pale pigeon grass	<i>(Setaria glauca)</i>
Common heliotrope	<i>(Heliotropium europeum)</i>	Paspalidium	<i>(Paspalidium spp.)</i>
Crested goosefoot	<i>(Chenopodium cristatum)</i>	Pepper grass	<i>(Panicum whitei)</i>
Crowsfoot grass	<i>(Eleusine indica)</i>	Pigweed	<i>(Portulaca oleracea)</i>
Dwarf amaranth	<i>(Amaranthus macrocarpus)</i>	Queensland blue grass	<i>(Dichanthium sericeum)</i>
Early spring grass	<i>(Eriochloa spp.)</i>	Red Flinders grass	<i>(Iseilema vaginiflorum)</i>
Fat hen	<i>(Chenopodium album)</i>	Scarlet pimpernel	<i>(Anagallis arvensis)</i>
Green amaranth	<i>(Amaranthus viridis)</i>	Small burr grass	<i>(Tragus australianus)</i>
Liverseed grass	<i>(Urochloa panicoides)</i>	Stink grass	<i>(Eragrostis cilianensis)</i>
Mexican clover	<i>(Richardia brasiliensis)</i>	Weeping love grass	<i>(Eragrostis parviflora)</i>
Mossman River grass	<i>(Cenchrus echinatus)</i>	Wireweed	<i>(Polygonum aviculare)</i>

Suppression of the following weeds is also obtained.

Blackberry nightshade	<i>(Solanum nigrum)</i>	Mintweed	<i>(Salvia reflexa)</i>
Caltrop	<i>(Tribulus terrestris)</i>	Peppergrass	<i>(Lepidium spp.)</i>
Common verbena	<i>(Verbena officinalis)</i>	Stagger weed	<i>(Stachys arvensis)</i>

WEED TABLE B**IN COTTON, SUNFLOWERS, MAIZE AND TEA TREE - with post-plant pre-emergence surface treatment (Rifle 440 alone).**

The following weeds are controlled:

Barnyard grass	<i>(Echinochloa spp.)</i>	Pale pigeon grass	<i>(Setaria glauca)</i>
Button grass	<i>(Dactyloctenium radulans)</i>	Paspalidium	<i>(Paspalidium spp.)</i>
Common heliotrope	<i>(Heliotropium europeum)</i>	Pepper grass	<i>(Panicum whitei)</i>
Crested goosefoot	<i>(Chenopodium cristatum)</i>	Pigweed	<i>(Portulaca oleracea)</i>
Crowsfoot grass	<i>(Eleusine indica)</i>	Queensland blue grass	<i>(Dichanthium sericeum)</i>
Dwarf amaranth	<i>(Amaranthus macrocarpus)</i>	Red Flinders grass	<i>(Iseilema vaginiflorum)</i>
Early spring grass	<i>(Eriochloa spp.)</i>	Scarlet pimpernel	<i>(Anagallis arvensis)</i>
Green amaranth	<i>(Amaranthus viridis)</i>	Small burr grass	<i>(Tragus australianus)</i>
Liverseed grass	<i>(Urochloa panicoides)</i>	Stink grass	<i>(Eragrostis cilianensis)</i>
Mexican clover	<i>(Richardia brasiliensis)</i>	Weeping love grass	<i>(Eragrostis parviflora)</i>
Mossman River grass	<i>(Cenchrus echinatus)</i>	Wireweed	<i>(Polygonum aviculare)</i>
Native millet	<i>(Panicum decompositum)</i>		

Suppression of the following weeds is also obtained.

Caltrop	<i>(Tribulus terrestris)</i>	Mintweed	<i>(Salvia reflexa)</i>
Common sowthistle	<i>(Sonchus oleraceus)</i>	Peppergrass	<i>(Lepidium spp.)</i>
Common verbena	<i>(Verbena officinalis)</i>	Stagger weed	<i>(Stachys arvensis)</i>

WEED TABLE C**In Maize - with post-plant pre-emergence surface treatment of Rifle 440 plus tank mix with atrazine.**

The following weeds are controlled in addition to those controlled by Rifle 440 alone:

Bathurst burr	<i>(Xanthium spinosum)</i>	Noogoora burr	<i>(Xanthium pungens)</i>
Caltrop	<i>(Tribulus terrestris)</i>	Paddy melon	<i>(Cucumis spp.)</i>
Mintweed	<i>(Salvia reflexa)</i>	Thornapple	<i>(Datura spp.)</i>

The following are not controlled by Rifle 440 or the mixture with atrazine

Bindweed	<i>(Convolvulus spp.)</i>	Wandering jew	<i>(Commelina spp.)</i>
Nut grass	<i>(Cyperus rotundus)</i>		

WEED TABLE D**IN CARROTS, PROCESSING PEAS, FRENCH BEANS, TRANSPLANTED CABBAGE, CAULIFLOWER, BROCCOLI AND LETTUCE - with pre-emergence surface treatment after planting or before transplanting as directed and incorporated by spray irrigation.**

