

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : ELAST® 400 FLOWABLE FUNGICIDE
 Other means of identification : EPA Reg. No. 55260-6

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

Recommended use : Fungicide

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

Emergency number : Exposure calls (PROPHARMA): 1-866-303-6952 or +1-651-603-3432 (international)
 Spill calls (CHEMTREC) (Contract # CCN179): +1-800-424-9300 or +1-703-527-3887 (international)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Inhalation:dust,mist) H332
 Skin Irrit. 2 H315
 Eye Dam. 1 H318
 Aquatic Acute 1 H400
 Aquatic Chronic 1 H410

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

GHS07

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H332 - Harmful if inhaled
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P261 - Avoid breathing mist, spray, vapours
 P264 - Wash hands thoroughly after handling
 P271 - Use only outdoors or in a well-ventilated area
 P273 - Avoid release to the environment
 P280 - Wear eye protection, protective clothing, protective gloves
 P302+P352 - If on skin: Wash with plenty of water
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a doctor
 P312 - Call a doctor if you feel unwell
 P321 - Specific treatment (see First aid measures on this label)
 P332+P313 - If skin irritation occurs: Get medical advice/attention
 P362+P364 - Take off contaminated clothing and wash it before reuse
 P391 - Collect spillage
 P501 - Dispose of contents/container to hazardous or special waste collection point, in

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS-US classification
Dodine	(CAS-No.) 2439-10-3	35 - 45	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Artificial respiration and/or oxygen if necessary. Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Call a physician immediately. Do NOT induce vomiting.

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

- Symptoms/effects after inhalation : May cause respiratory irritation. Sore throat. Chest pain. Harmful if inhaled.
- Symptoms/effects after skin contact : Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
- Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include pain, blinking, tears and redness.
- Symptoms/effects after ingestion : May be harmful if swallowed. Abdominal cramps. Nausea.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry chemical. Foam. Water spray.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes.
- Explosion hazard : Product is not explosive.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Wear fire/flammable resistant/retardant clothing. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin, eyes and clothing. Do not breathe aerosol.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
Emergency procedures : Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Notify authorities if liquid enters sewers or public waters. Prevent entry to sewers and public waters. Do not allow large quantities, as are, to spread into the environment. Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container. Clean contaminated surfaces with an excess of water.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid breathing mist, spray, vapours. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed. Store in correctly labelled containers.
Incompatible products : Alkali. Strong acids.
Prohibitions on mixed storage : Incompatible materials.
Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ELAST® 400 FLOWABLE FUNGICIDE	
ACGIH	Not applicable
OSHA	Not applicable
Dodine (2439-10-3)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Avoid splashing. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Use only in well ventilated areas.
Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Wear suitable gloves.
Eye protection : Chemical goggles or safety glasses. Face shield.
Skin and body protection : Long sleeved protective clothing.
Respiratory protection : In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
Colour : white
Odour : Negligible.
Odour threshold : No data available
pH : 5.8

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: 1.01
Relative vapour density at 20 °C	: No data available
Solubility	: No data available
Log Pow	: 0.96 @ 20 °C / pH 7
Log Kow	: No data available
Auto-ignition temperature	: 430 °C
Decomposition temperature	: No data available
Viscosity	: 800 cP
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Alkali. Strong acids.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂). Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Ingestion; Skin and eye contact
Acute toxicity	: Inhalation:dust,mist: Harmful if inhaled.

ELAST® 400 FLOWABLE FUNGICIDE	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (dust,mist)	1.1363636364 mg/l/4h
Dodine (2439-10-3)	
LD50 oral rat	660 mg/kg
LD50 dermal rat	> 5000 mg/kg
LD50 dermal rabbit	2100 mg/kg
LC50 inhalation rat (mg/l)	0.45 mg/l/4h
ATE US (oral)	660 mg/kg bodyweight
ATE US (dermal)	2100 mg/kg bodyweight

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Dodine (2439-10-3)	
ATE US (vapours)	0.45 mg/l/4h
ATE US (dust,mist)	0.45 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause respiratory irritation. Sore throat. Chest pain. Harmful if inhaled.
Symptoms/effects after skin contact	: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include pain, blinking, tears and redness.
Symptoms/effects after ingestion	: May be harmful if swallowed. Abdominal cramps. Nausea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

Dodine (2439-10-3)	
LC50 fish 1	1.5 mg/l 96 h
EC50 Daphnia 1	0.146 mg/l 48 h

12.2. Persistence and degradability

ELAST® 400 FLOWABLE FUNGICIDE	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

ELAST® 400 FLOWABLE FUNGICIDE	
Log Pow	0.96 @ 20 °C / pH 7
Bioaccumulative potential	Not established.

Dodine (2439-10-3)	
Log Pow	0.96 @ 20 °C / pH 7

12.4. Mobility in soil

ELAST® 400 FLOWABLE FUNGICIDE	
Ecology - soil	No additional information available.

12.5. Other adverse effects

Other information : No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Do not allow into drains or water courses.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Non-bulk (<= 119 gal / 450 L) Not Regulated

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Bulk (> 119 gal / 450 L) :
Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Dodine), 9, III
UN-No.(DOT) : UN3082
Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Dodine)
Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Dangerous for the environment : Yes
Marine pollutant : Yes



Additional information

Emergency Response Guide (ERG) Number : 171
Other information : No supplementary information available.

Transport by sea

IMDG

Transport hazard class(es) (IMDG) : 9
:
Two diamond-shaped hazard labels: one with a striped pattern and the number '9', and another showing a tree and a dead fish.
Marine pollutant : Yes
UN-No. (IMDG) : 3082
Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dodine), 9, III, MARINE POLLUTANT
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG) : III - substances presenting low danger
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F

Air transport

IATA

Transport hazard class(es) (IATA) : 9
:
Two diamond-shaped hazard labels: one with a striped pattern and the number '9', and another showing a tree and a dead fish.
Marine pollutant : Yes
UN-No. (IATA) : 3082
Transport document description (IATA) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dodine), 9, III
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Dodine	CAS-No. 2439-10-3	35 - 45%
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This chemical 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-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.:

EPA Registration Number	55260-6
FIFRA Signal Word	DANGER
FIFRA Hazard Statement	Corrosive. Causes irreversible eye damage. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing spray mist or vapor.
FIFRA Other	This pesticide is toxic to fish and aquatic invertebrates. 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 washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Surface Water and Erosion Control Statement: This product may contaminate water through runoff and has the potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

15.2. International regulations

CANADA

Dodine (2439-10-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Dodine (2439-10-3)

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date	: 11/28/2017
Data sources	: ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/quest/information-on-chemicals/cl-inventory-database . Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. Manufacturer Information. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html . National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard.
Other information	: None.

ELAST® 400 FLOWABLE FUNGICIDE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H330	Fatal if inhaled
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

NFPA health hazard

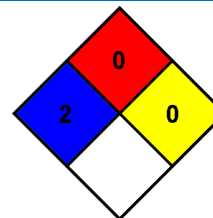
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Indication of changes:

Regulatory information.

SDS Prepared by:

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product