

ASSESSMENT GUIDELINES

Unit 21562

Identify and interpret agrichemical product information.

Level 2, Credit 2, Version 1

Identify and interpret agrichemical product information

Unit standard 21562

Level 2, Credit 2, Version 1

Level of performance required for this unit standard

This is a level 2 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under general supervision, as directed; with some responsibility for the standard of the outcome achieved.
- To complete tasks that are established and familiar, with a moderate range of skill and knowledge.
- To apply basic operational knowledge, use readily available information and known solutions to solve familiar problems.

Workplace assessment:

For guidelines on Workplace Assessment, please refer to the NZHITO Workplace Assessors Manual, and for further information, please contact: NZHITO, P O Box 8638, Christchurch. Ph 03 9644 735, Fax 03 9644 737, Website: www.hortito.org.nz

Special notes:

1. Legislation and relevant regulations relevant to this unit standard include but are not limited to – Hazardous Substances and New Organisms Act 1996, and relevant regulations; Health and Safety in Employment Act 1992.
2. The New Zealand Standard applicable to this unit standard is NZS 8409:2004 *The management of agrichemicals*, available from <http://www.standards.co.nz>.
3. Codes and related documentation applicable to this unit standard include but are not limited to: *Responsible Care Management System*, available from the New Zealand Chemical Industry Council (NZCIC, PO Box 5069, Wellington).
4. Definition - *agrichemical* – any substance, whether inorganic or organic, man-made or naturally occurring, modified or in its original state, that is used in any agriculture,

horticulture or related activity, to eradicate, modify or control flora and fauna. It includes agricultural compounds, fertilisers, vertebrate pest control products and oral nutrition products (this definition differs to that given in NZS 8409:2004, where *agrichemicals* exclude fertilisers, vertebrate pest control products and oral nutrition products).

Acknowledgement

At the back of this assessment guide is an *Agriculture ITO* endorsed question paper, with answers attached, which has been developed for this unit standard. The attached question paper may be used by the Workplace Assessor to carry out assessment and marking of this unit standard on-job. Also attached are the relevant *Agriculture ITO* endorsed information sheets for this form of assessment; Material Safety Data Sheets, Labels, HazNote/Dangerous Goods Declarations.

If you do decide to use the question paper as your method of assessment we only require you to submit the completion form to the NZHITO once the student is deemed to be competent, as is our normal practice.

Unit 21562: Identify and interpret agrichemical product information (Apprentice copy)

ELEMENT	Competent	Range of evidence an assessor should consider
<p>Element 1 Identify and interpret agrichemical product information.</p> <p>Range: information includes but is not limited to – storage, handling, safety precautions, withholding periods, use, priority and secondary identifiers, emergency response, disposal of unused product and containers; evidence is required for at least eight.</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Identify and interpret Agrichemical product information on product labels for agrichemical use. Range: evidence is required for labels on at least two agrichemical products. ▪ Identify and interpret agrichemical production information from sources other than product labels for agrichemical use. Range: one of – safety data sheets, product safety cards; evidence is required for at least one other produce source which may include but is not limited to – dangerous goods declaration; evidence is required for at least two agrichemical products.
<p style="text-align: right;">_____ (Name of Apprentice)</p> <p>is Competent / Not yet competent in Unit Standard 21562, version 1</p> <p>Signed (Assessor): _____</p> <p>WPA Registration Number: _____ Date: _____</p>		

**Unit 21562: Identify and interpret agrichemical product information
(Assessor copy)**

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_____ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 21562, version 1

Signed (Assessor): _____

WPA Registration Number: _____ Date: _____

Please send this page to your NZHITO Regional Manager, who will forward it to National Office to register the credits on your NZQA Record of Learning.

Unit 21562: Identify and interpret agrichemical product information.

(Name of Apprentice)

is Competent in Unit Standard 21562. (version 1)

Signed (Assessor):

WPA Registration Number: _____

Date: _____

Identify & Interpret Agrichemical Product Information

Instructions:

1. Write your name, address and the date you hand in this Assessment in the box below.
2. Answer all questions. Use more paper if required.
3. All answers must be in your own words.
4. You must show that you have achieved the standard in all elements of the unit standard.
5. If you do not attain the standard you will have an opportunity to attempt part or all of the assessment again either orally or written, after some further study.
6. If there are any questions you don't understand, or if you have any difficulty reading the questions, please ask your tutor or supervisor for some help.
7. This is an OPEN book assessment.

Student To Complete:

Student Name:	
Address:	
Date Handed In:	
Declaration:	This assessment is all my own work (Your signature)

Assessor To Complete:

Course Number/Name:	
Standard Achieved:	Yes / No (Delete One)
Assessor's Name & Signature:	
Date:	
Comments:	
Questions to Resit:	

Assessment Retake Date:	
Standard Achieved:	Yes / No (Delete One)
Assessor's Name & Signature:	

Identify & Interpret Agrichemical Product Information

Unit 21562

Level 2

Credits 2

You have been provided with two Agrichemical labels and a range of other information sources for these Agrichemicals. For each Product answer the questions below.

