



# Hammer® Force

HERBICIDE

## WARNING KEEP OUT OF REACH OF CHILDREN ECOTOXIC

### Active Ingredient:

240 g/L CARFENTRAZONE-ETHYL in the form of an oil in water emulsion concentrate.  
Also contains 240 g/L hydrocarbon liquid

### Contents:

1, 4, 5, 10, 20 L



GROUP

**E**

HERBICIDE

**For use in mixtures with systemic and knockdown herbicides, in the desiccation of Seed potato haulms. Also for use as a tank mixing partner with Cereal and Grass seed herbicides.**

Registered pursuant to the ACVM Act 1997, No. P007983.

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval Code HSR007989.

### PLEASE READ THE LABEL COMPLETELY BEFORE USE

**This product MUST NOT be used for any purpose or in any manner contrary to the controls and conditions of registration.**



**HAZARD Classifications:** 6.1E, 6.3B, 6.4A, 6.9B, 9.1A, 9.2A

This product MUST be under the control of an Approved Handler during use.

### WARNING

May be harmful if inhaled. May cause skin and eye irritation. May cause liver damage from repeated oral exposure at high doses. Very toxic to aquatic organisms. Very toxic to the soil environment.

### PRECAUTIONS

Store in original container, tightly closed, away from foodstuffs. When mixing or applying the substance wear waterproof gloves, hat, eye protection, overalls footwear, and suitable respiratory protection. Avoid contact with skin and eyes, and inhalation of spray mist. If clothing becomes contaminated with product, remove clothing immediately. **DO NOT** eat, drink, or smoke while using. Wash hands and face before eating, drinking, or smoking and after work. Wash protective clothing after use. Apply with well-maintained and calibrated spray equipment. Records of use **MUST** be kept. Application, storage and record keeping should be as described in the Management of Agrichemicals NZS8409. **DO NOT** carry on a passenger service vehicle. Avoid contamination of any water supply with chemical or empty container.

### CONTAINER DISPOSAL

Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Otherwise crush and bury in a suitable landfill. **DO NOT** reuse this container for any other purpose.

### PRODUCT DISPOSAL

Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

### 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. **DO NOT** scrub the skin. If splashed in eyes, wash out immediately with water. If inhaled move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

### SPILLAGE

Wear suitable protective clothing including face shield, impervious gloves and boots. Prevent the product or spilled material from entering water bodies. Absorb liquid spills with inert material such as earth or sand and place in waste containers. Wash area with water and absorb with further inert material. Dispose of safely.

## GENERAL INFORMATION

**General Weed Control:** Hammer® Force is a fast acting contact herbicide that desiccates and controls weeds through a process of membrane disruption. Hammer® Force is rapidly absorbed through the foliage and green stems of plants. The foliage of susceptible plants show signs of desiccation within a few hours following application. Death of the weed or plant tissue follows within a few days. Use in mixture with other herbicides will extend the weed spectrum, speed up knockdown, and improve control of some hard to kill weeds including mallows.

Hammer® Force can be added to contact and systemic herbicides to speed up knockdown and improve the control of certain broadleaf weeds. Application of Hammer® Force for broadleaf weed control should target small actively growing weeds. Under warm moist conditions, herbicide symptoms may be accelerated, while under very dry and cold conditions, the expression of herbicidal symptoms is slower. Weeds hardened off by drought are less susceptible to Hammer® Force.

**Cereal Weed Control:** Hammer® Force is also a herbicide for the control of certain broadleaf weeds in Cereals and Grass seed crops. When used in Cereal or Seed crops, Hammer® Force should be targeted at small actively growing weeds. Subsequent germinations will not be controlled. Hammer® Force should always be tank mixed with other approved cereal and grass seed herbicides. If MCPA is the mixing partner, only use an amine formulation.

Hammer® Force is also highly effective for the desiccation of Potato haulms.

