According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Enilconazole Smoke Formulation

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

Use of the Sub- : Veterinary product

stance/Mixture

Recommended restrictions : Not applicable

on use

1.3 Details of the supplier of the safety data sheet

Company : MSD

Walton Manor, Walton

MK7 7AJ Milton Keynes - United Kingdom

Telephone : +1-908-740-4000

E-mail address of person

responsible for the SDS

: EHSDATASTEWARD@msd.com

### 1.4 Emergency telephone number

+1-908-423-6000

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Oxidizing solids, Category 1 H271: May cause fire or explosion; strong oxidizer.

Eye irritation, Category 2 H319: Causes serious eye irritation. Carcinogenicity, Category 2 H351: Suspected of causing cancer.

Specific target organ toxicity - repeated H373: May cause damage to organs through pro-

exposure, Category 2 longed or repeated exposure.

Long-term (chronic) aquatic hazard, Cat-H410: Very toxic to aquatic life with long lasting

egory 1 effects.

### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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 through prolonged

or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

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.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

Response:

P371 + P380 + P375 In case of major fire and large quanti-

ties: Evacuate area. Fight fire remotely due to the

risk of explosion.

P391 Collect spillage.

Hazardous components which must be listed on the label:

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

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**

### 3.2 Mixtures

#### Components

•			
Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
1-[2-(allyloxy)-2-(2,4-	35554-44-0	Acute Tox. 3; H301	>= 10 - < 20
dichlorophenyl)ethyl]-1H-imidazole	252-615-0	Acute Tox. 4; H332	
	613-042-00-5	Eye Dam. 1; H318	

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 06.04.2024
5.1	28.09.2024	9372730-00008	Date of first issue: 27.08.2021

		Carc. 2; H351 STOT RE 2; H373 (Liver) Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Chronic	
		aquatic toxicity): 10	
Potassium chlorate	3811-04-9	Ox. Sol. 1; H271	>= 10 - < 20
	223-289-7	Acute Tox. 3; H301	
	017-004-00-3	Acute Tox. 4; H332	
Substances with a workplace exposure limit :			
Talc	14807-96-6		>= 50 - < 70
	238-877-9		

For explanation of abbreviations see section 16.

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

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).

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, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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

Risks : 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.

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

Treatment : Treat symptomatically and supportively.

### **SECTION 5: Firefighting measures**

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

### 5.2 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 prod- :

ucts

Carbon oxides

Chlorine compounds

Metal oxides

### 5.3 Advice for firefighters

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

#### **SECTION 6: Accidental release measures**

#### 6.1 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 pro-

tective equipment recommendations (see section 8).

#### 6.2 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.

If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

### 6.3 Methods and material 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.

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 deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

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 ventila-

tion.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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 as-

sessment

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.

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 contami-

nated 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.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep in properly labelled containers. 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.

Advice on common storage : 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

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

7.3 Specific end use(s)

Specific use(s) : No data available

### **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

### **Occupational Exposure Limits**

dust of any kind 10 mg/m3

Value type (Form of exposure): TWA (Inhalable)

Basis: GB EH40

4 mg/m3

Value type (Form of exposure): TWA (Respirable fraction)

Basis: GB EH40

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Talc	14807-96-6	TWA (Respirable dust)	1 mg/m3	GB EH40
1-[2-(allyloxy)-2- (2,4- dichloro- phenyl)ethyl]-1H- imidazole	35554-44-0	TWA	0.3 mg/m3 (OEB 2)	Internal
	Further information: Skin			

# **Derived No Effect Level (DNEL)**

Substance name	End Use	Exposure routes	Potential health effects	Value
Potassium chlorate	Workers	Inhalation	Long-term systemic effects	5.76 mg/m3
	Workers	Skin contact	Long-term systemic effects	3.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.13 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.06 mg/kg bw/day

### **Predicted No Effect Concentration (PNEC)**

Substance name	Environmental Compartment	Value
Potassium chlorate	Fresh water	1.15 mg/l
	Marine water	1.15 mg/l
	Sewage treatment plant	115 mg/l
	Soil	3.83 mg/kg dry weight (d.w.)

