

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

**Product name:** Double Nickel 55  
**Registration No:** 70051-108  
**Product Type:** Wettable Granule  
**Active Ingredient:** *Bacillus amyloliquefaciens* strain D747  
**CAS No.:** 68038-60-8

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses:** Biofungicide/bactericide  
**Uses advised against:** Not labeled uses

**1.3. Details of the supplier of the safety data sheet**

**Name:** Certis U.S.A., LLC  
**Address:** 9145 Guilford Road, Suite 175  
Columbia, Maryland 21046  
U.S.A.  
**Phone Number:** +01 (800) 255-3924  
**Website:** <http://www.certisusa.com>

**1.4. Emergency telephone number**

**Emergency number:** +1 800 255-3924

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Hazard Classification:** Not classified by OSHA  
**EPA Signal Word:** Caution (see Section 15)  
**Hazard Statements:** None  
**Pictogram:** None  
**Precautionary Statements:** Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes and clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco and using the toilet.

**2.2 Other Hazards:** Do not apply directly to water or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift or runoff from treated areas.

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Active Ingredient	CAS No.	Wt. %
<i>B. amyloliquefaciens</i>	Not applicable	25

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Generic measures**

**Eye Contact:** Immediately flush with water holding eye open for 15-20 minutes. Remove contact lenses after 5 minutes if present and continue rinsing eye. Seek medical attention if irritation persists.

**Skin Contact:** Remove contaminated clothing and wash affected area with plenty of soap and water. If irritation persists call poison control or doctor for treatment advice

**Inhalation:** Remove individual to fresh air. If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call poison control center or doctor for further advice.

Have the product label with you when calling a poison control center or doctor.

**4.2. Most important symptoms and effects, both acute and delayed**

May cause eye irritation

**4.3. Indication of any immediate medical attention and special treatment needed**

None specified

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable Extinguishing Media:** All methods

**Unsuitable Extinguishing Media:** None known

**5.2. Special hazards arising from the substance or mixture**

**Hazardous combustion products:** None known

**5.3. Advice for firefighters**

**Protection of Firefighters:** None known

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel:** To avoid exposure wear long sleeved shirt, long pants, waterproof gloves, shoes and socks.

Applicators must wear a dust/mist filtering respirator meeting at least NIOSH standards N-95, R-95 or P-95.

**For emergency responders:** Same as above

**6.2. Environmental precautions:**

Do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not apply when conditions favor drift or runoff from treated areas.

**6.3. Methods and material for containment and cleaning up**

**Methods for Containment:** Use absorbent material to minimize runoff of spilled product.

**Methods for Clean-Up:** Unused material should be disposed of in an approved waste facility following all federal, state and local regulations.

**Other Information:** If a significant spill occurs, contact CHEM-TEL (800) 255 3924.

**6.4. Reference to other sections**

See Section 8 for occupational exposure limits and risk management measures. Refer to Section 13 for disposal considerations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

See Section 8 for occupational exposure limits, risk management measures and personal protection equipment. Refer to Section 13 for disposal considerations.

**7.2. Conditions for safe storage, including any incompatibilities**

Do not contaminate water, food or feed during disposal. Store this product in a dry area inaccessible to children and pets. Store in original container only. Keep container closed when not in use.

**7.3. Specific end use(s)**

Use according to label

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**OSHA Permissible Exposure Limits (PELs):** None determined

**ACGIH Threshold Limit Values:** None determined

**Other Exposure Limits:** None determined

**8.2. Exposure controls**

**Engineering Controls:** None

**Personal Protective Equipment**

**Eye/Face Protection:** None specified

**Skin Protection:** Long-sleeved shirt and long pants  
Shoes and socks

**Hand Protection:** Waterproof gloves

**Body Protection:** Long-sleeved shirt and long pants

**Respiratory Protection:** Mixers and loaders must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Repeated exposure to high concentration of microbial proteins can cause allergic sensitization.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**Appearance:** Brown granules  
**Odour:** Earthy  
**Odour Threshold:** Not available  
**pH 1% dilution:** 7.0-9.0  
**Melting Point / Freezing Point:** Not applicable  
**Initial Boiling Point:** Not applicable  
**Boiling Range:** Not applicable  
**Flash Point:** Not available  
**Evaporation Rate:** Not applicable  
**Flammability (solid, gas):** Not available  
**Lower & Upper Flammability Limits:** Not available  
**Vapour Pressure:** Not available  
**Vapour Density:** Not available  
**Density:** 0.74-0.81 g/cc (CIPAC MT 186)  
**Solubility:** Not available  
**Partition Coefficient (n-octanol/water):** Not available  
**Auto-ignition Temperature:** 376°C (@ atmospheric pressure)  
**Decomposition Temperature:** Not available

Viscosity: Not applicable  
Other relevant properties: None

**9.2. Other information**

Not available.