### RESISTANCE MANAGEMENT

This product contains a Group E herbicide. Continuous use of this product may eventually lead to a build-up of weeds resistant to it. This can be prevented or delayed by using in mixture or alternating with a herbicide from another group. Use strictly in accordance with label instructions.

### MIXING

Add half the required volume of water to spray tank and start agitation and then add the measured amount of Hammer® Force. In cereals, add the required volume of the companion herbicide next. (If tank mixing with a dry flowable formulation, add the DF to the tank first), then add buffering agent if required then the balance of water to tank. Maintain good agitation at all times until spraying is completed.

The spray solution can be buffered to within the range of pH 5 to pH 8. **DO NOT** use with tank additives that alter the pH of the spray solution below pH 5 or above pH 8 or that contain surfactants.

## COMPATIBILITY

### Cereals and Grass Seed Crops

Hammer® Force should always be tank mixed with another approved herbicide to broaden the weed control spectrum and improve weed control compared to either product applied alone.

### DO NOT tank mix Hammer® Force with the following to avoid crop injury:

- In cereals **Ester formulations** of Herbicides
- In cereals herbicides that contain **isoproturon (IPU)** e.g. Cougar\*, **ioxynil** e.g. Combine\*, **bromoxynil** e.g. Axall\*
- In cereals, EC formulations of Insecticides and Fungicides.
- In cereals, Triazole fungicides e.g. Opus\*, unless testing on the cultivar being treated has shown no phytotoxicity.
- All crops: **Surfactants or Oil adjuvants**, unless required by the mixing partner. Prior to applying Hammer® Force clean the spray tank to remove any wetters or adjuvants remaining from previous spray operations otherwise crop injury may result.
- All crops: **Selective Grass Herbicides** e.g. Wild oat herbicides. Allow 10 to 14 days after Hammer® Force application before applying grass herbicides.

### TIMING

Application should be made to small, actively growing weeds generally less than 6 to 8 leaf in growth stage. As Hammer® Force is a contact herbicide, best control is achieved when weeds are exposed and are not shielded by other weeds and/or the crop. Ideally crops should be at the 3 leaf to early/mid tillering stage (Zadok's scale 13 to 32), prior to crop canopy closure. Follow the timing recommended for the companion herbicide.

### APPLICATION PRECAUTIONS

**Drift Management:** Hammer® Force will clearly demonstrate any off target drift into non-target vegetation by way of brown pin spots (drifted fines) or brown blotches (drifted large droplets or spray). Follow all precautions on this label to minimise off target drift. Drift management is the responsibility of the applicator.

**Caution: Use of Hammer® Force  
around non-target plants**

Hammer® Force is a contact herbicide and may cause damage if off target drift occurs. **DO NOT** allow drift on to crops as 'spotting' can occur.

Guidelines to manage spray drift include;

- Apply through a calibrated sprayer with correct nozzles and spacing. Use the lowest boom height possible appropriate to the target plant size.
- Use recommended nozzle pressure to produce a medium to large droplet size.
- If flat fan nozzles are to be used the addition of LI700 may help minimize production of fine droplets.
- Apply under good conditions (not too windy or dead calm).

< Least Nozzle Drift Potential Most >				
Air Induction	80° Flat Fan	110° Flat Fan	XR Flat Fan	Hollow Cone

**Rainfall and Irrigation: DO NOT** apply within 1 hour of rainfall or Irrigation.

#### SPRAYER CLEAN OUT

**Hammer® Force is a very sticky product.** After spraying Hammer® Force and before using the sprayer in sensitive crops such as brassicas, legumes etc. the sprayer must be thoroughly cleaned using the following procedure. (In addition, users must take appropriate steps to ensure proper equipment clean out for any other products mixed with Hammer® Force as explained on the other product labels).