1. (a) Jolyn G360 - It is March 15th and you are going to use this chemical to spot treat some blackberry and Rushes

Question	Answer	Where did you find this information
What safety precautions should you take when using or mixing this herbicide?		
How should this product be stored after you have used it?		
Why should this product not be used with galvanised or unlined steel containers?		
What type of equipment is suitable to use for spot treatment of blackberry and rushes with product?		
The weather forecast is for rain tomorrow. Should you still use this product?		
What would happen if you accidentally sprayed the lawn with this product?		

<p>If you left this lying around and one of the neighbour's kids played with the container and spilt some on his/her skin what should you do?</p>		
<p>How should you mix up the chemical in the knapsack spray tank?</p>		
<p>If you were spraying blackberry plants in the orchard what precautions should you take to stop the fruit trees getting damaged?</p>		
<p>After you have sprayed the blackberry plants when would it be safe to eat any blackberries that might ripen?</p>		
<p>How should equipment be cleaned after spraying?</p>		
<p>You empty the container, what should you do with it?</p>		
<p>If you spilled the chemical or found the container was leaking onto the concrete floor what should you do?</p>		

- (b) Gardoprim - You planted a small area of trees some weeks ago and now you are going to spot spray the grass that is growing up around them with Gardoprim.

Question	Answer	Where did you find this information?
What safety precautions should you take when using or mixing this herbicide?		
How should this product be stored after you have used it?		
What type of equipment is suitable to use for the spraying job?		
What would happen if you accidentally sprayed the lawn with this product?		
If you left this lying around and one of the neighbour's kids played with the container and splashed some into his or her eye what should you do?		
How should you mix up the chemical in the knapsack spray tank?		
What do you need to do to the tank all the time you are spraying		

What other uses can this product be used for?		
How should equipment be cleaned after spraying?		
You empty the container, what should you do with it?		

2. Using the SDS for Gardoprim, answer the following: -

(a) What does the information tell you about how toxic the chemical is?

(b) What is a specific environmental hazard of this chemical?

(c) What First aid information is included that is not on the label?

(d) What is the number to call for an emergency response?

3. For Jolyn G360 what should you do if there is an accident with your ute on the road home if you are carrying this chemical? (Assume you are not hurt in the accident).

Where did you find this information?

MARKING SCHEDULE

Identify & Interpret Agrichemical Product Information

Unit 21562

Level 2

Credits 2

Note to Assessors: Substitute other chemical labels or safety data sheets as you like but ask similar range of questions to ensure that range statements are met.

Question	Element	Evidence	Judgement
1	1	Answers questions requiring reading and interpretation of 2 chemical labels and safety data sheets. Model answers given overleaf	Answer as stated or similar for each question. Must get all right to cover range statement.
2	1	Answers questions on one Safety data sheet relating to information not found on the chemical label for one agrichemical. See Model answers.	Must get answers correct to meet range statements.
3	1	Locates information not found on the SDS or label on the Dangerous goods declaration for one agrichemical. Must be a different chemical to the one in Q2 See Model answers	Must get answers correct.

MODEL ANSWERS

Identify & Interpret Agrichemical Product Information

Unit 21562

Level 2

Credits 2

You have been provided with two Agrichemical labels and a range of other information sources for these Agrichemicals. For each Product answer the questions below.

1. (a) Jolyn G360 - It is March 15th and you are going to use this chemical to spot treat some blackberry and Rushes.

Question	Answer	Where did you find this information
What safety precautions should you take when using or mixing this herbicide?	<ul style="list-style-type: none"> ▪ <i>Avoid contact with eyes and inhaling spray mist.</i> ▪ <i>Wash hands and exposed skin after use.</i> ▪ <i>Wash clothing after use.</i> ▪ <i>Wear waterproof gloves when mixing (1.1).</i> ▪ <i>Do not eat food, drink or smoke when using product (SDS).</i> 	<i>Label</i>
How should this product be stored after you have used it?	<ul style="list-style-type: none"> ▪ <i>In original container, tightly closed, don't store near food.</i> ▪ <i>Store in well ventilated area (SDS)</i> 	<i>Label</i>
Why should this product not be used with galvanised or unlined steel containers?	It will form a highly flammable gas.	Label
What type of equipment is suitable to use for spot treatment of blackberry and rushes with product?	<ul style="list-style-type: none"> ▪ <i>Handgun, wiper or knapsack can be used for rushes.</i> ▪ <i>Handgun or knapsack can be used for blackberry.</i> 	<i>Label</i>
The weather forecast is for rain tomorrow. Should you still use this product?	Yes – would not use if likely to rain within 6 hours.	Label
What would happen if you accidentally sprayed the lawn with this product?	All the lawn plants sprayed are likely to die or be severely injured.	Label

