

**Enilconazole Smoke Formulation**

Version            Revision Date:            SDS Number:            Date of last issue: 04/09/2022  
7.8                10/01/2022                785480-00017            Date of first issue: 06/28/2016

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**SECTION 1. IDENTIFICATION**

Product name                                : Enilconazole Smoke Formulation

**Manufacturer or supplier's details**

Company name of supplier                : Merck & Co., Inc  
Address                                        : 126 E. Lincoln Avenue  
    : Rahway, New Jersey U.S.A. 07065  
Telephone                                    : 908-740-4000  
Emergency telephone                      : 1-908-423-6000  
E-mail address                              : EHSDATASTEWARD@merck.com

**Recommended use of the chemical and restrictions on use**

Recommended use                          : Veterinary product

Restrictions on use                        : Not applicable

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Oxidizing solids                            : Category 1  
  
Combustible dust  
  
Eye irritation                                : Category 2A  
  
Carcinogenicity                             : Category 2  
  
Specific target organ toxicity            : Category 2 (Liver)  
- repeated exposure

**GHS label elements**

Hazard pictograms                        :   

Signal Word                                : Danger

Hazard Statements                        : H271 May cause fire or explosion; strong oxidizer.  
If small particles are generated during further processing,  
handling or by other means, may form combustible dust  
concentrations in air.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs (Liver) through prolonged or  
repeated exposure.

Precautionary Statements               : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read

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and understood.  
 P210 Keep away from heat.  
 P220 Keep away from clothing and other combustible materials.  
 P221 Take any precaution to avoid mixing with combustibles.  
 P260 Do not breathe dust.  
 P264 Wash skin thoroughly after handling.  
 P280 Wear protective gloves, protective clothing, eye protection and face protection.  
 P283 Wear fire resistant or flame retardant clothing.

### Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
 P308 + P313 IF exposed or concerned: Get medical attention.  
 P337 + P313 If eye irritation persists: Get medical attention.  
 P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

### Other hazards

Contact with dust can cause mechanical irritation or drying of the skin.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Talc	14807-96-6	>= 50 - < 70
Enilconazole	35554-44-0	>= 10 - < 20
Potassium chlorate	3811-04-9	>= 10 - < 20

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
 Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.

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		Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes serious eye irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Contact with dust can cause mechanical irritation or drying of the skin.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

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### SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Chlorine compounds Metal oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Fight fire remotely due to the risk of explosion. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Only trained personnel should re-enter the area. Remove all sources of ignition. Use personal protective equipment.
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Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
Flush with water.  
Suppress (knock down) gases/vapors/mists with a water spray jet.  
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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### SECTION 7. HANDLING AND STORAGE

- Technical measures : Static electricity may accumulate and ignite suspended dust causing an explosion.  
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Local/Total ventilation : Use only with adequate ventilation.  
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.
- Advice on safe handling : Do not breathe dust.  
Do not swallow.  
Do not get in eyes.  
Avoid prolonged or repeated contact with skin.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Minimize dust generation and accumulation.  
Keep container closed when not in use.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Take precautionary measures against static discharges.  
Keep away from combustible material.  
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.

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Store in original container.  
 Store locked up.  
 Keep tightly closed.  
 Keep in a cool, well-ventilated place.  
 Keep away from direct sunlight.  
 Store in accordance with the particular national regulations.  
 Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:  
 Self-reactive substances and mixtures  
 Organic peroxides  
 Flammable liquids  
 Flammable solids  
 Pyrophoric liquids  
 Pyrophoric solids  
 Self-heating substances and mixtures  
 Substances and mixtures which in contact with water emit flammable gases  
 Aerosol cans and lighters  
 Explosives  
 Gases  
 Very acutely toxic substances and mixtures  
 Acutely toxic substances and mixtures  
 Substances and mixtures with chronic toxicity

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Talc	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m <sup>3</sup>	NIOSH REL
		TWA (Respirable particulate matter)	2 mg/m <sup>3</sup>	ACGIH
Enilconazole	35554-44-0	TWA	0.3 mg/m <sup>3</sup> (OEB 2)	Internal
Further information: Skin				

**Engineering measures** : Use feasible engineering controls to minimize exposure to compound.  
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

#### Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are

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unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

### Hand protection

Material : Chemical-resistant gloves

Remarks : Take note that the product is flammable, which may impact the selection of hand protection.

