Cobalt™ Advanced
Insecticide

For insect control in cereals, forage brassicas, maize and potatoes.

READ THE LABEL COMPLETELY BEFORE MIXING OR APPLYING

ACTIVE INGREDIENT:
Contains 300 g/litre chlorpyrifos and 15.4 g/L lambda-cyhalothrin in the form of an oil in water emulsion

GROUP 1 3A INSECTICIDE

WARNING – Flammable liquid
TOXIC - Keep out of reach of children
ECOTOXIC

This product contains an organophosphate

NET CONTENTS: 1- 1000L

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HAZARD CLASSIFICATION
3.1C, 6.1C, 6.3B, 6.4A, 6.8B, 9.1A, 9.2B, 9.3A, 9.4A

APPROVED HANDLER
This product must be under the personal control of an approved handler when:
- a) applied in a wide dispersive manner; or
- b) used by a commercial contractor.

TRACKING
This product must be tracked throughout its lifecycle. Handling of tracked substances and the keeping of records must be in accordance with the requirements of the Hazardous Substances (Tracking) Regulations and the NZS8409 Management of Agrichemicals.

RECORD KEEPING
Records of application or discharge to the environment, as described in relevant HSNO regulations and the New Zealand Standard for the Management of Agrichemicals (NZS8409) must be kept if the application or discharge is in a place where members of the public may be present or where the substance may enter air or water and leave the place.

FLAMMABLE LIQUID - Keep away from sources of ignition

TOXICITY
This substance may be fatal if swallowed, or absorbed through the skin. Repeated minor exposures may have cumulative effects. May cause neurotoxicity and lung damage from repeated oral and inhalation exposure at high doses. May cause reproductive/development damage from repeated oral exposure at high doses. Do not inhale the vapour or spray mist. Do not eat, drink or smoke while using. Remove protective clothing immediately after handling this product and wash hands and face before meals and after work.

May cause skin and eye irritation. Avoid contact with eyes and skin. Facial skin contact may cause temporary facial numbness.

ECOTOXICITY
Very toxic to aquatic organisms with long-lasting effects. Do not contaminate an aquatic environment with chemical or empty container. Do not spray over, or allow to drift over, an aquatic environment. Do not apply into, onto or over water.

Toxic to the soil environment. Do not allow drift outside the target area to occur.

Very toxic to terrestrial vertebrates such as birds and reptiles. Store chemical and empty containers away from animals and birds. Use only in accordance to label directions.

Very toxic to terrestrial invertebrates. Do not spray over beneficial predators. Very toxic to bees. Do not apply this product to any plant or tree likely to be visited by bees at the time of application, or immediately after application until spray has dried; or in areas where bees are foraging. When applied during non-foraging periods such as early morning or evening, application will not interfere with the activity of honey bees once the spray has dried, other than causing a short 2 to 3 day reduced foraging effect.

HANDLING PRECAUTIONS

EQUIPMENT
Apply using accurately calibrated and maintained equipment in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).
Flush equipment thoroughly with clean water after use according to the Cleaning Spray Equipment instructions below. Dispose of cleaning water according to the Disposal Instructions below.

**STORAGE**

Store in the original container tightly closed and in a locked, dry, cool, well ventilated area, well away from foodstuffs. Storage must be generally in accordance with NZS8409.

Do not store with Class 1, 2, 3.2, 4 or 5 substances.

Stores containing quantities of 100L or more require secondary containment and are subject to signage. See NZS8409 and relevant HSNO regulations for further information.

**PERSONAL PROTECTION**

When opening the container, mixing or applying wear face shield or goggles, elbow length chemical resistant gloves (e.g. PVC or neoprene), chemical resistant boots, waterproof hat and chemical resistant overalls buttoned to the neck and wrist, and chemical resistant headwear for overhead exposures. After each day’s use, wash gloves, face shield or goggles and contaminated clothing. Personal protection equipment is not required when the person is applying the product using a vehicle and where that person is operating the vehicle from within a fully-enclosed cab equipped with protective equipment to prevent contact with, and inhalation of, the product.