If you left this lying around and one of the neighbour's kids played with the container and spilt some on his/her skin what should you do?	Remove any contaminated clothing, flush skin with running water (label) wash skin with soap and water (SDS).	Label and/or safety data sheet
How should you mix up the chemical in the knapsack spray tank?	Half fill the tank with clean water, add the chemical and then fill tank with clean water, shake (agitate) before spraying.	Label
If you were spraying blackberry plants in the orchard what precautions should you take to stop the fruit trees getting damaged?	Use a shield or cone so the spray can be directed, do not spray any green growth, spray before bloom stage of the crop.	Label
After you have sprayed the blackberry plants when would it be safe to eat any blackberries that might ripen?	Does not specifically mention fruit crops – so suitable answer would be to ring the chemical company or use the pre-harvest information for wheat, barley and peas (which is 7 days) or avoid altogether.	
How should equipment be cleaned after spraying?	All to be thoroughly washed with water.	
You empty the container, what should you do with it?	<ul style="list-style-type: none"> ▪ <i>Triple rinse to bare ground,. Container can be crushed and buried in an approved landfill.</i> ▪ <i>Or may be burnt in an appropriate incinerator</i> 	<i>Label and SDS</i>
If you spilled the chemical or found the container was leaking onto the concrete floor what should you do?	<ul style="list-style-type: none"> ▪ <i>Wear protective clothing. Use soil or sawdust to absorb the chemical that has been spilt.</i> ▪ <i>If there is runoff into a waterway notify local council.</i> 	<i>SDS</i>

- (b) Gardoprim - You planted a small area of trees some weeks ago and now going to spot spray the grass that is growing up around them with gardoprim.

Question	Answer	Where did you find this information?
What safety precautions should you take when using or mixing this herbicide?	Avoid contact with eyes and inhaling spray mist. Wash hands and exposed skin after use.	Label
How should this product be stored after you have used it?	In original container with lid tightly closed. Store in well ventilated area (temp range -5-35C) out of reach of children. Do not store near food etc...	Label and SDS
What type of equipment is suitable to use for the spraying job?	Knapsack or gun.	Label
What would happen if you accidentally sprayed the lawn with this product?	All the grass would be killed off and may also kill clovers and other broadleaf weeds.	Label (tells you it will kill grasses)
If you left this lying around and one of the neighbour's kids played with the container and splashed some into his or her eye what should you do?	Flush eyes with large quantities of water-continue flushing for at least 15 mins. Call poisons centre ph 0800764766.	Label and SDS
How should you mix up the chemical in the knapsack spray tank?	Partly fill tank with water and add chemical. Add remaining product with agitation or stirring.	Label
What do you need to do to the tank all the time you are spraying	Keep agitating it – it will need a good shake every now and then.	Label
What other uses can this product be used for?	Controlling weeds in maize and pea crops.	Label or SDS

How should equipment be cleaned after spraying?	Wash thoroughly after use – discard washings to waste ground and be really careful not to contaminate waterways.	Label
You empty the container, what should you do with it?	Triple rinse container, burn if wind direction permits or crush and bury in approved landfill.	Label

2. Using one of SDS for Gardoprim, answer the following: -

(a) What does the information tell you about how toxic the chemical is?

LD50 is give for skin contact, ingestion and inhalation, the product is not an eye or skin irritant

(b) What is a specific environmental hazard of this chemical?

Toxic to fish (e.g. trout) and blue-green algae

(c) What First aid information is included that is not on the label?

What to do if the product is inhaled and advice to a doctor

(d) What is the number to call for an emergency response?

0800CHEMCALL or 0800 2432255

3. For Jolyn G360 what should you do if there is an accident with your ute on the road home if you are carrying this chemical? (Assume you are not hurt in the accident).

Switch off engine and any electrical equipment. Keep people away from the vehicle, warn other traffic. Check for spills/leaks

Where did you find this information?

On the dangerous goods declaration.



MATERIAL SAFETY DATA SHEET

Nufarm Number: 01668

FINAL 30/01/01

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GARDOPRIM®

HEALTH HAZARD INFORMATION

Acute Effects

Eye

May irritate.

Skin

May irritate.

Inhaled

Low toxicity.

Swallowed

Low toxicity.

Other Health Effects

No reported cases of poisoning in man.

Not a skin sensitiser.

In mammals, following oral administration 80% is eliminated in the urine and faeces within 24 hours.

Chronic Effects

None known.

First Aid

Eye

Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.

Skin

Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.

Inhaled

Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

Swallowed

Never give anything by mouth to an unconscious person.

Give 1-2 glasses of water or milk to dilute and induce vomiting by putting a finger down the throat. Repeat until vomit fluid is clear in appearance. Seek medical assistance immediately.

Other First Aid

None known.

Advice to Doctor

If ingested: (1st) Gastric lavage. (2nd) Emetic or alkaline catharsis. There is no antidote. Treat symptomatically.

Continued on next page



MATERIAL SAFETY DATA SHEET

Nufarm Number: 01668

FINAL 30/01/01

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GARDOPRIM®

Toxicity Data

Acute oral LC ₅₀ (rat):	=	1346mg/kg
Acute dermal LD ₅₀ (rat):	=	>4000mg/kg
Acute inhalation LC ₅₀ (rat):	=	>3.51mg/L @ 4 hours
90 day feeding study NOEL dogs:	=	3.5mg/kg (for terbutylazine technical)
Sensitisation (guinea pig)	=	Sensitiser

PRECAUTIONS FOR USE

Exposure Standards

No data available.