Eye protection : Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Color : Grey-brown

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : May form explosive dust-air mixture during processing,

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	handling or other means.
Flammability (liquids)	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: No data available
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is classified as oxidizing with the category 1.
Molecular weight	: No data available
Particle size	: No data available

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: May cause fire or explosion; strong oxidizer.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: May form explosive dust-air mixture during processing, handling or other means. Exposure to metals, combustible or organic materials can cause a violent reaction or ignition. May cause fire or explosion; strong oxidizer.
Conditions to avoid	: Heat, flames and sparks. Avoid dust formation.
Incompatible materials	: Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

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	Flammable materials
	Organic materials
Hazardous decomposition products	: No hazardous decomposition products are known.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
 Skin contact  
 Ingestion  
 Eye contact

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity	: LD50 (Rat): 2,100 - 2,800 mg/kg
Acute inhalation toxicity	: LC0 (Rat): 10.73 mg/l Test atmosphere: dust/mist Remarks: No mortality observed at this dose.
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg  LD50 (Rabbit): > 0.6 ml/kg

#### Components:

##### Talc:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials
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##### Enilconazole:

Acute oral toxicity	: LD50 (Rat): 227 mg/kg Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI  LD50 (Mouse): 390 - 620 mg/kg  LD50 (Dog): > 640 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 1.84 - 2.88 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity	: LD50 (Rat): 4,200 - 4,800 mg/kg  LD50 (Rabbit): 4,200 mg/kg
Acute toxicity (other routes of administration)	: LD50 (Rat): 155 mg/kg Application Route: Intraperitoneal



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**Potassium chlorate:**

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 436  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Species : Rabbit  
Result : No skin irritation

**Components:****Talc:**

Species : Rabbit  
Result : No skin irritation

**Enilconazole:**

Species : Rabbit  
Result : Mild skin irritation

**Potassium chlorate:**

Species : Rabbit  
Result : No skin irritation  
Remarks : Based on data from similar materials

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Species : Rabbit  
Result : Moderate eye irritation

**Components:****Talc:**

Species : Rabbit  
Result : No eye irritation

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**Enilconazole:**

Species                : Rabbit  
Result                 : Irreversible effects on the eye  
Remarks              : Based on harmonised classification in EU regulation  
                              1272/2008, Annex VI

Species                : Rabbit  
Result                 : Moderate eye irritation  
Remarks              : Based on harmonised classification in EU regulation  
                              1272/2008, Annex VI

**Potassium chlorate:**

Species                : Rabbit  
Result                 : No eye irritation  
Method                 : OECD Test Guideline 405

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Product:**

Species                : Guinea pig  
Result                 : Not a skin sensitizer.

**Components:****Talc:**

Routes of exposure    : Skin contact  
Species                : Humans  
Result                 : negative

**Enilconazole:**

Test Type              : Maximization Test  
Routes of exposure    : Dermal  
Species                : Guinea pig  
Result                 : equivocal

Routes of exposure    : Dermal  
Species                : Humans  
Result                 : Not a skin sensitizer.

**Potassium chlorate:**

Test Type              : Maximization Test  
Routes of exposure    : Skin contact  
Species                : Guinea pig  
Method                 : OECD Test Guideline 406

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Result : negative  
 Remarks : Based on data from similar materials

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### **Talc:**

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
 Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

#### **Enilconazole:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Result: negative

Test Type: Chromosomal aberration  
 Test system: Human lymphocytes  
 Result: negative

Test Type: gene mutation test  
 Test system: Chinese hamster fibroblasts  
 Result: negative

Test Type: unscheduled DNA synthesis assay  
 Test system: rat hepatocytes  
 Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
 Species: Rat  
 Application Route: Oral  
 Result: negative

Test Type: Micronucleus test  
 Species: Mouse  
 Application Route: Oral  
 Result: negative

Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
 Species: Mouse  
 Result: negative

#### **Potassium chlorate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Method: OECD Test Guideline 471  
 Result: negative

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Test Type: In vitro mammalian cell gene mutation test  
 Method: OECD Test Guideline 476  
 Result: negative  
 Remarks: Based on data from similar materials

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
 Method: OECD Test Guideline 482  
 Result: negative  
 Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
 Species: Mouse  
 Application Route: Ingestion  
 Method: OECD Test Guideline 474  
 Result: negative  
 Remarks: Based on data from similar materials

### Carcinogenicity

Suspected of causing cancer.