**SECTION 10: Stability and reactivity**

<b>10.1. Reactivity</b>	No known hazardous reactions when handled and stored according to stated provisions.
<b>10.2. Chemical stability</b>	Stable when handled and stored according to stated provisions.
<b>10.3. Possibility of hazardous reactions</b>	No known hazardous reactions.
<b>10.4. Conditions to avoid</b>	No known conditions to avoid when handled and stored according to stated provisions.
<b>10.5. Incompatible materials</b>	No known incompatible materials.
<b>10.6. Hazardous decomposition products</b>	No known hazardous decomposition products at temperatures above 250°C.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute Toxicity**

**Toxicological information on the substance or mixture:**

<b>LD<sub>50</sub> (oral)</b>	LD <sub>50</sub> > 5000 mg/kg body weight rat
<b>LD<sub>50</sub> (dermal)</b>	LD <sub>50</sub> > 5050 mg/kg body weight rat
<b>LC<sub>50</sub> (inhalation)</b>	LC <sub>50</sub> > 2.18 mg/L

<b>Skin corrosion / irritation:</b>	Non-irritating.
<b>Eye irritation:</b>	Mildly irritating.
<b>Respiratory or skin sensitization:</b>	Not sensitizing to guinea pigs.

**Other information on adverse health effects:**

**Carcinogenicity**

<b>NTP Listed:</b>	Not applicable.
<b>IARC Listed:</b>	Not applicable.
<b>OSHA:</b>	Not applicable.

**11.2 Reference to other sections**

See Section 4 for symptoms and acute and delayed effects.

**SECTION 12: Ecological information**

**12.1. Toxicity**

Test species	Test method	Test substance	LC <sub>50</sub>
Northern Bobwhite	Acute oral toxicity	<i>B. amyloliquefaciens</i> strain D747	LD <sub>50</sub> > 2250 mg/kg body weight
<i>Oncorhynchus mykiss</i>	30 days	<i>B. amyloliquefaciens</i> strain D747	LC <sub>50</sub> > 8.1 x 10 <sup>10</sup> CFU/L
<i>Daphnia magna</i>	21 days	<i>B. amyloliquefaciens</i> strain D747	EC <sub>50</sub> > 2.3 x 10 <sup>10</sup> CFU/L
<i>Desmodemus subspicatus</i>	72 hours	Double Nickel 55	EC <sub>50</sub> > 2.3 x 10 <sup>10</sup> CFU/L
<i>Apis mellifera</i> L	48-h, dose response test	Double Nickel 55	LD <sub>50</sub> Oral > 446.63 µg/bee LD <sub>50</sub> Contact > 320 µg/bee

**12.2. Persistence and degradability**

The active substance *B. amyloliquefaciens* D747 populations spreading to the environment during or after field application will rapidly decline to naturally occurring background levels.

**12.3. Bioaccumulative potential**

The active substance *B. amyloliquefaciens* D747 does not multiply and accumulate in animals and humans.

**12.4. Mobility in soil**

The active substance *B. amyloliquefaciens* D747 spores readily adsorb to the clay fractions in soils and show no evidence of leaching. Therefore the risk of ground water contamination is considered negligible.

**12.5. Other adverse effects**

No data available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal Instructions:** Do not contaminate water, food, or feed by storage and disposal.

*Pesticide Storage:* Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

*Pesticide Disposal:* Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.

*Container Handling:* Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14: Transportation information**

**14.1. UN number**

Not regulated.

**14.3. Transport hazard class(es)**

Not regulated.

**14.5. Environmental hazards**

Not regulated.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not regulated.

**14.2. UN proper shipping name**

Not regulated.

**14.4. Packing group**

Not regulated.

**14.6. Special precautions for user**

Not regulated.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA: This product is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticidal chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION, KEEP OUT OF REACH OF CHILDREN

Causes moderate eye irritation.

Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

<u>OSHA:</u>	N/A
<u>TSCA Status:</u>	Exempt
<u>CERCLA Reportable Quantity:</u>	N/A
<u>SARA Title III:</u>	
Section 302:	N/A
Section 311/312:	N/A
Section 313:	N/A
<u>RCRA Status:</u>	N/A

**SECTION 16: Other information**

**Disclaimer:**

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

**SDS Authoring Information:**

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**SDS Prepared by:** Certis U.S.A. L.L.C.