Engineering Controls

Facilities storing or utilising this material should be equipped with an eyewash facility and safety shower.

Handle in a well ventilated area, generally natural ventilation is adequate.

Personal Protection

Avoid all personal contact.

Wear safety goggles, dust mask, PVC or nitrile gloves, coveralls and boots. Use a NIOSH approved half-face respirator with organic vapour cartridge and dust/mist or pesticide prefilter in the absence of adequate ventilation.

Wash protective clothing before storage or reuse.

Wash thoroughly after handling and before eating, drinking or smoking.

Flammability

Non flammable.

Environment

Terbutylazine is of low toxicity in soil. It is moderately persistent (1/2 life = 2.6 months).

Degradation is primarily microbial. Terbutylazine practically non toxic to birds, bees and earthworms when used according to instructions.

Low toxicity to fish	LC ₅₀ (96h) trout:	4.6mg/L
	LC ₅₀ (96h) carp:	100mg/L
Harmful to Daphnia	EC ₅₀ (48h) Daphnia:	>75mg/L
Very toxic to green algae	IC ₅₀ (72h)	0.0075mg/L
	LC ₅₀ (14d) earthworms	>1g/kg

Continued on next page



MATERIAL SAFETY DATA SHEET

Nufarm Number: 01668

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GARDOPRIM[®]

SAFE HANDLING INFORMATION

Storage and Transport

ROAD TRANSPORT: Not listed in NZS 5433: 1999
SEA TRANSPORT: Not listed in IMDG Code 1994

STORAGE: Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Store away from foodstuffs, children and animals. Keep container sealed when not in use.

Packaging and Labelling

5L & 20L high density polyethylene.
CAUTION: Keep out of reach of children.

Spills and Disposal

Spills: Wear protective clothing. Clear area of unprotected personnel.
Contain spill and absorb with sand, soil or absorbent granules.
Do not allow product or washings to enter the waterways or sewer.
If spill does enter waterways contact the local authority.
Collect in an appropriate sealable container for disposal in an approved landfill.

Disposal Product: To avoid disposal all attempts should be made to utilise the product completely in accordance with its registered use. Dilute unusable product according to the label and pour onto wasteland areas, away from roots of desirable plants. Large quantities of waste and contaminated material must be disposed of in approved landfill in accordance with regulatory authorities.

Disposal Container: Triple rinse container and add residue to spray tank while it is filling. Puncture and burn empty container if wind direction permits, otherwise crush and bury in an approved landfill.

Reactivity Data

Corrosive to iron.
Not subject to polymerisation.
Stable for 2 years.
Terbutylazine is hydrolyzed by acids and alkali on heating.

Fire/Explosion Hazard

Wear protective clothing and self contained breathing apparatus.
Extinguishing media: Water, carbon dioxide, foam or chemical powder.
Very toxic fumes of nitrogen oxides and chlorine gas are produced when Gardoprim is heated to decomposition.
Cool containers with a water spray.

Continued on next page



NUFARM NZ LIMITED
2 Sterling Ave, Manurewa, Auckland
P.O. Box 22407, Otahuhu, Auckland
Telephone 0-9-268 2920 Fax 0-9-267 8444

MATERIAL SAFETY DATA SHEET

Nufarm Number: 01668

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GARDOPRIM[®]

ADDITIONAL INFORMATION

CONTACT POINTS

NORMAL HOURS: Emergency Response Co-ordinator: (649) 268 2920
24Hr Tollfree Emergency No: Phone: 0800 651 911

IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Emergency No: National Poisons Centre Phone: (643) 474 7000

PLEASE READ THE LABEL COMPLETELY BEFORE USE

WARNING

This material may be harmful if swallowed.

PRECAUTIONS

Avoid skin contact and inhalation of spray mist.

Wash hands and exposed skin before meals and after work.

Container Disposal: Triple rinse empty container and add residue to spray tank. Burn if circumstances, especially wind direction, permit. Otherwise bury in a suitable landfill.

Avoid contamination of any water supply with chemical or empty container.

FIRST AID

If swallowed give a glass or two of water and cause vomiting by putting a finger down the throat. Repeat until vomit fluid is clear in appearance. Do not cause vomiting if the patient is unconscious or convulsing. Take to hospital without delay.

BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS.

It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.

ACTIVE INGREDIENT

GARDOPRIM contains 500g/litre terbuthylazine in the form of a suspension concentrate.

GENERAL INFORMATION

GARDOPRIM is a selective herbicide for the control of grass and broadleaf weeds in forestry, established lucerne and annual broadleaf weeds in maize, sweetcorn and peas.

DIRECTIONS FOR USE

FORESTRY - grass and broadleaf weeds

GARDOPRIM is a selective herbicide for the use either pre-planting or over newly planted "bare rooted" trees. Weeds controlled include Yorkshire fog, browntop, sweet vernal, ryegrass spp., Poa spp., cocksfoot, catsear, chickweed, seedling gorse, Scotch thistle, nodding thistle, clovers, annual grasses and broadleaf weeds.

