



**KANTAREL**  
**Fungicide - Emulsifiable Concentrate (EC)**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING (>)**

**1.1 Product identifier:** KANTAREL  
Fungicide - Emulsifiable Concentrate (EC)  
Contains 100g/L or 10.23% (w/w) of Penconazol

**Other means of identification:** NA

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

Relevant uses: Fungicide for agricultural use. For professional user only.

Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Details of the supplier of the safety data sheet:**

Ascenza Agro, SA  
Avenida do Rio Tejo, Herdade das Praias  
2910-440 Setúbal - Portugal - Setúbal  
Phone.: +351265710100 - Fax: +351265710105  
agroseguranca@ascenza.com  
http://www.ascenza.com

**Holder of approval:**  
TRADE CORPORATION INTERNATIONAL, S.A.U  
C/Vía de los poblados, 3. Parque Empresarial Cristalia  
Edificio ONIC 5, 6ª planta  
28033, Madrid  
Tel: 91 327 29 30  
sds@tradecorp.rovensa.com  
http://www.tradecorp.es

**1.4 Emergency telephone number:** Local Poisons Information Centre

**SECTION 2: HAZARDS IDENTIFICATION (>)**

**2.1 Classification of the substance or mixture:**

**CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Eye Irrit. 2: Eye irritation, Category 2, H319

Repr. 2: Reproductive toxicity, Category 2, H361d

**2.2 Label elements:**

**CLP Regulation (EC) No 1272/2008:**

**Warning**



**Hazard statements:**

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Repr. 2: H361d - Suspected of damaging the unborn child.

**Precautionary statements:**

P201+P202: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood

P261: Avoid breathing spray

P273: Avoid release to the environment

P280: Wear protective gloves and eye protection/face protection

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

P391: Collect spillage

P501: Dispose of the contents/container to the authorized waste recovers facility.

**Supplementary information:**

EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

SP1: Do not contaminate water with the product or its container. (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

SPe3: To protect the aquatic organisms, respect an untreated buffer zone of 15 m to surface water bodies.

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

No endocrine disrupting properties are known for any of the substances present in the mixture.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (>)**

**3.1 Substance:**



Non-applicable

**3.2 Mixture:**

**Chemical description:** Organic compounds

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 34590-94-8 EC: 252-104-2 Index: -- REACH: 01-2119450011-60-XXXX	<b>Dipropylene Glycol Methyl Ether<sup>(1)</sup></b> Not classified Regulation 1272/2008	<b>50 - &lt;75 %</b>
CAS: 108-94-1 EC: 203-631-1 Index: 606-010-00-7 REACH: 01-2119453616-35-XXXX	<b>Cyclohexanone<sup>(2)</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302+H312+H332; Eye Dam. 1: H318; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Danger 	<b>10 - &lt;25 %</b>
CAS: 66246-88-6 EC: 266-275-6 Index: 613-317-00-X REACH: (i)	<b>Penconazole (ISO)<sup>(2)</sup></b> ATP ATP06 Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Repr. 2: H361d - Warning 	<b>10.23 % (*)</b>

<sup>(1)</sup> Substance with a Union workplace exposure limit

<sup>(2)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

(\*) Equivalent to 100g/L of Penconzol pure

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

- (i) Substance considered registered under Article 15 (1) of Regulation 1907/2006;
- (ii) Substance considered as registered under Article 15 (2) of Regulation (EC) No 1907/2006;
- (iii) Substance exempted from registration under Article 2 (9) of Regulation 1907/2006;
- (iv) Substance exempt from registration under Article 2 (7) (a) of Regulation (EC) No 1907/2006;
- (v) Substance exempted from registration under Article 6 (1) of Regulation (EC) No 1907/2006;
- (vi) Substance exempted from registration under Article 2 (7) (b) of Regulation (EC) No 1907/2006;
- (vii) Substance exempted from registration under Article 2 (7) (c) of Regulation (EC) No 1907/2006

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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#### SECTION 4: FIRST AID MEASURES (continued)

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

Acute and delayed effects are indicated in sections 2 and 11.

**(Penconazole):** Ingestion - gastrointestinal disorder: nausea, vomiting, diarrhoea and abdominal ache; anorexia, fever, headache, depression of central nervous system. Inhalation – respiratory disturbs: cough, dyspnoea, rhinitis, increase in bronchial secretions; Contact - irritation of the eyes, skin and mucous, watering of eyes, conjunctivitis; contact dermatitis.

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

Provide supportive care and symptomatic treatment. If swallowed induce vomiting or provide a gastric wash, avoiding aspiration or administrate activated charcoal or saline laxative (type: sodium or magnesium sulphate or similar).

#### SECTION 5: FIREFIGHTING MEASURES

##### 5.1 Extinguishing media:

###### Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

###### Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

##### 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

##### 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

###### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

##### 6.1 Personal precautions, protective equipment and emergency procedures:

###### For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

###### For emergency responders:

See section 8.

##### 6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

##### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

##### 6.4 Reference to other sections:

See sections 8 and 13.



