

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

**Section 1: Identification**

**Product identifier** : Enilconazole Smoke Formulation

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

Recommended use : Veterinary product  
Restrictions on use : Not applicable

**Manufacturer or supplier's details**





Company : MSD  
Address : 50 Tuas West Drive  
Singapore - Singapore 638408  
Telephone : +1-908-740-4000  
Emergency telephone number : 65 6697 2111 (24/7/365)  
E-mail address : EHSDATASTEWARD@msd.com

---

**Section 2: Hazard identification****Classification of the substance or mixture**

Oxidizing solids : Category 1  
Serious eye damage/eye irritation : Category 2A  
Carcinogenicity : Category 2  
Specific target organ toxicity - repeated exposure : Category 2 (Liver)  
Long-term (chronic) aquatic hazard : Category 1

**GHS Label elements, including precautionary statements**

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.

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

H373 May cause damage to organs (Liver) through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

## 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.

P220 Keep away from clothing and other combustible materials.

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing 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 advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P391 Collect spillage.

**Storage:**

P405 Store locked up.

P420 Store separately.

**Disposal:**

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

**Other hazards which do not result in classification**

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	CAS-No.	Concentration (% w/w)
---------------	---------	-----------------------

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

Talc	14807-96-6	>= 50 -< 70
1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	35554-44-0	>= 10 -< 20
Potassium chlorate	3811-04-9	>= 10 -< 20

## Section 4: First-aid measures

## Description of necessary 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.  
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

- Risks : Contact with dust can cause mechanical irritation or drying of the skin.  
Causes serious eye irritation.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.
- 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).

## Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

## Section 5: Fire-fighting measures

## Extinguishing media

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

Unsuitable extinguishing media : None known.

**Special hazards arising from the substance or mixture**

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

**Special protective actions for fire-fighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

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.

---

**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Personal precautions : 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**

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**

Methods for 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/vapours/mists with a water spray jet.

**Enilconazole Smoke Formulation**

Version 6.2	Revision Date: 14.04.2025	SDS Number: 785479-00022	Date of last issue: 28.09.2024 Date of first issue: 28.06.2016
----------------	------------------------------	-----------------------------	-------------------------------------------------------------------

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****Precautions for safe handling**

- |                         |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures      | : | Static electricity may accumulate and ignite suspended dust causing an explosion.<br>Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Local/Total ventilation | : | Use only with adequate ventilation.<br>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.<br>Do not swallow.<br>Do not get in eyes.<br>Avoid prolonged or repeated contact with skin.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Minimize dust generation and accumulation.<br>Keep container closed when not in use.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Keep away from combustible material.<br>Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures        | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>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.                                                                                                                                                                                                  |

**Conditions for safe storage, including any incompatibilities**

- |                             |   |                                       |
|-----------------------------|---|---------------------------------------|
| Conditions for safe storage | : | Keep in properly labelled containers. |
|-----------------------------|---|---------------------------------------|

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

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.  
Store in original container.

Materials to avoid : Do not store with the following product types:  
Self-reactive substances and mixtures  
Organic peroxides  
Flammable gases  
Flammable liquids  
Pyrophoric liquids  
Pyrophoric solids  
Self-heating substances and mixtures  
Substances and mixtures, which in contact with water, emit flammable gases  
Explosives  
Corrosive Substances

## Section 8: Exposure controls/personal protection

## Control parameters

## Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Talc	14807-96-6	PEL (long term)	2 mg/m <sup>3</sup>	SG OEL
		TWA (Respirable particulate matter)	2 mg/m <sup>3</sup>	ACGIH
1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole	35554-44-0	TWA	0.3 mg/m <sup>3</sup> (OEB 2)	Internal
Further information: Skin				

**Appropriate engineering control 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.

**Individual protection measures, such as personal protective equipment (PPE)**

Eye/face 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.

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

		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 protection	:	Work uniform or laboratory coat.
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.

---

**Section 9: Physical and chemical properties**

Appearance	:	powder
Colour	:	Grey-brown
Odour	:	No data available
Odour 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, 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
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

Density	:	No data available
Solubility(ies)	:	
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition 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

---

**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
------------------------------------------	---	--------------------------------------------------------



## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

**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
---------------------	---	----------------------------------------------------------------------------

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

**Potassium chlorate:**

Acute oral toxicity	:	Acute toxicity estimate (Humans): 100 mg/kg Method: Expert judgement
Acute inhalation toxicity	:	LC50 (Rat): > 5.1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 436

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

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

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

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 sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Product:**

Species	:	Guinea pig
Result	:	Not a skin sensitizer.

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

Exposure routes	:	Skin contact
Species	:	Humans
Result	:	negative

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

Test Type	:	Maximisation Test
Exposure routes	:	Dermal
Species	:	Guinea pig
Result	:	equivocal

Exposure routes	:	Dermal
Species	:	Humans
Result	:	Not a skin sensitizer.

**Potassium chlorate:**

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

**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

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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  Test Type: In vitro mammalian cell gene mutation test
-----------------------	---	------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

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

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

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 foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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 foetal development : Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: LOAEL: 80 mg/kg body weight  
Result: Reduced foetal 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.

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

**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 foetal development : Test Type: Embryo-foetal 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:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

**Repeated dose toxicity****Components:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

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:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

---

**Section 12: Ecological information****Toxicity****Components:****Talc:**

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

**1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

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



## Enilconazole Smoke Formulation

Version	Revision Date:	SDS Number:	Date of last issue:
6.2	14.04.2025	785479-00022	28.09.2024
			Date of first issue: 28.06.2016

---

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

M-Factor (Chronic aquatic toxicity) : 10

**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  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

**Persistence and degradability****Components:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

**Bioaccumulative potential****Components:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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

**Mobility in soil****Components:****1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole:**

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
UN proper shipping name	: POTASSIUM CHLORATE MIXTURE
Transport hazard class(es)	: 5.1
Packing group	: II
Labels	: 5.1
Environmental hazards	: no

**IATA-DGR**

UN/ID No.	: UN 1485
UN proper shipping name	: Potassium chlorate Mixture
Transport hazard class(es)	: 5.1
Packing group	: II
Labels	: Oxidizer
Packing instruction (cargo aircraft)	: 562
Packing instruction (passenger aircraft)	: 558

**IMDG-Code**

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

UN number : UN 1485  
Proper shipping name : POTASSIUM CHLORATE MIXTURE  
(1-[2-(allyloxy)-2-(2,4-dichlorophenyl)ethyl]-1H-imidazole)  
Transport hazard class(es) : 5.1  
Packing group : II  
Labels : 5.1  
EmS Code : F-H, S-Q  
Marine pollutant : yes

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**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****Safety, health and environmental regulations specific for the product in question**

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable

Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable  
Regulations

**The components of this product are reported in the following inventories:**

AICS : not determined

DSL : not determined

IECSC : not determined

---

**Section 16: Other information**

Revision Date : 14.04.2025

**Further information**

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

Date format : dd.mm.yyyy

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of

**Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 28.09.2024
6.2	14.04.2025	785479-00022	Date of first issue: 28.06.2016

---

## Toxic Substances.

ACGIH / TWA : 8-hour, time-weighted average  
SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term

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; 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; WHMIS - Workplace Hazardous Materials Information System

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.

SG / EN