Time of application: Apply either to bare ground or existing vegetation not exceeding 10cm in height prior to spring growth in September. **Note:** For applications made later in the spring season, or for the control of difficult to kill perennial grasses like paspalum, kikuyu, couch and Mercer grass, the addition of an approved selective grasskiller at label rates is recommended.

Radiata Pine, Douglas Fir and Eucalyptus species (*E.delegatensis, fastigata and saligna*).

Broadcast Applications:

Rate of Application: Apply 15-20 litres GARDOPRIM in 150-300 litres water/ha. Use the higher rate on gorse seedlings. Wetting agent should be added at manufacturer's label rates.

Spot Applications:

Calibrate equipment carefully to deliver 1.5-2ml of GARDOPRIM per square metre in sufficient water to obtain good coverage. Treat 2 square metres (i.e. 1.6m diam. spot) around each tree where untreated surrounding vegetation could become rank and collapse to affect the planted tree. Include wetting agent at manufacturer's label rates to the spray mixture. If necessary, a repeat application can be made 12 months later to release slow growing trees.

Spotgun: Mix 110ml GARDOPRIM in 1 litre of water and apply 15-20ml of the mixture per square metre.

Knapsack: Mix 55ml GARDOPRIM in 1 litre of water and apply 30-40ml of the mixture per square metre.

LUCERNE (established) - grass and broadleaf weeds

Rate of Application: Apply 1.5-2 litres GARDOPRIM in mixture with 2-3 litres of paraquat 20% a.i. per sprayed hectare. Use the higher rate when clover is a problem and longer residual activity is required. Do not exceed recommended rates of application as lucerne yields may be adversely affected.

Time of Application: Apply to closely grazed lucerne stands that are at least two years old. Do not spray immediately following heavy grazing - allow a few days for weed growth to freshen up. Apply during the winter months when lucerne is completely dormant, but not when frost is still on the foliage or when ground conditions are excessively wet.

GARDOPRIM is absorbed through the leaves and roots of shepherd's purse, storksbill, chickweed, subterranean clover, dovesfoot, barley grass, Kentucky bluegrass and some other annual seedling weeds.

WITHHOLDING PERIOD: Lucerne.....4 weeks

MAIZE AND SWEETCORN - annual broadleaf weeds

Rates and Times of Application-

Pre-emergence: Apply 3.6 litres GARDOPRIM/sprayed hectare. The addition of DUAL® Gold at label rates is necessary for the control of annual grass weeds. Apply to a freshly prepared seedbed after crop sowing but before emergence.

Post-emergence: Apply 3 litres GARDOPRIM in 200-300 litres water/hectare to actively growing weeds no greater than 5cm high. The addition of a wetting agent should be made at manufacturer's label rates.

GARDOPRIM is absorbed through the leaves and roots of redroot, black nightshade, fathen and willow weed. **Note:** Some fathen plants may be resistant to products containing terbuthylazine, and the use of a specific post-emergence herbicide such as BANVEL® may be necessary to remove them.

PEAS - annual broadleaf weeds

Rates of Application: Apply 1.5-2 litres GARDOPRIM in 200-300 litres water/hectare. Use the higher rate under dry soil conditions.

Time of Application (pre-emergence): Apply to a freshly prepared seedbed after crop sowing but before emergence. A minimum of 10mm rainfall or irrigation within 1 week following application is necessary for herbicidal activity.

Do not use GARDOPRIM on soils low in organic matter, or of a very sandy or stony texture.

APPLICATION EQUIPMENT

GARDOPRIM is non-corrosive and almost non-abrasive. GARDOPRIM can be applied with conventional ground and spot spraying equipment. Do not use strainers finer than 300 micrometres. Wash equipment thoroughly after use. Dispose of excess liquid and washings of spray equipment only on wasteland, away from roots of desirable plants and waterways.

MIXING

GARDOPRIM mixes readily with water. Pour the correct quantity into the partly filled tank then add the remaining water with agitation. The spray mixture should be kept agitated before and during spraying, and before spraying after a stoppage. Unused spray mixture may settle out overnight.

Note: When using mixtures of GARDOPRIM and paraquat 20% a.i. add the GARDOPRIM to the partly filled tank, mix first, then add the paraquat and the remaining water with agitation.

CROP ROTATION

To minimise soil residues which could affect subsequent crops, areas treated with GARDOPRIM should be ploughed and cross cultivated between crops to ensure maximum dispersal of residues. Because residues may result from the use of GARDOPRIM, certain crops, for example tomatoes, cucurbits, brassicas, lettuce and beans should not be planted in areas previously treated with GARDOPRIM without first obtaining advice from a representative of Orion Crop Protection or from your supplier

STORAGE

Store in a cool, dry place, avoiding temperatures below -5°C and above 35°C.

COMPATIBILITY

GARDOPRIM is compatible with herbicides commonly used in forestry, lucerne, maize and sweetcorn.

WARRANTY

This formulation is warranted to contain the specified active ingredient within accepted analytical tolerance when packed. The user bears the risk for damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.

Registered pursuant to the Pesticides Act 1979 No. 3342.