**SPILLS**

Wear face shield or goggles, elbow length chemical resistant gloves (e.g. PVC or neoprene), chemical resistant boots, waterproof hat and chemical resistant overalls buttoned to the neck and wrist. Extinguish all sources of ignition and exclude all bystanders from vicinity of the spill. Do not touch or walk through spilled material. Stop leak when safe to do so. Contain liquid spills and prevent substance entry into waterways, and drains or coming into contact with HSNO Class 1, 2, 3.2, 4 or 5 substances. **Small spills/leaks:** Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Seek advice from the SDS, product label or Dow AgroSciences regarding disposal. **Large spills:** Report large spills to Dow AgroSciences Emergency Services at 0800 CHEMCALL (0800 243 622).

**DISPOSAL**

Triple rinse empty containers and add rinsate to spray tank. Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues (liquid and dry) and have an intact legible label should be taken to an Agrecovery collection site. Otherwise crush and bury in a suitably approved landfill. Do not burn empty containers.

Dispose of this product only by using according to the label, via Agrecovery (visit www.agrecovery.co.nz or call 0800 AGRECOVERY (247 326) for information about the type and quantity of chemical acceptable for disposal), or at an approved landfill. Do not burn the product.

Dispose of unused spray mix and equipment cleaning water onto non-grazed and non-cropped ground away from edible and flowering plants.

Do not dispose of this product; spray mix or equipment cleaning water down drains or sewers.
FIRST AID
If swallowed do not induce vomiting. If swallowed, splashed on skin or in eyes, or inhaled, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If swallowed activated charcoal may be advised. Give atropine if instructed. If the patient is not breathing, begin artificial respiration. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention. If splashed in eyes, flush eyes with water for at least 15 minutes and see a doctor. If inhaled, move victim to fresh air immediately. If breathing has stopped, begin artificial respiration. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

TRANSPORT
Do not carry on a passenger service vehicle.

RE-ENTRY
DO NOT allow entry into treated areas within 24 hours unless wearing the Personal Protection Equipment recommended in the Handling Precautions.

SPRAY DRIFT MANAGEMENT
The person applying this substance must not cause adverse effects beyond the boundary of the treated property, and must also avoid adverse effects from spray drift occurring. Mitigation measures employed must be recorded as part of the application records.

SAFETY DATA SHEET
A Safety Data Sheet is available from Dow AgroSciences on request. Call Customer Service Toll Free on 0800 803 939, or visit www.dowagrosciences.co.nz.
**NOTICE**

**Important:** You must read the warning and conditions given on this label. If they are not acceptable, or if you are in doubt as to the proper handling of this product (including its transport, storage, use, disposal, and requirements for approved handlers [if applicable]) then return the unopened product to the supplier at once.

**Warning:** This product is subject to controls and could be hazardous if handled incorrectly. The user is responsible for ensuring that the handling of this product is in accordance with the law (including the *Hazardous Substances and New Organisms Act 1996* and the *Agricultural Compounds and Veterinary Medicines Act 1997*) and with the directions provided. The Registrant declines all liability (whether in contract, tort (including but not limited to negligence), or otherwise) to the maximum extent permitted by law in relation to the handling of this product in a manner which is contrary to the directions given or to any applicable Acts, Regulations or Guidelines.

**Further information** regarding the applicable Acts, Regulations and Guidelines for the proper handling of this product may be obtained by contacting EPA New Zealand ([www.epa.govt.nz](http://www.epa.govt.nz)) or the Ministry for Primary Industries (MPI) ([www.foodsafety.govt.nz](http://www.foodsafety.govt.nz)).

This product is warranted to contain the specified active ingredients within accepted analytical tolerance when packed.

<table>
<thead>
<tr>
<th>Registered to:</th>
<th>EMERGENCY RESPONSE</th>
<th>IN A TRANSPORT EMERGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow AgroSciences (NZ) Ltd</td>
<td>(All hours)</td>
<td>DIAL 111 FOR POLICE OR FIRE</td>
</tr>
<tr>
<td>89 Paritutu Road</td>
<td>Ring from anywhere in New Zealand</td>
<td></td>
</tr>
<tr>
<td>Private Bag 2017</td>
<td><strong>0800 CHEMCALL</strong>, or <strong>0800 243 622</strong></td>
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<tr>
<td>New Plymouth 4342</td>
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<td></td>
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<tr>
<td>Telephone 0800 803 939</td>
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Registered pursuant to the ACVM Act 1997, No P8826
See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to HSNO Act 1996, EPA Approval Code HSR100908
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

Primary: 6.1  
Subsidiary: 3  
Shipping Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (CHLORPYRIFOS, Solvent naphtha (petroleum), light aromatic). Marine Pollutant

UN Number: 3017  
Packing Group: III  
HAZCHEM 2X

[AGRECOVERY](http://www.agrecovery.co.nz)

Date of Manufacture: Batch No. Barcode
DIRECTIONS FOR USE
It is an offence to use this product on animals.

