Arysta LifeScience

MATERIAL SAFETY DATA SHEET

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 WHMIS. 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: ELEVATE® 50 WDG Fungicide
PMRA REGISTRATION NUMBER: 25900
SYNONYM(S): Fenhexamid Fungicide WDG 50

COMPANY
Arysta LifeScience North America LLC 15401 Weston Parkway, Suite 150 Cary, NC 27513

EMERGENCY TELEPHONE NUMBERS	
HEALTH EMERGENCY:	SPILL EMERGENCY:
1-866-303-6952, or 1-651-603-3432	**1-800-424-9300, or 1-703-527-3887**

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient(s)/ Hazardous Inert Ingredient(s)	CAS #	Exposure Limits*	% Weight	% Volume
Fenhexamid: N-(2,3-dichloro-4-hydroxyphenyl) -1-methyl-cyclohexanecarboxamide	126833-17-8	**TWA**[a] OSHA PEL[b]: None ACGIH TLV[c]: None NIOSH REL[d]: None	50	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 2008*, published by ACGIH

[a]**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.

[b]**OSHA PEL**: Occupational Safety and Health Administration Permissible Exposure Limits.

[c]**ACGIH TLV**: American Conference of Governmental Industrial Hygienists, Inc., Threshold Limit Values.

[d]**NIOSH REL**: National Institute for Occupational Safety and Health Recommended Exposure Limits.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION:	**-**	**AVOID CONTACT WITH EYES, SKIN, OR CLOTHING**
	-	**HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN**
	-	**AVOID BREATHING DUST**
	-	**KEEP OUT OF REACH OF CHILDREN**

Acute Health Hazards

Eye: This product is slightly irritating to the eyes.

Skin: This product is slightly irritating to the skin. This product is not a skin sensitizer. If absorbed through the skin, this substance is considered practically non-toxic to internal organs.

Ingestion: This product is considered practically non-toxic if swallowed.

Inhalation: This product is considered practically non-toxic if inhaled.

Chronic Health Hazards (Including Cancer): ELEVATE® is not a carcinogen.

Teratology (Birth Defects) Information: ELEVATE® is not a developmental toxicant.

Reproduction Information: ELEVATE® is not a reproductive toxicant.

SECTION 4: FIRST AID MEASURES

Eyes: Flush eyes immediately with plenty of fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Call a physician if irritation persists.

Skin: Remove contaminated clothing, wash skin with plenty of soap and water. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing. Call a physician if irritation persists.

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.

Inhalation: If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

Notes to Physician: Provide basic first aid measures, decontaminate individual and treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Limits in Air (% by volume):		
	Upper:	NDA
	Lower:	NDA
Flash Point:		NA
	Method Used:	NA
Autoignition Temperature:		Spontaneous ignition temperature = 295°C
LEL/UEL:		NDA
NFPA Hazard Classification:		
	Health:	NDA
	Flammability:	NDA
	Reactivity:	NDA
	Other:	NDA
Extinguishing Media:		CO_2, dry chemical, foam, water fog, sand
Special Fire Fighting Procedures:		Wear breathing protection (respirator). Keep away from sources of ignition. No smoking. Keep container tightly closed. Prevent dust formation and deposits. Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including SCBA. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse.
Hazardous Combustion Products:		Does not liberate gases in hazardous amounts in case of contact with water or moist air. Does not undergo spontaneous combustion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PHONE NUMBERS
Exposure Calls (PROSAR): 1-866-303-6952 or 1-651-603-3432 (International)
Spill Calls (CHEMTREC): 1-800-424-9300 or 1-703-527-3887

Avoid runoff into storm sewers and ditches that lead to waterways. Clean up spill immediately. Place product and any contaminated cleanup materials in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a disposable container. Stop or reduce contamination of any water. Isolate contaminated water. Remove contaminated water for removal or treatment.

SECTION 7: HANDLING AND STORAGE

Do not use or store near flame, sparks or hot surfaces. Use only in well-ventilated area. Keep container closed. Do not weld, heat or drill container. Replace cap or bung. Before entry into confined spaces that may have contained hazardous material, determine concentrations and take appropriate measures for personal protection. Keep pesticide in original container. Store in a dry place to preserve product quality. Do not store or transport near food or feed. This product is dust explosible, and exhibits a lower explosible limit of 90 g/m^3.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Avoid contact with your eyes. Eye contact can be avoided by wearing chemical eyewear.

Respiratory/Ventilation Requirements: This material is not expected to present an inhalation hazard. However, the use of approved respiratory protection is recommended (fine dust mask). Use this material only in well-ventilated areas.