©GARDOPRIM, DUAL, and BANVEL are registered trade marks of Novartis AG, Basel, Switzerland.
Proprietor Novartis New Zealand Limited, 43-45 Patiki Road, Avondale, Auckland.
Distributed by Orion Crop Protection 24 Poland Road, Glenfield, Auckland.



Net Contents:
20 litres



HAZNOTE / DANGEROUS GOODS DECLARATION

Jolyn Holdings Ltd
 PO Box 568 Ashburton
 Ph: (03)308 8869 Fax (03) 308 2555 Email: office@jolyn.co.nz

EMERGENCY INFORMATION : STORAGE GUIDE : DANGEROUS GOODS DECLARATION

JOLYN G360™

Substance: Viscous, amber-coloured liquid (soluble concentrate) containing 360 g/l glyphosate (CAS No. 38641-94-0)

Proper Shipping Name: : Glyphosate

UN No.:	DG Class	Subsidiary Risk Class	Packing Group	Flash Point (°C)	HAZCHEM	Marine Pollutant	Maximum Transport Quantity:
N/A	N/A	N/A	N/A	N/A	2Z	No	250L
HSNO Class: 6.1D, 6.4A, 9.1B.		HSNO No. HSR000227		Tracking Required: No	Approved Handler: No		SNZ HB 76: [IER Guide] Guide 47

EMERGENCY PROCEDURES

IF THIS HAPPENS	DO THIS
Tanker/Vehicle Accident	Switch off engine and electrical equipment. Keep people away, warn other traffic. Check for spills, leaks.
Spill or Leak	Wear protective clothing including nitrile rubber or neoprene gloves. Prevent further leakage. Absorb spillage with inert material collect and place in sealable container for disposal. Wash down affected area with water plus detergent. Absorb and collect washings. Seek advice from the local authority regarding disposal.
Fire	Product may give off harmful fumes. Wear breathing apparatus. Use water fog or foam to extinguish. Cool steel drums with water to prevent explosion by thermal expansion.

24 HOUR ADVICE IN AN EMERGENCY ONLY: Ph: 0800 565 961

FIRST AID

If Swallowed	Give water to drink, but do NOT induce vomiting. Consult a doctor if symptoms develop.
If In Eyes	Rinse water, for 15 minutes. Consult a doctor if symptoms develop.
If On Skin	Remove contaminated clothing and wash affected areas thoroughly with soap and water. Wash clothing before re-use.
If Inhaled	Remove from exposure.

STORAGE and SEGREGATION

Storage: Store in original container in a cool dry ventilated place away from direct heat or direct sunlight. Store away from foodstuffs, children and animals. Keep container sealed when not in use.

Aggregate Storage Volume Thresholds:

Location Certificate:	Hazardous Atmosphere Zone:	Fire Extinguisher:	Hazard Class and Emergency Action Sinage:	Emergency Information:	Emergency Plan:	Secondary Containment:
N/A	N/A	N/A	1000 litres	5 litre	1000 litres	1000 litres
Note:						

DO NOT STORE OR LOAD WITH:

SEGREGATE FROM:

Food and food packaging

SEGREGATION: Check the Land Transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea Transport may require additional segregation; refer NZS5433 for details.

No. and Kind of Packages:	Gross Weight:	kg	Volume:	m ³
Consignor (from):	Consignee (to):			

Dangerous Goods Declaration:
 I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled, and are in all respects in proper condition for transport according to the applicable international and national rules, regulations and legislation.

Name:

Title:

Signature:

Date:

DISCLAIMER: The information provided above is based upon sources believed to be accurate. However Jolyn Holdings (1991) Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The consignor and the consignee are responsible to determine the suitability of this information for their particular purpose.

JOLYN G360

ACTIVE INGREDIENT: Contains 360g/litre glyphosate as the isopropylamine salt in the form of a soluble concentrate.

For specific rate of application and complete directions for use, read enclosed Directions for Use Booklet.

Registered pursuant to the ACVM Act 1997, P04335
See www.nzfsa.govt.nz/acvm/ for registration conditions.

BEWARE:

Apply this product carefully. Spray drift may cause severe damage to other desirable plants.

PRECAUTIONS:

Keep out of reach of children.
Store in the original container, tightly closed and away from foodstuffs.
Avoid contact with eyes and inhalation of spray mist.
Wash hands and exposed skin before meals and after work.
Wash clothing before re-use.
When using or mixing, wear waterproof gloves.
Triple rinse container and add residue to spray tank.
Crush and bury empty container in a suitable landfill.

FIRST AID:

If swallowed DO NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water. If inhaled, move the patient to fresh air immediately. Begin artificial respiration if breathing has stopped.

CONDITIONS OF SALE:

The use of JOLYN G360 being beyond the control of the suppliers, no warranty expressed or implied is given by Jolyn Holdings Limited, regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Jolyn Holdings Limited accept no responsibility whatsoever resulting from the use of this product, except where the Jolyn Performance Guarantee applies.