The following weeds are controlled:

Awnless barnyard grass	<i>(Echinochloa colona)</i>	Green fat hen	<i>(Chenopodium murale)</i>
Bittercress	<i>(Coronopus didymus)</i>	Pigweed	<i>(Portulaca oleracea)</i>
Bladder ketmia	<i>(Hibiscus trionum)</i>	Prickly lettuce	<i>(Lactuca serriola)</i>
Chickweed	<i>(Stellaria media)</i>	Shepherd's purse	<i>(Capsella bursa-pastoris)</i>
Deadnettle	<i>(Lamium amplexicaule)</i>	Wireweed	<i>(Polygonum aviculare)</i>
Fat hen	<i>(Chenopodium album)</i>		

Suppression only of the following weeds at the lower rates. Higher rates or tank mixtures are required for complete control (see Directions for Use table).

Annual nettles	<i>(Urtica spp.)</i>	Indian hedge mustard	<i>(Sisymbrium orientale)</i>
Blackberry nightshade	<i>(Solanum nigrum)</i>	Turnip weed	<i>(Rapistrum rugosum)</i>
Common sowthistle	<i>(Sonchus oleraceus)</i>	Wild radish	<i>(Raphanus raphanistrum)</i>
Fumitory	<i>(Fumaria spp.)</i>	Winter grass	<i>(Poa annua)</i>

GENERAL INSTRUCTIONS

Rifle 440 Herbicide is a selective herbicide for the control of most annual grasses and certain broadleaf weeds. Rifle 440 controls weeds by inhibiting seedling development; it will not control established weeds. For best results, seedbeds should be free of weeds, trash and clods at the time of application. Soils containing a high percentage of organic matter can result in poor control. It is recommended that application to soils containing a high percentage of organic matter (greater than 6%) be avoided. Crop injury may result if cold, wet weather follows planting or if Rifle 440 is applied to a poorly prepared seedbed. With the return of favourable growing conditions (warm weather), the crop will usually recover and resume normal growth.

NOTE: Rifle 440 will stain (yellow) any objects it contacts. Keep all objects, etc. that are not to be stained well clear of the product and spray.

MIXING

Put half the required volume of water in spray tank and start agitation. When using Rifle 440 alone, add Rifle 440 to partially filled tank and then add the remainder of the water. Mix thoroughly. When using Rifle 440 in tank mixes with products such as atrazine or diuron, mix these products as indicated on the relevant label and add the Rifle 440 last, then complete filling of the tank. Maintain good agitation at all times until spraying is completed. If the spray mixture is allowed to settle, thorough agitation is essential to re-suspend the mixture before spraying is resumed. Note that when tank mixing Rifle 440 with Nuquat 250 and glyphosate herbicides, the Rifle 440 should be thoroughly mixed in the spray tank first, before adding Nuquat 250 or a glyphosate product (eg Glyphosate CT, Credit + Bonus, Weedmaster Duo).

APPLICATION METHOD**Ground Application**

Use conventional sprayers with either mechanical or by-pass agitation. Flat fan nozzles should be used. Spray equipment should be correctly calibrated to ensure proper application. If applying Rifle 440 in tank mix combination with Nu-trazine or diuron, nozzle screens must be no finer than 50 mesh. Apply the recommended quantity of Rifle 440 in 50-200 Litres of water per hectare. Where pre-emergence surface treatment is used, the higher rates of water per hectare are recommended.

Aerial Application

Pre-plant soybeans, cotton, sunflowers, peanuts, navy beans, cowpeas, mung beans, pigeon peas and post-plant, post flushed combine sown rice only. Apply the recommended quantity of Rifle 440 in 25-60 Litres of water per hectare. It is essential that the equipment is correctly calibrated and an even spray pattern is obtained. It is essential that markers be used and an accurate swath width is maintained. Do NOT apply if wind speed is greater than 16 km/hour. Always spray with a cross wind in accordance with recommended flying practice.

Incorporation

- (a) Rifle 440 works best if thoroughly mixed with soil either mechanically or by irrigation or rainfall. The aim of incorporation is to produce an even band of herbicide to intercept germinating weed seeds.
- (b) Post-plant pre-emergence surface applications of Rifle 440 alone, or as a tank mixture, are most effective in controlling weeds when adequate rainfall occurs or irrigation is applied within 7-10 days after treatment to achieve incorporation. If no rain or irrigation is received within 7-10 days, light mechanical incorporation is required for optimum weed control, except when used on maize, carrots and rice.
- (c) Maize is tolerant to Rifle 440 either alone or in mixtures with Nu-trazine if the seed germinates below the chemically treated band. Maize, carrots and rice are NOT tolerant to Rifle 440 if it is in direct contact with the seed.