Skin Protection: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige
Odor:	Weak, not characteristic
Physical State:	Granule
pH:	8.3 in 1% solution of water
Boiling Point:	NA
Melting Point:	<153°C
Freezing Point	NA
Vapor Pressure:	4×10^{-7} Pa at 20°C (pure a.i.)
Vapor Density:	NA
Specific Gravity:	NA
Evaporation Rate:	NA
Solubility in Water:	Water: varies between pH 3 and 9 from soluble to very soluble. Soluble in most polar organic solvents (pure a.i.)
Percent Solids by Weight:	NDA
Percent Volatile:	NA
Volatile Organic Compounds:	NA
Molecular Weight:	NDA
Viscosity:	NA

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable for 52 weeks at ambient temperature.
Hazardous Polymerization:	NDA
Flash Point:	NA
Flammable Point:	NDA
Auto Ignition:	295°C
Incompatibility With Other Materials:	NDA
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapors

SECTION 11: TOXICOLOGICAL INFORMATION

Acute (Product Specific Information)

Eye Irritation: Slightly irritating in rabbits.

Skin Irritation: Slightly irritating in rabbits.

Dermal Toxicity: The dermal LD_{50} in rats is > 2,000 mg/kg.

Oral Toxicity: The oral LD_{50} in rats is > 2,000 mg/kg.

Inhalation Toxicity: The 4 hour inhalation LC_{50} (dust) of Fenhexamid Technical in rats is > 5,057 mg/m^3 air. The 4-hour inhalation in LC_{50} (aerosol) of Fenhexamid Technical in rats is > 332 mg/m^3 air.

Skin Sensitization: Negative

Subchronic: In subchronic studies with Fenhexamid Technical, the NOEL for rat, mice and dog where 5,000 ppm, 1,000 ppm and 1,000 ppm respectively. Reduced body weight development, increased feed and water intake was seen in rats and mice. The liver is the main toxicological target organ. In dogs, effects in the red blood system were also observed.

Chronic/Carcinogenicity: Fenhexamid Technical is not carcinogenic to the rat or mouse. Unspecific signs of toxicity seen in rats treated with Fenhexamid Technical were reduced body weight development, increased feed and water intake and slight effects on liver and thyroid. In mice the main effects were with the kidney. In dogs the red blood system was the main toxicological target.

Teratology/Developmental Toxicity: Fenhexamid Technical is not a teratogen or developmental toxicant. The NOEL for both maternal and developmental effects in rats was 1,000 mg/kg bw/day. No maternal toxicity, no clinical signs, no necropsy findings, no compound related effects in body weight or food consumption, mating, fertility, gestation indices, embryo toxicity, fetotoxicity or teratogenicity were observed.

Reproduction: No reproduction toxicity was observed in a 2-generation study with rats exposed to Fenhexamid Technical.

Mutagenicity: Fenhexamid Technical is negative in the following genotoxicity assays: Samonella/microsome test (Ames test), mouse micronucleus test, Reverse mutation, chromosome aberration in vitro, V79-HGPRT in vitro, rat primary hepatocyte UDS in vitro. Fenhexamid Technical does not present a genetic hazard to intact animal systems.

SECTION 12: ECOLOGICAL INFORMATION

Avian Toxicity: The acute toxicity of Fenhexamid Technical is very low.
Bobwhite quail LD_{50} = > 2,000 mg a.i./kg bw
Bobwhite quail dietary LC_{50} = > 5,000 mg a.i./kg diet
Mallard duck dietary LC_{50} = > 5,000 mg a.i./kg diet

Aquatic Organism Toxicity: ELEVATE® is moderately toxic to fish, has a low toxicity to Daphnia magna and the sensitivity to green algae ranges from low to moderate.
Rainbow trout 96-hour LC_{50} = 2.66 mg/L
Daphnia magna 48-hour EC_{50} = 200 mg/L
Green algae (growth rate) 72-hour EC_{50} = 11.1 mg/L

Other Non-Target Organisms: In acute toxicity studies, Fenhexamid Technical was found to be nontoxic to honey bees.
Oral LD_{50} = >100 ug a.i./bee
Contact LD_{50} = >200 ug a.i./bee

SECTION 13: DISPOSAL CONSIDERATIONS

Check governmental regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

SECTION 14: TRANSPORT INFORMATION

D.O.T. Shipping Name:	Pesticide, Non-regulated
Technical Shipping Name:	NA
Packing Group:	NA
D.O.T. Hazard Class:	NA
U.N/N.A. Number:	NA
Product RQ (lbs):	NA
D.O.T. Label:	NA
D.O.T. Placard:	NA
Marine Pollutant:	NA
IMO :	
IMO Label:	NA
IMO Placard:	NA
IMDG Code:	NA
European Road/Rail:	
Class:	NA
Item NO.:	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

Reason for issue:	Changes to Emergency Response Number
Prepared by:	Susan H. Parker
Issue date:	03/03/2015
Supersedes date:	01/04/2013
MSDS number:	00200

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 LLC at (919) 678-4900 to determine if additional data and information have become available since the issue date.

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