Proprietor:
Jolyn Holdings Limited
P O Box 568
Ashburton, New Zealand

Telephone: 03 308 8869
Facsimile: 03 308 2555

JOLYN G360™

ACTIVE INGREDIENT: contains 360g/litre glyphosate as the isopropylamine salt in the form of a soluble concentrate.

A water soluble herbicide for non selective control of many annual and perennial weeds in the situations stated in the directions for use booklet.

READ LABEL CAREFULLY BEFORE USING JOLYN G360

GENERAL INSTRUCTIONS:

JOLYN G360 is a foliar absorbed and translocated herbicide for control of emerged weeds only and is not residual. JOLYN G360 can be deactivated by soil particles and hard water containing calcium salts. If hard water cannot be avoided, the addition of Buffer BB5 is recommended.

Plants should be actively growing, free of stress with clean foliage at time of spraying.

JOLYN G360 and solutions of, should only be mixed, contained in or sprayed by, equipment made from stainless steel, fibreglass, plastic, aluminium, brass and copper.

WARNING: A highly flammable gas may be formed from the contact of this product with galvanised or unlined steel.

The effects of JOLYN G360 may not be apparent for 3-7 days depending on weather conditions, weed species and the herbicide rate used. Some perennial weeds may not show effects for 14-21 days.

RESTRICTIONS:

Do not spray if rain is likely within 6 hours. Do not allow spray contact with non-target plants as severe injury may occur. Clean spray tank of previous chemical residues, preferably with a chemical residue remover. Half fill the spray tank with clean water, add the required amount of JOLYN G360, then fill with clean water.

Add surfactant where required. Agitate well before spraying. When tank mixing with other chemicals, add JOLYN G360 after other water soluble products and flowables eg Simaflow 500. Be sure to observe all precautions, especially plant back periods when using other herbicides in tank mix with JOLYN G360.

APPLICATION:

Boom equipment:

JOLYN G360 can be applied in spray volumes up to 200 litres per hectare using fan nozzles at pressures in the range of 240-280 kPa. Boom height should be set so a double overlap of nozzle pattern is achieved at the top of the target plants.

Aerial equipment:

(Forest and non-crop areas only): JOLYN G360 can be applied by aircraft in spray volumes of up to 100 litres per hectare. Increase spray volumes in hilly terrain to ensure maximum target contact. DO NOT use aerial application in intensive horticultural cropping areas.

Handgun and Knapsack:

Ensure a fine spray pattern to give complete coverage.

Wiper Equipment:

Mix only enough for immediate use. Plants must be clean and dry and the wiper fully saturated. Apply up and down slopes for effective applications. High weed density: reduce speed and apply twice in opposing directions.

CLEANING EQUIPMENT:

All spray equipment including pumps, spray tanks, lines and nozzles, landing gear (aircraft) should be thoroughly washed with water after each day of spraying.

SITUATIONS FOR USE

SITUATIONS	CROP	CRITICAL COMMENTS
Drains and Waterways		Do not spray until 75% of the weed is above water level. Do not allow submergence for 6 hours post spraying.
Forestry For control of all listed weeds prior to planting of forest or nursery or around established trees		For rates of weeds see Weed Table Do not allow spray contact with established trees.
Industrial As a knockdown or selective if spot spraying		Treat weeds as per Weed Table
Market Gardens As a knock down prior to seeding, transplanting and after harvest clean up.	All Vegetables	For best results do not disturb weeds by grazing or cultivation for 1 day post spray of annual weeds and 10 days post spraying of perennial weeds. Cultivate within 21 days of spraying to ensure control. Do not sow until a satisfactory seed bed has been prepared. An appropriate residual herbicide can be used as a tank mix with JOLYN G360
Minimum Tillage For total weed control prior to seeding.	Cereal, pasture & leguminous crops.	For best results, do not disturb weeds by grazing or cultivation for 1 day post spraying of annual weeds, and 10 days post spraying of perennial weeds. To ensure control and avoid respraying newly germinated weeds, work sprayed area by full cultivation or the seeding operation within 3 weeks of spraying. Do not sow until a satisfactory seed bed has been prepared. For improved control of white clover, tank mix with Void, Granstar® or dicamba. Read respective labels fully before applying, and observe recommended plant back periods.
Orchards and Vineyards. As a knockdown prior to establishment or where plants are 3 years old or over.	Apple, Citrus, Grapevines, Kiwifruit, Pears and Stonefruit.	Use a directed or shielded spray. DO NOT let spray contact an green foliage or new growth. Spray before the bloom stage of crop. JOLYN G360 can be tank mixed with an appropriate herbicide for residual control.
Pre-Harvest For control of emerged weeds and as a clean-up to enhance harvesting.	Wheat, Barley, Oats and Threshing peas.	Spray 7-12 days pre-harvest. Grain moisture should be below 30% Withholding period: 7 days. DO not spray seed or malting crops. Do not spray undersown crops.
Recreational Areas. For weed control prior to establishment and as a clean-up around established areas.	Lawns, Ornamentals, Parks and Reserves.	Established Plants: Use a directed or shielded spray or with a wiper around plants avoiding any spray contact on green or growing points of plant.

