

Double Nickel® 55

Reg. No. L10053, Act No. 36 of 1947

GROUP BM02 FUNGICIDE READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN & ANIMALS

Double Nickel® 55 is a preventative biofungicide for the suppression of fungal plant diseases on crops as specified.



HAZARD SYMBOL	GHS HAZARD STATEMENTS	GHS PRECAUTIONARY STATEMENTS
	CAUSES SERIOUS EYE IRRITATION	<ul style="list-style-type: none">• Wear protective gloves/protective clothing/eye protection.• In case of inadequate ventilation, wear respiratory protection.• Avoid breathing dust, mist or spray.• Wash hands and face thoroughly after handling. Do not touch eyes.

Active Ingredient: *Bacillus amyloliquefaciens* subsp. *plantarum* D747 (5×10¹⁰ CFU per gram).
Double Nickel® is a Registered Trademark of Certis USA, L.L.C.

BIO DISEASE MANAGEMENT

Registration holder: **Andermatt Madumbi (Pty) Ltd.**
Unit 19 Midway Square, 1 Prospect Place, Howick, 3290, KwaZulu-Natal, South Africa.
Tel: +27 (0) 33 342 3984 (09:00 to 16:00)
Email address (Technical): support@andermatt.co.za
Emergency Number: GPIC: +27 (0) 82 446 8946 (24 H)
In case of poisoning, call the Poison Information Helpline: +27 861 555 777
www.andermatt.co.za

Country of Origin: USA

See pack for details

Net Mass: 30 Kg

Batch No.:
Date of Manufacture:
Expiry Date: 24 months from date of manufacture.
UN No.: Not relevant
Pack Size:

WARNINGS
GHS Hazard Statement: Causes serious eye irritation.

PRECAUTIONS	
GHS Precautionary Statements	
Wear protective gloves/protective clothing/eye protection.	IF IN THE EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.
In case of inadequate ventilation, wear respiratory protection.	
Do not eat, drink, or smoke when using this product.	
Wash hands and face thoroughly after handling. Do not touch eyes.	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical help. Take off contaminated clothing and wash it before reuse.
Avoid breathing dust, mist or spray.	Contaminated work clothing should not be allowed out of the workplace.
	Dispose of the product in a responsible manner.

- Do not leave the product or mixture standing in the sun.
- Prevent contamination of food, foodstuffs, drinking water and eating utensils.
- Clean applicator before and after use. Do not contaminate other crops, grazing, treatment with water used to wash the equipment.
- Store in original container in a dry area, away from food and feed stuffs.
- Store in a cool, dry place.
- Use before expiry date indicated on label.
- Triple rinse empty container: Shake all the fungicide formulation out of the container into the spray or mixing tank. Hold container over the spray or mixing tank and rinse the container with running water for thirty seconds. Pour the rinse water into the mixing tank. Repeat the rinsing twice. Puncture the triple-rinsed container and dispose via an Approved Collector or Recycler. Do not bury, burn or donate the container to any other parties who may use it as a receptacle for foodstuffs.

RELEVANT SUBSTANCES

Ingredient	CAS Number	%
<i>Bacillus amyloliquefaciens</i> subsp. <i>plantarum</i> D747	68038-60-8	25 (> 5×10 ¹² CFU/100 g)
Solid formulators	Confidential	75

NOTE: The other ingredients not included above, do not cause or contribute towards the correct GHS classification of Double Nickel® 55 and is therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

FIRST AID

Eye contact: Most important acute symptoms/effects: eye irritation, redness, and excessive tears.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists, get medical help.

Skin contact: Most important acute symptoms/effects: skin irritation, redness may occur.
IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical help.

Inhalation: Most important acute symptoms/effects: irritation of the upper airway, coughing may occur.

Ingestion: Most important acute symptoms/effects: no symptoms or effects are known.
IF SWALLOWED: Rinse cautiously with water for several minutes. Get medical help.

Most important delayed symptoms/effects after exposure:
Microorganisms may have the potential to provoke sensitising reactions, especially if there is prolonged or frequently repeated skin contact.

RESISTANCE WARNING STATEMENT

Double Nickel® 55 is a Group Code BM02 Fungicide.

Currently there is no known resistance to Double Nickel® 55 or the biological active. Due to the nature of the mode of action, resistance is not expected to be likely. It is still advisable to use good agricultural practices of resistance management.

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same Fungicide Group Code.
- Alternate or tank mix with products from different Fungicide Group Codes.
- Refer to individual product labels when alternating products, or when using tank mixtures with products in Fungicide Group Codes 7, 27, 28, 29, 30 and M.
- Integrate other control methods (chemical, cultural, biological) into disease control programmes.