MIXING:
Pour the measured quantity of Cobalt Advanced into the partly filled spray tank and agitate the mixture while adding the remaining water. Maintain agitation during spraying and after a stoppage.

CLEANING SPRAY EQUIPMENT:
After using Cobalt Advanced:
• Empty the spray tank completely and drain the whole system. Drain the spray unit and clean any filters in the tank, pump, lines, hoses and nozzles.
• After cleaning the spray unit as above, quarter fill with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.
• Discard rinse water on land already sprayed or on non-grazed and non-cropped ground away from edible and flowering plants, and water sources.

APPLICATION METHODS
The following application situations must use spray equipment in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).

Cobalt Advanced can be applied with conventional ground equipment. Good coverage is essential to ensure adequate control.

Ground Spraying
Cereals, Forage Brassicas and Maize:
Apply in a minimum of 100 L/ha of water depending on the crop. DO NOT apply with spray droplets smaller than a MEDIUM spray droplet size category according to nozzle manufacturer specifications that refer to the ASABE S-572 Standard or the BCPC Guideline. Increase spray volumes as the crop grows.

Potatoes:
Apply Cobalt in sufficient water (500L/ha) to ensure thorough coverage.

COMPATIBILITY
If intending to tank mix Cobalt Advanced with other agricultural chemicals or plant nutrients consult Dow AgroSciences.

Do not mix with highly alkaline materials such as Bordeaux mixture and lime sulphur, or foliar fertilisers.

WETTING AGENTS
Not all wetting agents or adjuvants are of equal quality. Dow AgroSciences only recommends use of reputable non-ionic wetting agents with a proven history of safe use on cereals, forage brassicas and maize such as Actiwett®, Spreadwet 1000 and Contact™ Xcel. Consult Dow AgroSciences for further advice.

Actiwett ® Trademark of Loveland Inc.
Contact™ Xcel Trademark of Nufarm Limited

RAINFASTNESS
Cobalt Advanced is rainfast once the spray is dry.
WITHHOLDING PERIOD

It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residues Limits of Agricultural Compounds) Food Standards.

<table>
<thead>
<tr>
<th>Cereals</th>
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</thead>
<tbody>
<tr>
<td>Cereal grain</td>
<td>70 days</td>
</tr>
<tr>
<td>Cereal forage</td>
<td>28 days</td>
</tr>
<tr>
<td>Forage Brassicas</td>
<td>Do not allow stock to graze within 14 days after the last application.</td>
</tr>
<tr>
<td>Maize</td>
<td>Seedlings only</td>
</tr>
<tr>
<td>Potatoes</td>
<td>14 days</td>
</tr>
</tbody>
</table>

RESISTANCE MANAGEMENT

Cobalt Advanced contains an organophosphate and a pyrethroid insecticide (Group 1 and 3A). Some naturally occurring individual insects may become resistant when excessive use of the same insecticide occurs. To minimise the risk, use strictly in accordance with label instructions. To maximize the effectiveness of insecticides, products containing alternate modes of action should be used in the spray program. Consult [http://resistance.nzpps.org/](http://resistance.nzpps.org/) for alternate modes of action and the details of resistance management strategies (if any) for the crops listed on the label.
DIRECTIONS FOR USE:
It is an offence to use this product on animals.

Apply by broadcast application from the ground (boom spraying).

Ensure thorough coverage of all crops. Increase water volume with crop growth stage and apply with an appropriate wetter/spreader if required.