WEED TABLE

WEEDS CONTROLLED	RATE PER HECTARE	CRITICAL COMMENTS
Amaranthus, Barley Grass, Capeweed, Cleavers, Volunteer Cereals, Spiny Emex, Storksbills, Fumitory, Mintweed, Patersons Curse, Prairie Grass, Ryegrass, Saffron Thistle, Vulpia Hairgrass, Sub. Clover, Wild Mustard, Wild Turnip.	1.0-2.0 litres Handgun: 200ml/100 litres Knapsack: 20ml/10 litres Wiper: 33% Solution	Use the high rate on weeds greater than 14cm across or 14cm high.
Australian Sedge	6.0 litres Handgun: 1.0 Litre/100 litres Knapsack: 100ml/10 litres Wiper: 33% solution	Best results when sprayed in Summer Do not disturb for 4 weeks post treatment.
Floating Sweet Grass, Reed Sweet Grass		
Johnson Grass, Kikuyu, Mercer Grass (non-aquatic)		Best results when plants are in early seedhead.
Ragwort		Ensure adequate leaf area for spray uptake. Wiper: plants should be above pasture to avoid non-target contact. Use a double pass for best results. Plants become more palatable to stock after treatment, so remove until brownout occurs.
Ratstail		Use high Water Volumes (200 litres/ha) in Autumn when foliage is green. Do not disturb treated plants for 21 days post spray.
Rautahi (Cutty Grass) Rushes, Tall Fescue		Spray in Jan-March. Do not burn or slash for 4 weeks post spraying.

Californian Thistle	4.0 litres Handgun: 1.0 litre/100 litres Knapsack: 100ml/100 litres	Spray plants after flower bud stage. Improved results obtained when thistles are mowed 10 days post spraying.
Paspalum		Spray when plants are at early seedhead.
Couch	3.0 – 6.0 litres Handgun: 1.0litre/100 litres Knapsack: 100ml/100 litres	Spray at the early seedhead stage when plants are actively growing. Use the low rate for suppression only. Pre-Harvest: Use 4.0 litres/ha. JOLYN G360 will not control unemerged growth.
Gorse	Handgun only: 1.0 litre/100 litres	Use Kiwi Buddy at 200ml/100 litres. Spray when plants are at early seedhead. Ensure complete coverage. Regrowth may occur after 1 year. Retreat if required.
Nodding Thistle	Wiper only: 33% solution	A double pass may be required for good coverage. Spray Spring to Autumn on actively growing plants with at least 10cm of growth exposed to wiper.
Old Mans Beard	Handgun: 1.0-2.0 litres/100 litres Knapsack: 200ml/10 litres	Apply before the first leaf browns off. Use the higher rate on plants with stems greater than 1cm in diameter. If complete coverage is not possible, cut plants in the winter and treat at the high rate when regrowth is at least 0.5-1.0m in length.
Pampas Grass, Toetoe.	Handgun: 1.0-2.0 litres/100 litres Knapsack: 200ml/10 litres	Spray spring to autumn. Do not spray flowering plants.
Ring Fern	1.0-3.0 litres Handgun; 300ml/100 litres Knapsack: 30ml/10 litres	Use the high rate for control Use 1.0-2.0 litres/ha for Pasture Manipulation.
Barberry	Handgun: 1.0litre/100 litres Knapsack: 100ml/10 litres	Best results when sprayed mid to late Summer after flowering to full fruit.
Blackberry	9.0-20.0 litres Handgun: 1.0-1.5 litres.100 litres Knapsack: 100ml/100 litres	Best results when sprayed mid to late summer after flowering to full fruit. Best results when plants have a full canopy and total leaf coverage is achieved. Use higher rate on heavy infestations where total coverage may not be achieved. Regrowth can occur after 1-2 years. Do not disturb treated plants until 8 weeks post treatment.
Bracken	9.0 litres Handgun: 1.0litre/100 litres	Spray mid summer to mid winter when fronds are open. Burning after treatment will help pasture establishment. The addition of KIWI BUDDY at 250ml/100 litres is recommended.
Broom	Knapsack: 100ml/10 litres	Spray late spring to early summer when plants are in full leaf. The use of KIWI BUDDY at 200ml/100L is recommended.
Buddleia		
Dock		Best results when sprayed Spring-Summer before seedheads have formed.
Indian Doab, Mercer grass (Aquatic)	9.0 litres Handgun:	Best results when plants are at early seedhead.
Willow	1.0 litre/100 litres Knapsack: 100ml/100 litres	Spray to ensure good leaf coverage from mid to late Summer
Browntop	3.0 litres Handgun:	If plants are greater than 10cm high, graze or burn then treat regrowth. The addition of KIWI BUDDY is recommended at 25-50ml/100 litres.
Potatoe (self set)	0.5 litre/100 litres Knapsack: 50ml/10 litres	
Ryegrass (perennial)	1.5-3.0 litres	Use the low rate only when cultivation is to follow treatment. Use KIWI BUDDY 50-100ml/100 litres
Yarrow	3.0-6.0 litres	For best results cultivation should follow treatment. Only use the lower rate when a competitive crop is planted after treatment.

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