MODE OF ACTION

Double Nickel® 55 produces a number of antimicrobial metabolites such as Iturin and Surfactin which inhibit growth of fungi and bacteria.

Double Nickel® 55 colonises plant surfaces, occupying space and using up nutrient sources at potential infection sites thus making it difficult for pathogens to become established.

Induced Systematic Resistance (ISR) is a state of enhanced immunity to infection demonstrated by plants following an injury or presence of inducer organisms like *B. amyloliquefaciens*. Double Nickel® 55 can help activate a plant's natural defence mechanisms through ISR.

USE RESTRICTIONS

NOTICE TO USER

This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under the Act to use this agricultural remedy for any purpose in a manner contrary to the directions on the label.

WITHHOLDING PERIOD

There is no withholding period after treatment and crops can be harvested or used at any stage after treatment.

Disclaimer: Although this remedy has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label as well as by the methods, time and accuracy of application. The registration holder, furthermore, does not accept responsibility for damage to crops vegetation, the environment or harm to man or animals, the lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of registration. Please consult the supplier in the event of any uncertainty.

DIRECTIONS FOR USE - Use only as directed

- Fill spray tank with half the required water volume and check neutral pH.
- Use an appropriate buffering agent if necessary.
- Start agitator mechanism. Maintain agitation during application.
- Add the correct amount of product to the water in the tank at the recommended dose rate.
- Top up spray tank and do a final check on the pH.
- If other products are to be added to the tank mix, always add them first.
- Mixed volumes must be applied as soon as possible and not left overnight or standing in the sun.

REGISTERED USAGES

Crop/Disease	Dosage Rates	Recommendations
CUCURBITS Powdery Mildew (<i>Podosphaera fusca</i>)	1 - 2 kg/ha (Water volumes 200 - 1000 L)	<ul style="list-style-type: none">• Apply full cover spray but not runoff.• Start application at first sign of disease or during periods favourable to disease outbreak.• Repeat at 7-day intervals until disease is under control.• At least 3 applications are recommended.
GRAPES (Table and Wine) Downy Mildew (<i>Plasmopara viticola</i>) Powdery Mildew (<i>Erysiphe necator</i>) Botrytis (<i>Botrytis cinerea</i>)	1 - 2 kg/ha (Water volumes 200 - 1000 L)	<ul style="list-style-type: none">• Apply full cover spray but not to runoff.• Start preventative applications with onset of flowering.• Repeat every 7-10 days until harvest.
MACADAMIA NUTS Flower blight (<i>Cladosporium cladosporioides</i>)	1 kg/ha	<p>Apply at 14-day intervals.</p> <p>1st Application: Apply at flower initiation or when the first individual flowers are visible (still closed)</p> <p>2nd Application: Apply when first flower petals are visible (petalled forms)</p> <p>3rd Application: Apply when first flowers open (sporadically)</p> <p>4th Application: Apply at 50 - 100 % full flowers open, first petals may have fallen until disease is under control.</p>
POME FRUIT Powdery Mildew (<i>Podosphaera leucotricha</i>)	0.5 - 1 kg/ha	<ul style="list-style-type: none">• Apply preventatively when weather conditions are favourable for the development of powdery mildew, before visible symptoms appear.• Apply as full cover spray but not to point of run off.• Use as part of an integrated disease management strategy in combination with other management practices.• Repeat applications every 14 days as required.• Do not exceed more than four (4) consecutive applications.• Use the higher dosage rate with increased disease pressure, foliar development and canopy densities.• Curative use after disease onset may result in limited control.
BERRIES AND SMALL FRUIT (strawberries, blackberries, raspberries, blueberries, currants, elderberries)	1 kg/ha (Water volume 150 - 300 L)	<ul style="list-style-type: none">• Apply as a full cover spray but not to run off.• Start preventative applications with onset of flowering, repeat every 7 - 10 days until harvest.
STONE FRUIT (apricots, cherries (sweet and sour), nectarines, peaches, plums and prunes)	1 kg/ha (Water volume 700 - 1000 L)	<ul style="list-style-type: none">• Apply as a full cover spray but not to run off.• Start preventative applications with onset of ripening (3 - 4 weeks before harvest), repeat every 7 - 10 days until harvest, complete at least 3 applications.
CITRUS Botrytis (<i>Botrytis cinerea</i>)	1 kg/ha (Water volume 4000 - 6000 L)	<ul style="list-style-type: none">• Apply as full cover spray but not to run off• Start application at first sign of disease or during periods favourable to disease outbreak• Focus applications at flowering, which are most vulnerable just before opening.• Repeat at 7-day intervals until disease is under control. Four to six applications recommended