<table>
<thead>
<tr>
<th>CROP</th>
<th>PEST</th>
<th>APPLICATION RATE &amp; COMMENTS</th>
<th>APPLICATION TIMING &amp; COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Cereal aphid</td>
<td>333-667 ml/ha</td>
<td>Apply at first sign of aphids.</td>
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<tr>
<td></td>
<td>Rose grain aphid</td>
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<td>Apply the lower rate when aphid pressure is low and shorter residual activity is required.</td>
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<tr>
<td></td>
<td>Grain aphid</td>
<td>467-667 ml/ha</td>
<td>Apply the higher rate when aphid populations are high or when the crop is dense. A second application may be required if aphids continue to migrate into the crop.</td>
</tr>
<tr>
<td>Forage brassicas</td>
<td>Diamond back moth, white butterfly, leaf miner</td>
<td>667 ml/ha</td>
<td>Monitor pest populations and apply at the onset of insect damage in periods when pest numbers will increase. Repeat applications may be required if new infestations occur.</td>
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<td>Apply with an appropriate wetter/spreader.</td>
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<tr>
<td>Springtails</td>
<td></td>
<td>333 ml/ha</td>
<td>Apply immediately prior to crop emergence or as soon as springtails or their damage is evident in young crops.</td>
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<td></td>
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<td></td>
<td>Ensure complete coverage of seedlings and surrounding soil.</td>
</tr>
<tr>
<td>Nysius (wheat bug – Nysius huttoni)</td>
<td>For suppression of Nysius or where populations are low</td>
<td>For suppression of Nysius or where populations are low</td>
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<tr>
<td></td>
<td></td>
<td>- apply 667ml/ha.</td>
<td>Where higher levels of control are required or where Nysius populations are high</td>
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<tr>
<td></td>
<td></td>
<td>- apply 667ml/ha as a tank mix with 800ml of Lorsban 50EC Insecticide per ha.</td>
<td>Apply as soon as damage is evident or when Nysius adults or nymphs are first seen in seedling crops.</td>
</tr>
<tr>
<td>Cutworm</td>
<td>667 ml/ha</td>
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<td>Apply early post emergence or as soon as damage is evident. Application in the evening will maximise control.</td>
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<td></td>
<td></td>
<td></td>
<td>Ensure complete coverage of seedlings and surrounding soil.</td>
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<tr>
<td>Aphids</td>
<td>467-667 ml/ha</td>
<td></td>
<td>Apply at first sign of aphids.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Apply the higher rate when aphid populations are high or</td>
</tr>
<tr>
<td>Crop</td>
<td>Pest</td>
<td>Application Rate</td>
<td>Application Details</td>
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<tr>
<td>Maize</td>
<td>Cutworm</td>
<td>667 ml/ha</td>
<td>Ensure complete coverage of seedlings and surrounding soil. Apply early post emergence or as soon as damage is evident. Application in the evening will maximise control.</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Potato tuber moth</td>
<td>667 ml/ha</td>
<td>Always apply Cobalt Advanced in sufficient water (500L/ha) to ensure thorough coverage and with a suitable wetter/spreader with a history of safe use in potatoes. Apply at first sighting of moths then at 2 week intervals.</td>
</tr>
<tr>
<td>Tomato / potato psyllid (Bactericera cockerelli, TPP)</td>
<td>1667 ml/ha</td>
<td>Always apply Cobalt Advanced in sufficient water (500L/ha) to ensure thorough coverage. As part of a season long programme, apply up to four, “back to back”, applications of Cobalt Advanced at 7 day intervals.</td>
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</table>

**Resistance Management**

Cobalt Advanced is a mixture of an organophosphate and a synthetic pyrethroid insecticide. Do not apply more than 4 applications of Cobalt Advanced per crop in any one season, or more than a total of 4 organophosphate and 4 synthetic pyrethroid insecticides per season per crop.

**Tomato/Potato Psyllid**

Use Cobalt Advanced only in a sequence of 4 ‘back to back’ applications per season.

The addition of a wetting agent is not required when applying Cobalt Advanced. If applied in combination with a wetter or adjuvant, scorching of flowers in potatoes may be observed, especially in hot, dry conditions. Foliage is NOT affected.

**Diamondback Moth**

In the unlikely event that more than 2 insecticide applications are required for control of diamond back moth, apply 2 ‘back to back’ applications of Cobalt Advanced, followed by additional applications of an insecticide with a different mode of action e.g. Sparta™ insecticide.