Drain sprayer tank, hoses, and spray boom and thoroughly rinse the inside of the sprayer tank free of visible sediment and residues with clean water flush through sprayer hoses, boom and nozzles. Remove and clean all filters and nozzle strainers of any sediment and residues. Pay particular attention to dead spots in the system eg. boom ends and in the tank. Fill the tank with clean water and add **ALL CLEAR\* Spray Tank Decontaminator** at the recommended rate **drain tank completely** then refill the tank to capacity with clean water and operate the sprayer for a minimum of 15 minutes to flush hoses, boom and nozzles then drain tank. Be aware of the environmental warnings.

#### STORAGE

Store in a cool dry place avoiding temperatures above 35°C.

#### SAFETY DATA SHEET

If additional hazard or safety information is required, refer to the Safety Data Sheet. For a copy visit our website at [www.fmccrop.nz](http://www.fmccrop.nz)

#### NOTICE TO BUYER

FMC warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use of application, all of which are beyond the control of FMC. To the extent permitted at law FMC shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer.

TO THE EXTENT PERMITTED AT LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE

#### WEEDS SUSCEPTIBILITY

Hammer® Force is very effective on certain weeds e.g. Speedwells, Cornbind, Cleavers and will enhance control of many broadleaved weeds when applied in partnership with other herbicides, particularly MCPA amine, sulphonyl ureas (e.g. Glean®), mecoprop (e.g. Duplosan® KV) and Trimec®.

Weed	Enhanced control with Hammer® Force at 70 mL/ha plus tank companion at label rate
Black nightshade	MCPA amine, Trimec*, Jaguar*
Cleavers#	Trimec*
Cornbind#	MCPA amine, Trimec*, chlorsulfuron, diflufenican, mecoprop, tribenuron methyl
Dandelions	MCPA amine, chlorsulfuron, mecoprop, Tropicox*
Field madder	Jaguar*, Trimec*
Fat hen	MCPA amine, Trimec*, chlorsulfuron, diflufenican, mecoprop, tribenuron methyl
Field pansy	diflufenican, Jaguar*
Groundsel	Jaguar*
Fumitory	Trimec*, diflufenican
Hawksbeard	MCPA amine, chlorsulfuron
Mayweeds	MCPA amine, Trimec*, chlorsulfuron, Tropicox*
Rayless chamomile	MCPA amine, Trimec*, chlorsulfuron
Redroot	MCPA amine, Trimec*, chlorsulfuron, diflufenican
Scarlet pimpernel	MCPA amine, chlorsulfuron
Scotch thistle	MCPA amine, Trimec*, Tropicox*
Shepherds purse	MCPA amine, Trimec*, chlorsulfuron, diflufenican, mecoprop, tribenuron methyl, Jaguar*
Speedwell#	Trimec*, Jaguar*
Spurrey	Trimec*, chlorsulfuron, diflufenican, mecoprop, tribenuron methyl
Twin cress	Trimec*, chlorsulfuron, diflufenican, mecoprop
Vetch#	chlorsulfuron, mecoprop
Willow weed	MCPA amine, Trimec*, chlorsulfuron, diflufenican, mecoprop, tribenuron methyl
Wild turnip	MCPA amine, Trimec*, mecoprop, Tropicox*
Wire weed	Trimec*

# Susceptible to Hammer® Force at 70 mL/ha alone

## DIRECTIONS FOR USE

### IMPORTANT

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

Toxic weeds may become more palatable after spraying with partner products and Hammer® Force may concentrate this effect.

