

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

**1.1. Product identifier**

**Product name:** Neemix 4.5  
**Registration No:** 70051-9  
**Product Type:** Botanical Insecticide  
**Active Ingredient:** Azadirachtin  
**CAS No.:** Not applicable

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

**Identified uses:** Insecticide  
**Uses advised against:** Any use not specified on the label

**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:** Flammable Liquid Category 3  
**Signal Word:** WARNING  
**Hazard Statements:** Flammable liquid and vapor

**Pictogram:**



**Precautionary Statements:**

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces.- No smoking  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wear protective gloves, eye protection, face protection.

- Response:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
In case of fire, use dry chemical, carbon dioxide, alcohol or polymer foam to extinguish.
- Storage:** Store in a well ventilated place
- Disposal:** Dispose of contents/container in accordance with all local/regional/national regulations.
- 2.2 Other Hazards:** None specified

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

**3.1 Substance**

Component	CAS Number	% weight
Azadirachtin	11141-17-6, 95507-03-2	4.5
Isopropanol	67-63-0	20-40

**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:** Move to fresh air. If still feeling unwell, with label in hand call poison control or doctor for treatment advice
- Ingestion:** If ingested, with label in hand call poison control or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person.

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

Eye, skin and throat 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:** Dry chemical, carbon dioxide, alcohol or polymer foam

**Unsuitable Extinguishing Media:** None specified

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

Flammable liquid and vapor.

**Hazardous combustion products:** None known

### 5.3. Advice for firefighters

**Protection of Firefighters:** None specified

## SECTION 6: Accidental release measures

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

**For non-emergency personnel:** Goggles or safety glasses are suggested  
Long sleeved shirt, long pants,  
chemical resistant gloves such as barrier laminate, butyl rubber,  
nitrile rubber, neoprene rubber, or polyvinyl chloride,  
shoes and socks

**For emergency responders:** Same as above

### 6.2. Environmental precautions

This product is hazardous to fish and aquatic vertebrates. For terrestrial uses: 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 water or rinse water.

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

**Methods for Containment:** Do not use in a manner that would allow drift or rinse water from equipment cleaning to contaminate water sources or supplies.

**Methods for Clean-Up:** Wear SCBA, rubber boots, and heavy rubber glove. Shut off sources of ignition. Dike around spill, adsorb on sand or similar, and place in closed containers for disposal. Ventilate area and wash spill site after material pick-up. Avoid run-off into storm sewers and ditches, which lead to waterways.

**Other Information:** None

**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**

Wear long pants, long sleeved shirt, chemical resistant gloves shoes plus socks, protective eyewear when handling this product.

Remove clothing immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. Wash clothes separately before reuse.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Wash PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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

Combustible, do not store near heat or flame

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

Any labeled use

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

**8.1. Control parameters**

OSHA Permissible Exposure Limits (PELs): Not determined

ACGIH Threshold Limit Values: Not determined

Other Exposure Limits: Not determined

**8.2. Exposure controls**

**Engineering Controls:** Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**Personal Protective Equipment**

**Eye/Face Protection:** Safety glasses or goggles  
**Skin Protection** Long sleeved shirt and long pants  
**Hand Protection:** Chemical resistant gloves  
**Body Protection:** Shoes plus socks

<b>Respiratory Protection:</b>	None specified
<b>Thermal Hazards:</b>	None known
<b>General Hygiene Considerations:</b>	After handling wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet
<b>Environmental exposure controls:</b>	Wear SCBA, rubber boots, and heavy rubber glove. Shut off sources of ignition. Dike around spill, adsorb on sand or similar, and place in closed containers for disposal. Ventilate area and wash spill site after material pick-up. Avoid run-off into storm sewers and ditches, which lead to waterways.

## SECTION 9: Physical and chemical properties

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

<b>Appearance:</b>	Dark brown liquid
<b>Odour:</b>	Disinfectant
<b>Odour Threshold:</b>	Not determined
<b>pH:</b>	5.0-6.0
<b>Melting Point / Freezing Point:</b>	Not determined
<b>Initial Boiling Point:</b>	Not determined
<b>Boiling Range:</b>	Not determined
<b>Flash Point:</b>	113°F 45°C
<b>Evaporation Rate:</b>	Not determined
<b>Flammability (solid, gas):</b>	Not applicable
<b>Lower &amp; Upper Flammability Limits:</b>	Not determined
<b>Vapour Pressure:</b>	Not determined
<b>Vapour Density:</b>	Not determined
<b>% Volatile by weight:</b>	30%
<b>Density:</b>	0.903-.998 g/ml
<b>Solubility:</b>	Not determined
<b>Partition Coefficient (n-octanol/water):</b>	Not determined
<b>Auto-ignition Temperature:</b>	Not determined
<b>Decomposition Temperature:</b>	Not determined
<b>Viscosity:</b>	Not determined
<b>Other relevant properties:</b>	None

### 9.2. Other information

Not available.

**SECTION 10: Stability and reactivity**

<b>10.1. Reactivity</b>	Not determined
<b>10.2. Chemical stability</b>	Stable
<b>10.3. Possibility of hazardous reactions</b>	None known
<b>10.4. Conditions to avoid</b>	Keep away from heat, sparks, or open flame
<b>10.5. Incompatible materials</b>	Acids, acid chlorides, oxidizing agents, reducing metals, alkali metals
<b>10.6. Hazardous decomposition products</b>	None known

**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, rat
<b>LD<sub>50</sub> (dermal)</b>	LD <sub>50</sub> > 2000 mg/kg, rat
<b>LC<sub>50</sub> (inhalation)</b>	LC <sub>50</sub> > 2.0 mg/L
<b>Skin corrosion / irritation:</b>	Slightly irritating, Toxicity Category IV
<b>Eye irritation:</b>	Minimally irritating, New Zealand white rabbits
<b>Respiratory or skin sensitization:</b>	Not considered to be a dermal sensitizer in 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	Short term oral tox	Azadirachtin Technical	LC <sub>50</sub> > 2000 mg/kg body weight
<i>Oncorhynchus mykiss</i>	96-hour flow through	Azadirachtin Technical	LC <sub>50</sub> = 0.48 mg/L
<i>Daphnia magna</i>	48-hour flow through	Azadirachtin Technical	LC <sub>50</sub> = 10 mg/L
<i>Apis mellifera</i> L	Acute contact tox	Azadirachtin Technical	LD <sub>50</sub> > 25 µg/bee

**12.2. Persistence and degradability**

Azadirachtin exhibits rapid degradation and low persistence in soil.

**12.3 Bioaccumulative Potential**

Azadirachtin is not considered to accumulate in aquatic organisms such as fish.

**12.4. Mobility in soil**

Azadirachtin rapidly degrades in soil.

**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:* Do not store about 100°F or below -20°F for extended periods of time. Keep containers tightly closed when not in use.

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

*Container Handling:* Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

The offer for recycling, if available or puncture and dispose of 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.

**14.2. Proper Shipping Name:**

Ground Mode: Non-bulk package not regulated by DOT; Combustible liquid n.o.s. (isopropanol)  
Vessel and air shipments: Flammable liquid, N.O.S. (isopropanol) , 3, UN1993, PGIII

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

D.O.T.: Not regulated in non-bulk packaging.

**14.4. Packing group**

Not regulated.

**14.5. Environmental hazards**

Not regulated.

**14.6. Special precautions for user**

Not regulated.

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

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

Harmful if swallowed or inhaled.

This product may be hazardous to fish and aquatic invertebrates.

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