

# Double Nickel 55

## MATERIAL SAFETY DATA SHEET

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### 1. PRODUCT AND COMPANY IDENTIFICATION

**Distributed and Registered by:** Andermatt Madumbi  
Postnet Suite 20, Private Bag X6011  
Hilton, 3245  
Emergency Telephone no.:27 (0)33 342 3984

**Manufactured by:** Certis USA, L.L.C.  
9145 Guilford Rd, Suite 175  
Columbia, MD 21046

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Product description:** Water dispersible granular biofungicide containing spores of the bacteria *Bacillus amyloliquefaciens* for the suppression of powdery and downy mildew on crops as specified. No hazardous components.

**Dangerous ingredients:** None

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### 3. HAZARDS IDENTIFICATION

**Important hazards:** None  
**Hazard statements:** Caution

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### 4. FIRST AID MEASURES

**Symptoms and effects:** No typical symptoms and effects known  
**General:** In all cases of doubt, or when symptoms persist, seek medical attention.  
**Inhalation:** Move person to fresh air. If person is not breathing seek immediate medical attention and provide artificial respiration (mouth-to-mouth) if possible. Call a poison centre or doctor for further advice.

**Skin:** Remove contaminated clothing. Rinse skin with plenty of water for 15-20 minutes. Seek medical advice if irritation develops. Launder clothes before reuse.

**Eye:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical advice if irritation develops.

**Ingestion:** No typical symptoms and affects known.  
**Advice to physician:** Symptomatic treatment is advised.

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### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water mist, alcohol resistant foam, dry powder, carbon dioxide.  
**Unsuitable media:** None.  
**Special exposure hazards** None known.  
**Hazardous decomposition/combustion products:** None  
**Protective equipment:** No specific recommendations  
**Other information:** None

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** The usual precautions for handling chemicals should be observed.  
**Environmental precautions:** No specific recommendations  
**Methods for cleaning up:** Collect as much as possible; in a clean container for (preferable) reuse or disposal. Use absorbent material to minimize runoff of mixed product.

Other information for personal protection see Section 8.

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## 7. HANDLING AND STORAGE

<b>Handling:</b>	The usual precautions for handling-chemicals should be observed.
<b>Fire and explosion:</b>	No specific recommendations. Avoid contact with oxidizing agents.
<b>Storage requirements:</b>	Store in a dry area inaccessible to children. Store in original container and keep closed when not in use.
<b>Other information:</b>	To maintain quality store in a cool, dry place. Avoid elevated temperatures.

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## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

<b>Engineering controls:</b>	The usual precautionary measures for handling chemicals should be observed.
<b>Exposure limits:</b>	No exposure limit has been established
<b>Personal protection:</b>	
<b>Respiratory protections:</b>	Wear an approved respirator with N, P, R or HE filter.
<b>Protective clothing:</b>	Long sleeved shirt and long pants, waterproof gloves, shoes and socks.
<b>Eye protection:</b>	Use goggles. Avoid contact with eyes.
<b>Hygienic practices:</b>	Remove contaminated clothing/PPE immediately after handling product. Wash the outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.
<b>Other information:</b>	The usual precautions for handling chemicals should be observed. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Powder
<b>Colour:</b>	Brown
<b>Boiling point/range:</b>	Not relevant
<b>Flash point:</b>	392°C
<b>Flammability:</b>	Not highly flammable
<b>Explosive properties:</b>	Not explosive
<b>Explosion limits:</b>	Not explosive
<b>Oxidizing properties:</b>	Not oxidising
<b>Vapour pressure:</b>	N/A
<b>Density:</b>	0.43 g/mL
<b>Bulk density:</b>	Not relevant
<b>Solubility in water:</b>	Water miscible
<b>Solubility in other solvents:</b>	Not determined
<b>pH value:</b>	8.6
<b>Partition coefficient:</b>	
<b>n-Octanol/water:</b>	Not determined
<b>Relative vapour density (air=1):</b>	Not determined

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## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Conditions to avoid:</b>	None known
<b>Materials to avoid:</b>	None known
<b>Hazardous decomposition products:</b>	None known

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## 11. TOXICOLOGICAL INFORMATION

<b>Name:</b>	DOUBLE NICKLE 55
<b>Acute toxicity:</b>	
<b>LD<sub>50</sub> (oral)</b>	> 5000 mg/ka bw. Rat
<b>LD<sub>50</sub> (dermal)</b>	> 5050 mg/kg bw.
<b>LD<sub>50</sub> (inhalation)</b>	> 2.18 mg/L
<b>Irritation</b>	
<b>Skin:</b>	Non-irritating
<b>Eye:</b>	Mildly irritating

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## 12. ECOLOGICAL INFORMATION

<b>Name:</b>	Double Nickel 55
<b>Ecotoxicity</b>	
<b>Bird:</b>	LD <sub>50</sub> > 2250 mg/kg
<b>Fish:</b>	EC <sub>50</sub> > 2.3 x 10 <sup>10</sup> mg/kg
<b>Algae:</b>	LC <sub>50</sub> > 144 mg/L
<b>Fate</b>	
<b>Degradation:</b>	Biotic Biodegradable

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## 13. DISPOSAL CONSIDERATIONS

<b>Product:</b>	According to local regulations (most probably controlled incineration).
<b>Contaminated packaging:</b>	According to local regulations

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## 14. TRANSPORT INFORMATION

There are no transport regulations or restrictions for this product.

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## 15. REGULATORY INFORMATION

Labelling according to EC directives

<b>Symbols (s):</b>	none
<b>Risk phrase(s):</b>	none
<b>Safety phrase(s):</b>	none

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## 16. OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

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