### Components:

#### Talc:

Species : Mouse  
 Application Route : inhalation (dust/mist/fume)  
 Exposure time : 2 Years  
 Result : negative

#### Enilconazole:

Species : Rat  
 Application Route : Oral  
 Exposure time : 2 Years  
 NOAEL : 40 mg/kg body weight  
 Result : negative

Species : Mouse  
 Application Route : Oral  
 Exposure time : 2 Years  
 LOAEL : 33 mg/kg body weight  
 Result : positive  
 Target Organs : Liver

Species : Mouse  
 Application Route : oral (feed)  
 Exposure time : 23 Months  
 NOAEL : 8 mg/kg body weight  
 LOAEL : 105 mg/kg body weight  
 Result : positive  
 Target Organs : Liver  
 Remarks : Based on harmonised classification in EU regulation 1272/2008, Annex VI

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Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

**Potassium chlorate:**

Species : Rat  
 Application Route : Ingestion  
 Exposure time : 106 weeks  
 Result : negative  
 Remarks : Based on data from similar materials

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Talc:**

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

**Enilconazole:**

Effects on fertility : Test Type: Multi-generation study  
 Species: Rat  
 Application Route: Oral  
 General Toxicity Parent: NOAEL: 20 mg/kg body weight  
 Result: Maternal toxicity observed., Embryotoxic effects and adverse effects on the offspring were detected.  
 Remarks: Not classified due to data which are conclusive although insufficient for classification.

Effects on fetal development : Test Type: Development  
 Species: Rat  
 Application Route: Oral  
 Developmental Toxicity: LOAEL: 80 mg/kg body weight  
 Result: Reduced fetal weight., Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses  
 Remarks: The effects were seen only at maternally toxic doses.

Test Type: Development  
 Species: Rabbit  
 Application Route: Oral  
 Developmental Toxicity: LOAEL: 10 mg/kg body weight

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Result: Maternal toxicity observed., No teratogenic effects., Postimplantation loss.  
 Remarks: The effects were seen only at maternally toxic doses.

### Potassium chlorate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 416  
 Result: negative  
 Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on data from similar materials

### STOT-single exposure

Not classified based on available information.

### STOT-repeated exposure

May cause damage to organs (Liver) through prolonged or repeated exposure.

### Components:

#### Enilconazole:

Target Organs : Liver  
 Assessment : May cause damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

#### Components:

#### Enilconazole:

Species : Rat  
 NOAEL : 5 mg/kg  
 LOAEL : 20 mg/kg  
 Application Route : Oral  
 Exposure time : 3 - 24 Months  
 Target Organs : Liver  
 Symptoms : decrease in appetite

Species : Dog  
 NOAEL : 2.5 mg/kg  
 LOAEL : 20 mg/kg  
 Application Route : Oral  
 Exposure time : 12 Months  
 Symptoms : Salivation, Vomiting

Species : Mouse  
 NOAEL : 12 mg/kg

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LOAEL	:	140 mg/kg
Application Route	:	Oral
Exposure time	:	3 Months
Target Organs	:	Liver

### Potassium chlorate:

Species	:	Rat
NOAEL	:	> 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Remarks	:	Based on data from similar materials

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Components:

#### **Enilconazole:**

Skin contact	:	Symptoms: pruritis, skin rash, Skin irritation
Eye contact	:	Symptoms: Eye irritation
Ingestion	:	Symptoms: Nausea

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### **Talc:**

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l Exposure time: 24 h
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#### **Enilconazole:**

