

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

SECTION 1. IDENTIFICATION

Product name : Enilconazole Smoke Formulation
Other means of identification : No data available

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

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Oxidizing solids : Category 1
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.
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 and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version 5.2 Revision Date: 09/28/2024 SDS Number: 785465-00021 Date of last issue: 09/30/2023
Date of first issue: 06/28/2016

P220 Keep away from clothing and other combustible materials.
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.
P420 Store separately.

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.
May form explosive dust-air mixture during processing, handling or other means.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Talc	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	14807-96-6	>= 30 - < 60 *
Enilconazole	Imazalil	35554-44-0	>= 10 - < 30 *
Potassium chlorate	Chloric acid, potassium salt (1:1)	3811-04-9	>= 10 - < 30 *

* Actual concentration or concentration range 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.

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Water spray Alcohol-resistant foam Carbon dioxide (CO2) 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.

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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.
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.

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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version 5.2 Revision Date: 09/28/2024 SDS Number: 785465-00021 Date of last issue: 09/30/2023
Date of first issue: 06/28/2016

- 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.
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	TWAEV (respirable dust)	2 mg/m ³	CA QC OEL
		TWA (Respirable particulates)	2 mg/m ³	CA AB OEL
		TWA (Respirable)	2 mg/m ³	CA BC OEL
		TWA	2 fibres per cubic centimeter	CA ON OEL
		TWA (Respirable frac-	2 mg/m ³	CA ON OEL

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version 5.2 Revision Date: 09/28/2024 SDS Number: 785465-00021 Date of last issue: 09/30/2023
Date of first issue: 06/28/2016

		tion)		
		TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
Enilconazole	35554-44-0	TWA	0.3 mg/m ³ (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 : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Color : Grey-brown

Odor : No data available

Odor Threshold : No data available

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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, 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 characteristics Particle size	:	No data available

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

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
---------------------	---	--

Enilconazole:

Acute oral toxicity	:	LD50 (Rat): 227 mg/kg Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
---------------------	---	---

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

Potassium chlorate:

Acute oral toxicity : Acute toxicity estimate (Humans): 100 mg/kg
Method: Expert judgment

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:

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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
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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

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

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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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
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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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
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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Talc:

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

Enilconazole:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.48 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

		LC50 (Lepomis macrochirus (Bluegill sunfish)): 3.99 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
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
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 1.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (green algae)): 0.457 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	:	EC50 (Lemna minor (duckweed)): > 10 - 100 mg/l Exposure time: 7 d Method: OECD Test Guideline 221 Remarks: Based on data from similar materials
		NOEC (Lemna minor (duckweed)): > 1 mg/l Exposure time: 7 d Method: OECD Test Guideline 221 Remarks: Based on data from similar materials
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

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

Mobility in soil

Components:

Enilconazole:

Distribution among environmental compartments : log Koc: 3.82

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
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.

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
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 1485

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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

TDG

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

The ingredients of this product are reported in the following inventories:

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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWA	:	Time-weighted average exposure value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - 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; WHMIS - Workplace Hazardous Materials Information System

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/
--	---	---

Revision Date	:	09/28/2024
Date format	:	mm/dd/yyyy

SAFETY DATA SHEET

according to the Hazardous Products Regulations



Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
5.2	09/28/2024	785465-00021	Date of first issue: 06/28/2016

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.

CA / Z8