



Please read the entire document. This Material Safety Data Sheet contains important environmental, health and toxicology information for your employees, and anyone who will use, transport, store, dispose of or handle this product. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information contained herein must be incorporated in your MSDS.

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** SHUTTLE™ 15 SC MITICIDE  
**PMRA REGISTRATION NUMBER:** 28640  
**SYNONYM(S):** TM-41301, AKD-2023 15% Flowable, KANEMITE™ 15 SC Miticide

<u>COMPANY</u>
Arysta LifeScience North America Corporation 15401 Weston Parkway, Suite 150 Cary, NC 27513

<u>EMERGENCY TELEPHONE NUMBERS</u>	
<b>HEALTH EMERGENCY:</b>	<b>SPILL EMERGENCY:</b>
<b>1-866-303-6952, or 1-651-632-8946</b>	<b>1-800-424-9300, or 1-703-527-3887</b>

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Active Ingredient(s)/ Hazardous Inert Ingredient(s)	CAS #	Exposure Limits*	% Weight	% Volume
Acequinocyl (3-Dodecyl-1,4-dihydro-1,4-dioxo-2-naphthylacetate)	57960-19-7	<b>TWA<sup>a</sup></b> OSHA PEL <sup>b</sup> : None ACGIH TLV <sup>c</sup> : None NIOSH REL <sup>d</sup> : None	15.8	NA

Only the identities of the active ingredient(s) and any hazardous inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

\*Source: *Guide to Occupational Exposure Values 2000*, published by ACGIH

<sup>a</sup>**TWA:** Time-weighted average exposure concentration for a conventional 8-hour (TLV, PEL) or up to a 10-hour (REL) workday and a 40-hour workweek.

<sup>b</sup>**OSHA PEL:** Occupational Safety and Health Administration Permissible Exposure Limits.

<sup>c</sup>**ACGIH TLV:** American Conference of Governmental Industrial Hygienists, Inc., Threshold Limit Values.

<sup>d</sup>**NIOSH REL:** National Institute for Occupational Safety and Health Recommended Exposure Limits.

**SECTION 3: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

**CAUTION:**

- HARMFUL IF INHALED
- MAY CAUSE SLIGHT EYE IRRITATION
- PROLONGED EXPOSURE MAY CAUSE SKIN SENSITIZATION
- KEEP OUT OF REACH OF CHILDREN

**Acute Health Hazards**

**Inhalation:** May be harmful if inhaled. Avoid breathing dust. Remove and wash contaminated clothing before reuse.

**Eyes:** May cause slight eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

**Skin:** May cause slight skin irritation. Avoid contact with skin and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Ingestion:** Not expected to be an ingestion hazard under normal handling operations.

**Chronic Health Hazards (Including Cancer):** No evidence of carcinogenicity from animal studies. Effects to the liver, kidney, and hematology system have been observed following chronic exposure in laboratory animals.

**Reproductive and Developmental Toxicity:** No evidence of reproductive or developmental toxicity.

**SECTION 4: FIRST AID MEASURES**

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

**Eyes:** Hold eye 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. Call a poison control center or doctor for treatment advice.

**Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

## SECTION 5: FIRE FIGHTING MEASURES

<b>Flammable Limits in Air (% by volume):</b>		
	<b>Upper:</b>	NDA
	<b>Lower:</b>	NDA
<b>Flash Point:</b>		NDA
	<b>Method Used:</b>	NDA
<b>Autoignition Temperature:</b>		NDA
<b>LEL/UEL:</b>		NDA
<b>NFPA Hazard Classification:</b>		
	<b>Health:</b>	1
	<b>Flammability:</b>	NDA
	<b>Reactivity:</b>	NDA
	<b>Other:</b>	NDA
<b>Extinguishing Media:</b>		Foam, dry powder, CO <sub>2</sub> extinguisher, or water mist
<b>Special Fire Fighting Procedures:</b>		Avoid inhaling or contact with the substance, any combustion products, or resulting gases. Wear full protective clothing and mask.
<b>Hazardous Combustion Products:</b>		NDA

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### EMERGENCY PHONE NUMBERS

**Exposure Calls (PROSAR): 1-866-303-6952 or 1-651-632-8946 (International)**

**Spill Calls (CHEMTREC): 1-800-424-9300 or 1-703-527-3887**

Isolate and post spill area. Wear prescribed protective clothing and equipment. Keep out unprotected persons and animals. Large spills should be covered to prevent dispersal. Vacuum or shovel wastes into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution and add the solution to the drums of wastes already collected. Spillage or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body. Remove contaminated water for removal or treatment.

## SECTION 7: HANDLING AND STORAGE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read entire label. Use strictly in accordance with label precautionary statements and directions. Store in well ventilated place. Keep container tightly closed. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep out of reach of children.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eye Protection:** Do not get this material in your eyes. The use of chemical safety eyewear is recommended when handling this material.

**Respiratory/Ventilation Requirements:** Make sure that adequate ventilation is available to avoid breathing the spray mist. If needed, use a MSHA/NIOSH approved respirator for pesticides to eliminate inhaling the material.