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1.48 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
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	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 3.99 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
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Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3.54 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
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Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 1.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
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	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 0.457
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mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): < 0.007 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

**Potassium chlorate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50: 1.9 mg/l  
Exposure time: 72 h  
  
NOEC: 0.5 mg/l  
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): > 1 mg/l  
Exposure time: 36 d  
Method: OECD Test Guideline 210  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: > 1,000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

**Persistence and degradability****Components:****Enilconazole:**

Biodegradability : Result: not rapidly degradable  
Biodegradation: 50 %  
Exposure time: 166 d

**Bioaccumulative potential****Components:****Enilconazole:**

Partition coefficient: n-octanol/water : log Pow: 3.82



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### Mobility in soil

#### Components:

#### Enilconazole:

Distribution among environmental compartments : log Koc: 3.82

#### Other adverse effects

No data available

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.  
 Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 If not otherwise specified: Dispose of as unused product.

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### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

UN number : UN 1485  
 Proper shipping name : POTASSIUM CHLORATE MIXTURE  
 Class : 5.1  
 Packing group : II  
 Labels : 5.1

##### IATA-DGR

UN/ID No. : UN 1485  
 Proper shipping name : Potassium chlorate Mixture  
 Class : 5.1  
 Packing group : II  
 Labels : Oxidizer  
 Packing instruction (cargo aircraft) : 562  
 Packing instruction (passenger aircraft) : 558

##### IMDG-Code

UN number : UN 1485  
 Proper shipping name : POTASSIUM CHLORATE MIXTURE (Enilconazole)  
 Class : 5.1  
 Packing group : II  
 Labels : 5.1  
 EmS Code : F-H, S-Q  
 Marine pollutant : yes

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### Domestic regulation

#### 49 CFR

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UN/ID/NA number	:	UN 1485
Proper shipping name	:	Potassium chlorate MIXTURE
Class	:	5.1
Packing group	:	II
Labels	:	OXIDIZER
ERG Code	:	140
Marine pollutant	:	yes(Enilconazole)

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** :

- Oxidizer (liquid, solid or gas)
- Combustible dust
- Carcinogenicity
- Specific target organ toxicity (single or repeated exposure)
- Serious eye damage or eye irritation

**SARA 313** :

The following components are subject to reporting levels established by SARA Title III, Section 313:

Enilconazole	35554-44-0	>= 10 - < 20 %
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### US State Regulations

#### Pennsylvania Right To Know

Talc	14807-96-6
Enilconazole	35554-44-0
Lactose	63-42-3
Potassium chlorate	3811-04-9

#### California Prop. 65

WARNING: This product can expose you to chemicals including Enilconazole, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California List of Hazardous Substances

Talc	14807-96-6
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#### California Permissible Exposure Limits for Chemical Contaminants

Talc	14807-96-6
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The ingredients of this product are reported in the following inventories:

## Enilconazole Smoke Formulation

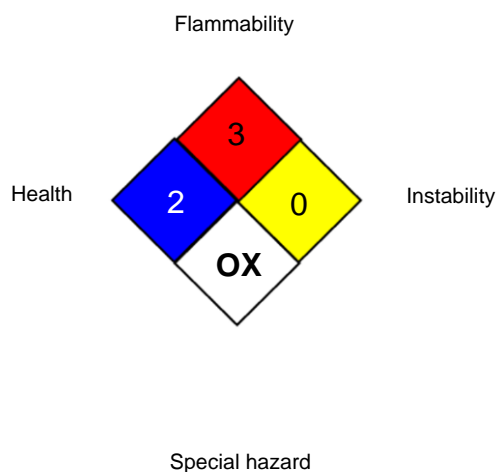
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AICS : not determined  
 DSL : not determined  
 IECSC : not determined

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

<b>HEALTH</b>	*	<b>2</b>
<b>FLAMMABILITY</b>		<b>3</b>
<b>PHYSICAL HAZARD</b>		<b>3</b>

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 NIOSH REL : USA. NIOSH Recommended Exposure Limits  
 OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts  
 ACGIH / TWA : 8-hour, time-weighted average  
 NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek  
 OSHA Z-3 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime

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Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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