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

### 8.2 Exposure controls

#### **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

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.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Hand protection

Material : Chemical-resistant gloves

Remarks : Take note that the product is flammable, which may impact

the selection of hand protection.

Skin and body protection : Work uniform or laboratory coat.

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Equipment should conform to BS EN 143

Filter type : Particulates type (P)

# **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic 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, han-

dling or other means.

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available Partition coefficient: n- : No data available

octanol/water

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.

9.2 Other information

Flammability (liquids) : No data available

Molecular weight : No data available

Particle size : No data available

### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

May cause fire or explosion; strong oxidizer.

#### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : May form explosive dust-air mixture during processing, han-

dling or other means.

Exposure to metals, combustible or organic materials can

cause a violent reaction or ignition.

May cause fire or explosion; strong oxidizer.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

Avoid dust formation.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

10.5 Incompatible materials

Materials to avoid : Accelerators, strong acids and bases, heavy metals and

heavy metal salts, reducing agents

Flammable materials Organic materials

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

**SECTION 11: Toxicological information** 

11.1 Information on toxicological effects

Information on likely routes of : Inhalation

exposure 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:

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

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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 : Acute toxicity estimate: 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Talc:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Remarks: Based on data from similar materials

#### Skin corrosion/irritation

Not classified based on available information.

**Product:** 

Species : Rabbit

Result : No skin irritation

### **Components:**

### 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

Talc:

Species : Rabbit

Result : No skin irritation

### Serious eye damage/eye irritation

Causes serious eye irritation.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

**Product:** 

Species : Rabbit

Result : Moderate eye irritation

**Components:** 

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

Species : Rabbit

Result : Moderate eye irritation

Remarks : Based on harmonised classification in EU regulation

1272/2008, Annex VI

Potassium chlorate:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Talc:

Species : Rabbit

Result : No eye irritation

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:** 

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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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

Talc:

Exposure routes : Skin contact Species : Humans Result : negative

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

### 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

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

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 syn-

thesis 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

Talc:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro

Species: Rat

Application Route: Ingestion

Result: negative

#### Carcinogenicity

Suspected of causing cancer.

### **Components:**

# 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)

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

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 - Assess-

ment

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

Talc:

Species : Mouse

Application Route : inhalation (dust/mist/fume)

Exposure time : 2 Years
Result : negative

Reproductive toxicity

Not classified based on available information.

**Components:** 

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 develop-

ment

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 ma-

ternally toxic doses

Remarks: The effects were seen only at maternally toxic dos-

es.

Test Type: Development

Species: Rabbit Application Route: Oral

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

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 dos-

es.

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 develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Talc:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

### STOT - single exposure

Not classified based on available information.

#### STOT - repeated exposure

May cause damage to organs 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

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

Species: DogNOAEL: 2.5 mg/kgLOAEL: 20 mg/kgApplication 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:** 

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** 

12.1 Toxicity

**Components:** 

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

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 5.1 28.09.2024 9372730-00008 Date of first issue: 27.08.2021

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 (Chron-

ic toxicity)

NOEC: < 0.007 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

10

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Very toxic to aquatic life.

Remarks: Based on the harmonised classification in Turkish

regulation SEA No 28848

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 microorganisms : EC50 : > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

NOEC: > 1 mg/l

Exposure time: 36 d

Species: Danio rerio (zebra fish) Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

Toxicity to daphnia and other : aquatic invertebrates (Chron-

NOEC: > 1 mg/l Exposure time: 21 d

ic toxicity)

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Talc:

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

Exposure time: 24 h

### 12.2 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

### 12.3 Bioaccumulative potential

#### **Components:**

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

Partition coefficient: n-

octanol/water

: log Pow: 3.82

### 12.4 Mobility in soil

### **Components:**

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

Distribution among environ:

mental compartments

: log Koc: 3.82

#### 12.5 Results of PBT and vPvB assessment

#### **Product:**

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

#### 12.6 Other adverse effects

#### **Product:**

Endocrine disrupting poten-

tial

This substance/mixture does not contain components considered to have endocrine disrupting properties for environment

according to UK REACH Article 57(f).