Cereal Seed Dressing

Some fungicidal seed dressings can shorten coleoptile length and this can effect emergence particularly if seed is sown too deep. When these cereal seed dressings are used in Rifle 440 treated areas it is very important to ensure there is good seed depth control and to sow just below (1 cm) the chemically treated band. Consult your local Department of Agriculture Agronomist for further advice.

Weather Conditions At Planting

Crop injury may result if cold weather follows planting. With the return of favourable growing conditions (warm weather), crops usually recover and resume normal growth. In cereals, prolonged cold wet conditions during germination and emergence can result in wheat or barley coleoptiles remaining in the treated band for an extended period. This can reduce emergence.

RESISTANT WEEDS WARNING

Rifle 440 Herbicide is a member of the dinitroaniline group of herbicides. Rifle 440 has the inhibition of tubulin formation mode of action. For weed resistance management, Rifle 440 is a Group D herbicide. Some naturally-occurring weed biotypes resistant to Rifle 440 and other Group D 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 Rifle 440 or other Group D herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of Rifle 440 to control resistant weeds.

COMPATIBILITY

Rifle 440 is compatible with the following herbicides: Nufarm Nu-trazine (900DF and Flowable), Nufarm Diuron (900DF and Flowable), Nufarm Simazine (900DF and Flowable), Nufarm Prometryn (900DF and Flowable) Nufarm Nutron (900DF and Flowable), Nufarm Convoy®, ametryn, Nuquat 250, propanil, linuron, glyphosate (Glyphosate CT, Credit® + Bonus®, Weedmaster® Duo) and Ramrod*. If tank mixing, observe the directions under mixing.

FOLLOWING CROPS

In the event of crop failure the soil should be cultivated to a minimum depth of 15 cm to ensure any residues are evenly dispersed throughout the soil. If a maize crop fails due to weather conditions or some other reason, maize can be replanted the same year without adverse effects but seeding depth must be below the refilled area.

The following crops may be sown after a minimum interval of 2 months after application of Rifle 440

Carrots, parsnips, parsley, celery, potatoes, peas, French beans, transplanted Brassicas, transplanted lettuce, transplanted tomatoes, transplanted capsicums.

The following crops may be sown after a minimum interval of 5 months after application of Rifle 440

Turnips, lettuce, radish, Brussel sprouts, cabbage, cauliflower, broccoli, onions, leeks, sweet corn, pumpkins, squash, melons, cucumbers.

The following crops may be sown after a minimum interval of 12 months after application of Rifle 440

Redbeet (beetroot), spinach, silverbeet, poppy.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Do NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto nearby susceptible plants/adjacent crops, cropping lands or pastures.

**PROTECTION OF WILDLIFE, FISH,
CRUSTACEANS AND ENVIRONMENT**

Dangerous to fish and other aquatic life.
Do NOT contaminate streams, rivers or waterways
with the chemical or used containers.

STORAGE AND DISPOSAL***All pack sizes:***

Store in the closed, original container in a dry, cool
well-ventilated area out of direct sunlight.
Do not store below 5°C. Extended storage below 5°C
can result in the formation of crystals on the bottom of
the container. If crystallisation does occur, store the
container on its side at room temperature and rock
occasionally until crystals re-dissolve.

5L, 10L, 20L, 200L only:

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.

Refillable containers (55L, 500L, 800L, 1000L):

Empty contents fully into application equipment.
Close all valves and return to point of supply for
refill or storage.

***Envirodrum 110 L Mini Bulk Returnable
Container:***

Store the original sealed Envirodrum in a cool, well
ventilated area. Do not store for prolonged periods in
direct sunlight. Do not tamper with the Micro Matic
valve or the security seal. Do not contaminate the
Envirodrum with water or any other foreign matter.
After each use of the product, please ensure that the
Micro Matic coupler, delivery system and hoses are
disconnected, triple rinsed with clean water and
drained accordingly. When the contents of the
Envirodrum have been used, please return the empty
Envirodrum to the point of purchase. The Envirodrum
remains the property of Nufarm Australia Limited.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes, nose,
throat and skin. Avoid contact with eyes and skin.
DO NOT inhale vapour. When preparing spray and
using the prepared spray wear cotton overalls
buttoned to the neck and wrist (or equivalent clothing),
elbow length nitrile gloves and face shield or goggles.
If product on skin, immediately wash area
with soap and water. If product in eyes, wash it out
immediately with water. Wash hands after use. After
each day's use, wash gloves and face shield (or
goggles), and contaminated clothing.

FIRST AID

If poisoning occurs, contact a Doctor or Poisons
Information Centre (Phone 13 11 26). If swallowed,
DO NOT induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET (MSDS)

For further information refer to the Material Safety
Data Sheet (MSDS), which can be obtained from your
supplier or the Nufarm website - www.nufarm.com.au

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In case of emergency: Phone 1800 033 498

Ask for shift supervisor. Toll free 24 hours.

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