**Skin Protection:** Avoid skin contact by wearing appropriate protective clothing, gloves and eye/face protection. Remove contaminated clothing and wash before re-wearing.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Light yellowish
<b>Odor:</b>	Slightly aromatic odor
<b>Physical State:</b>	Viscous suspension
<b>pH:</b>	6.5-7.0 (20% in water)
<b>Boiling Point:</b>	NDA
<b>Melting Point:</b>	NA
<b>Freezing Point:</b>	NA
<b>Vapor Pressure:</b>	NDA
<b>Vapor Density:</b>	NDA
<b>Specific Gravity:</b>	1.02-1.05 (20°C)
<b>Evaporation Rate:</b>	NDA
<b>Solubility in Water:</b>	NDA
<b>Percent Solids by Weight:</b>	NDA
<b>Percent Volatile:</b>	NDA
<b>Volatile Organic Compounds (VOC):</b>	NDA
<b>Molecular Weight:</b>	NDA
<b>Viscosity:</b>	NDA

## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions
<b>Hazardous Polymerization:</b>	Will not occur
<b>Flash Point:</b>	NDA
<b>Flammable Point:</b>	NDA
<b>Auto Ignition:</b>	NDA
<b>Incompatibility With Other Materials:</b>	Excessive heat and fire, oxidizers and acids
<b>Hazardous Decomposition Products:</b>	None identified

## SECTION 11: TOXICOLOGICAL INFORMATION

### Acute:

**Eye Irritation:** This product produced slight eye irritation in rabbits (irritation cleared within 48 hours following exposure).

**Skin Irritation:** This product was not irritating to the skin of rabbits following 4-hr exposure.

**Dermal Toxicity:** The dermal LD<sub>50</sub> of this product is > 2,000 mg/kg in male and female rats.

**Oral Toxicity:** The oral LD<sub>50</sub> of this product in rats and mice is > 5,000 mg/kg (male/female).

**Inhalation Toxicity:** The inhalation LC<sub>50</sub> (4-hr) of this product is > 4.56 mg/L in rats (male/female).

**Skin Sensitization:** The test material has been shown to be negative in the modified Buehler test, and mild sensitization in the Magnusson/Kligman maximization test.

**Subchronic Toxicity:** (based upon testing of the active ingredient) Following 13-week dietary exposure to mice (NOEL < 100 ppm), rats (NOEL ≥ 400 ppm), or dogs (NOEL < 40 ppm), at least one of the following adverse effects were observed: decreased body weight, decreased food consumption, hematological disturbance, death, anorexia, urine discoloration, altered activity, diarrhea, fecal discoloration, liver effects, heart effects, kidney lesions, hemorrhage.

**Chronic/Carcinogenicity:** (based upon testing of the active ingredient) Not carcinogenic in rats, mice, or dogs. In general, the clinical signs and adverse effects that occurred in the subchronic tests were also observed during chronic testing.

**Teratology/Developmental Toxicity:** (based upon testing of the active ingredient) Not teratogenic in rabbits or rats. Only at maternally toxic doses was fetotoxicity observed in rabbits ( $\geq 60$  mg/kg/d) and rats ( $\geq 500$  mg/kg/d).

**Reproduction:** (based upon testing of the active ingredient) Not a reproductive toxicant in rat 2-generation study (NOEL > 1,500 ppm).

**Mutagenicity:** (based upon testing of the active ingredient) Negative for bacterial reverse mutation, chromosomal aberration in CHO cells, and mouse micronucleus tests.

## SECTION 12: ECOLOGICAL INFORMATION

### Avian Toxicity (based upon technical material):

Bobwhite quail (*C. virginianus*) Oral LD<sub>50</sub> > 2,000 mg a.i./kg b.w.

### Aquatic Organism Toxicity:

Rainbow trout (*O. mykiss*) 96 hr LC<sub>50</sub> = 65 mg a.i./L  
Water flea (*D. magna*) 46 hr EC<sub>50</sub> = 2.3 µg a.i./L

### Other Non-Target Organism Toxicity:

Earthworm (*E. foetida*) 14 d LC<sub>50</sub> > mg a.i./kg soil  
Honeybee (*A. mellifera* L.) 72 hr contact LD<sub>50</sub> > 350 µg /bee  
Honeybee (*A. mellifera* L.) 72 hr oral LD<sub>50</sub> > 315 µg /bee

## SECTION 13: DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national regulations. An acceptable method of disposal is to burn in an incinerator. Do not cut or weld metal containers. Vapors that form inside may create an explosion hazard.

## SECTION 14: TRANSPORT INFORMATION

<b>D.O.T. Shipping Name:</b>	Not regulated
<b>Technical Shipping Name:</b>	NA
<b>Packing Group:</b>	NA
<b>D.O.T. Hazard Class:</b>	NA
<b>U.N/N.A. Number:</b>	NA
<b>Product RQ (lbs):</b>	NA
<b>D.O.T. Label:</b>	NA
<b>D.O.T. Placard:</b>	NA
<b>Marine Pollutant:</b>	Yes
<b>IMO :</b>	
<b>Shipping Name:</b>	Environmentally hazardous substance liquid, N.O.S.
<b>IMO Label:</b>	9
<b>IMO Placard:</b>	9
<b>European Road/Rail:</b>	
<b>Class:</b>	NA

**SECTION 15: REGULATORY INFORMATION**

This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

**SECTION 16: OTHER INFORMATION**

<b>Reason for issue:</b>	New
<b>Prepared by:</b>	Ashley R. Brown
<b>Issue date:</b>	06/05/07
<b>Supersedes date:</b>	NA
<b>MSDS number:</b>	00335

The information in this MSDS is based on data available to us as of the issue date given herein, and believed to be correct. Contact Arysta LifeScience North America Corporation at (919) 678-4900 to determine if additional data and information have become available since the issue date.

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