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

### **SECTION 14: Transport information**

#### 14.1 UN number

ADN : UN 1485
ADR : UN 1485
RID : UN 1485
IMDG : UN 1485
IATA : UN 1485

### 14.2 UN proper shipping name

ADN : POTASSIUM CHLORATE, MIXTURE
ADR : POTASSIUM CHLORATE, MIXTURE
RID : POTASSIUM CHLORATE, MIXTURE
IMDG : POTASSIUM CHLORATE, MIXTURE

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

IATA : Potassium chlorate, Mixture

### 14.3 Transport hazard class(es)

Class Subsidiary risks

ADN : 5.1
ADR : 5.1
RID : 5.1
IMDG : 5.1
IATA : 5.1

### 14.4 Packing group

**ADN** 

Packing group : II
Classification Code : O2
Hazard Identification Number : 50

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

Labels : 5.1

**ADR** 

Packing group : II
Classification Code : O2
Hazard Identification Number : 50
Labels : 5.1
Tunnel restriction code : (E)

RID

Packing group : II
Classification Code : O2
Hazard Identification Number : 50
Labels : 5.1

**IMDG** 

Packing group : II Labels : 5.1 EmS Code : F-H, S-Q

IATA (Cargo)

Packing instruction (cargo : 562

aircraft)

Packing instruction (LQ) : Y544
Packing group : II
Labels : Oxidizer

IATA (Passenger)

Packing instruction (passen- : 558

ger aircraft)

Packing instruction (LQ) : Y544
Packing group : II
Labels : Oxidizer

14.5 Environmental hazards

**ADN** 

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

#### 14.6 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.

# 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 28.09.2024 9372730-00008 Date of first issue: 27.08.2021 5.1

### **SECTION 15: Regulatory information**

# 15.1 Safety, health and environmental regulations/legislation specific for the substance or mix-

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17) : Not applicable

UK REACH Candidate list of substances of very high Not applicable

concern (SVHC) for Authorisation

The Persistent Organic Pollutants Regulations (retained Not applicable

Regulation (EU) 2019/1021 as amended for Great Brit-

Regulation (EC) on substances that deplete the ozone Not applicable

laver

Regulation (EU) 2019/1148 on the marketing and use of Potassium chlorate

explosives precursors

UK REACH List of substances subject to authorisation Not applicable

(Annex XIV)

GB Export and import of hazardous chemicals - Prior Potassium chlorate

Informed Consent (PIC) Regulation

Control of Major Accident Hazards Regulations 2015 (COMAH)

Quantity 2 Quantity 1 200 t

P8 **OXIDIZING LIQUIDS AND** 50 t

**SOLIDS** 

E1 **ENVIRONMENTAL** 100 t 200 t

**HAZARDS** 

### Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

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

**AICS** not determined

DSL not determined

**IECSC** not determined

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

Other information Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

lines.

#### **Full text of H-Statements**

H271 : May cause fire or explosion; strong oxidizer.

H301 : Toxic if swallowed.

H318 : Causes serious eye damage.

H332 : Harmful if inhaled.

H351 : Suspected of causing cancer.

H373 : May cause damage to organs through prolonged or repeated

exposure.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard Aquatic Chronic : Long-term (chronic) aquatic hazard

Carc. : Carcinogenicity
Eye Dam. : Serious eye damage
Ox. Sol. : Oxidizing solids

STOT RE : Specific target organ toxicity - repeated exposure GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



# **Enilconazole Smoke Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 5.1
 28.09.2024
 9372730-00008
 Date of first issue: 27.08.2021

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

#### **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 Agen-

cy, http://echa.europa.eu/

### Classification of the mixture: Classification procedure:

Ox. Sol. 1	H271	Based on product data or assessment
Eye Irrit. 2	H319	Based on product data or assessment
Carc. 2	H351	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 1	H410	Calculation method

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.

GB / EN