Crop / Situation	Rate	Comments
Grass seed crops	Apply 70 mL/ ha in mixture with the standard rate of the companion herbicide (chart below)	Tank mix with herbicides with approved label claim for use in grass seed crops. Follow the recommendations for the companion herbicide. Refer to the Compatibility section of this label.
Wheat and Barley	Apply 70 mL/ ha in mixture with the standard rate of the companion herbicide (chart below)	Tank mix with herbicides with approved label claim for use in cereals. Follow the recommendations for the companion herbicide. Refer to the Compatibility section of this label.
Weed control for ground preparation pre-planting of crops and pasture. (DO NOT apply after seeds have been sown)	<p><b>Broadcast Application:</b> Apply 50 – 100 mL/ ha in mixture with the recommended label rates of Roundup*, Buster*, Touchdown*, Preeglone* or other products based on amitrole or glyphosate.</p> <p><b>Spot Spraying:</b> Apply 10 mL/100 L plus the recommended label rate for spot spraying of the companion herbicide.</p> <p>LI 700* may be added at 250 mL/100 L to aid with drift control</p>	The addition of Hammer® Force to other herbicides will increase the speed at which treated broadleaved weeds develop visible symptoms and may improve final control of broadleaved weeds including certain hard-to-kill weeds, e.g. mallows.
Post cropping clean up sprays		Use the lower rates on younger weeds or weeds growing under good conditions. Use the higher rates on older weeds or weeds growing under less optimum conditions.
Weed control around yards, roadways etc.		The lower rate may only provide suppression of some broadleaf weeds– older or stressed weeds may not be adequately controlled.
General weed control in industrial and commercial situations		Application to hardened weeds or drought stressed weeds, especially under summer conditions, may cause localised injury only to weed foliage which may not enhance final weed control. Mallow is especially prone to drought stress and may either not show symptoms typical of Hammer® Force or may regrow following treatment even if plants did not appear stressed at the time of application. Apply only as a tank mix with recommended rates of knockdown herbicides. Refer to the appropriate label for weed sizes and follow all label directions. When using Hammer® Force as a spot spray, apply in sufficient water to thoroughly wet all weed foliage to the point of run-off.
Seed potato haulm desiccation	250 mL/ ha plus 1 litre PEPTOIL* / ha in sufficient water to achieve complete foliage and stem coverage.  The addition of ACTIWETT* non-ionic surfactant at 25 mL/100L of spray mix is recommended.	Hammer® Force is most active on the stems of Potatoes but may be applied to foliage of Potatoes in the later stages of senescence to provide desiccation of potato foliage and vines. A second application at 7 days may be required on vigorous varieties e.g. Ilam Hardy.  If the crop is in the active vegetative growth stage when desiccation is initiated first destroy the foliage mechanically or with a knock down desiccant such as Reglone*. Apply Hammer® Force 7 days later ensuring thorough coverage of the stems. A second application at 7 – 14 days may be required on vigorous varieties e.g. Ilam Hardy.

### WITHHOLDING PERIODS

**SEED POTATOES 14 DAYS.**

**DO NOT SPRAY ON CROPS WITH EXPOSED TUBERS.**

**GRAZING WITHHOLDING PERIOD: NOT REQUIRED. HOWEVER, GRAZING TOO EARLY AFTER APPLICATION MAY RESULT IN REDUCED WEED CONTROL. OBSERVE THE RECOMMENDATIONS AND WITHHOLDING PERIODS OF THE PARTNER HERBICIDE.**

**It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.**

## DISCLAIMER

Hammer® Force is rapidly absorbed through the foliage of plants. Within a few hours following application, the foliage of susceptible weeds show signs of desiccation, and in subsequent days necrosis and death of the plant. Due to environmental conditions and certain spray tank additives, some herbicidal symptoms may appear on the crop in the form of leaf spotting. However, the crop recovers quickly, usually within two to three weeks of treatment.

Extremes in environmental conditions eg. temperature and moisture, soil conditions and/or cultural practices may affect the activity of Hammer® Force. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicidal symptoms is delayed, and weeds hardened off by drought are less susceptible to Hammer® Force.

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Formulated for and distributed by:

FMC New Zealand Limited  
6 Clayton Street  
Newmarket  
Auckland 1023  
Freephone: 0800 65 80 80  
[www.fmccrop.nz](http://www.fmccrop.nz)

New Zealand Emergency Telephone  
Transport Emergency: 0800 387 668  
24 hr Emergency Medical Information: 0800 111 174

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