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**SECTION 7: HANDLING AND STORAGE (>)**

**7.1 Precautions for safe handling:**

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

**PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT.** Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

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

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (>)**

**8.1 Control parameters:**

**(Penconazole):** ADI: 0.03 mg/kg b.w/ day. AOEL: 0.03 mg/kg b.w / day.

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)	10 ppm	40,8 mg/m <sup>3</sup>
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	IOELV (STEL)	20 ppm	81,6 mg/m <sup>3</sup>
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	IOELV (8h)	50 ppm	308 mg/m <sup>3</sup>
	IOELV (STEL)		

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	283 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	308 mg/m <sup>3</sup>	Non-applicable
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	4 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Inhalation	80 mg/m <sup>3</sup>	80 mg/m <sup>3</sup>	40 mg/m <sup>3</sup>	40 mg/m <sup>3</sup>

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued) (>)**

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	36 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	121 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	37,2 mg/m <sup>3</sup>	Non-applicable
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Oral	1,5 mg/kg	Non-applicable	1,5 mg/kg	Non-applicable
	Dermal	1 mg/kg	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	20 mg/m <sup>3</sup>	40 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>

**PNEC:**



Identification				
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	STP	4168 mg/L	Fresh water	19 mg/L
	Soil	2,74 mg/kg	Marine water	1,9 mg/L
	Intermittent	190 mg/L	Sediment (Fresh water)	70,2 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	7,02 mg/kg
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	STP	10 mg/L	Fresh water	0,033 mg/L
	Soil	0,03 mg/kg	Marine water	0,003 mg/L
	Intermittent	0,329 mg/L	Sediment (Fresh water)	0,249 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,025 mg/kg

**8.2 Exposure controls:**



A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Panoramic mask or half-mask with combined filter ABEK replaceable.		EN 405+A1 EN 140	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1 EN 420+A1	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.





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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued) (>)**

**E.- Body protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 1149 -5 EN 13034+A1 EN ISO 13688	For professional use only. Clean periodically according to the manufacturer 's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20347 EN ISO 20345 EN 13832-3	Replace boots at any sign of deterioration.

**F.- Additional emergency measures**

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1	 Eyewash stations	DIN 12 899 ISO 3864-1

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	78,56 % weight
V.O.C. density at 20 °C:	Non-applicable
Average carbon number:	6,84
Average molecular weight:	139,97 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (>)**

**9.1 Information on basic physical and chemical properties:**

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Emulsifiable Concentrate
Colour:	Light yellow
Odour:	Uncharacteristic
Odour threshold:	Not available

**Volatility:**

Boiling point at atmospheric pressure:	Not available
Vapour pressure at 20 °C:	Not available
Vapour pressure at 50 °C:	Not available
Evaporation rate at 20 °C:	Not available

**Product description:**

Density at 20 °C:	Not available
Relative density at 20 °C:	0.98
Dynamic viscosity at 20 °C:	Not available
Kinematic viscosity at 20 °C:	Not available
Kinematic viscosity at 40 °C:	Not available

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued) (>)**

Concentration:	Not available
pH:	4.8 (1% in water)
Vapour density at 20 °C:	Not available
Partition coefficient n-octanol/water 20 °C:	Not available
Solubility in water at 20 °C:	Miscible in water
Solubility properties:	Not available
Decomposition temperature:	Not available
Melting point/freezing point:	Not available

**Flammability:**

Flash Point:	65 °C
Flammability (solid, liquid, gas):	Not flammable
Autoignition temperature:	360 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available

**Particle characteristics:**

Median equivalent diameter:	Non-applicable
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**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties:	No explosive (based on components)
Oxidising properties:	No oxidant (based on components)
Corrosive to metals:	Not available
Heat of combustion:	Not available
Aerosols-total percentage (by mass) of flammable components:	Not available

**9.2 Other information:**

Surface tension at 20 °C:	Not available
Refraction index:	Not available

As for the remaining characteristics, data is not presented because it is not available, in accordance with the registration studies and intrinsic characteristics of the products.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Precaution	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

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**SECTION 10: STABILITY AND REACTIVITY (continued)**

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION (>)**

**11.1 Information on toxicological effects:**

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health.

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.  
IARC: Cyclohexanone (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Suspected of damaging the unborn child.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

**Acute toxicity (KANTAREL):**

Acute Oral LD50: > 2000 mg/kg b.w. (Rats)  
Acute Dermal LD50: > 4000 mg/kg b.w. (Rats)  
Acute Inhalation LC50 (4h): NA

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**SECTION 11: TOXICOLOGICAL INFORMATION (continued) (>)**

**Acute Effects (Penconazole):**

Skin corrosion/ irritation: Non irritant (Rabbit)  
Serious eye damage/irritation: Non irritant (Rabbit)  
Respiratory sensitisation: No information available  
Skin sensitisation: Not a skin sensitizer (Guinea pigs)

**Acute Effects (KANTAREL):**

Skin corrosion/ irritation: Non irritant (Rabbit)  
Serious eye damage/irritation: Irritant (Rabbit)  
Respiratory sensitisation: No information available  
Skin sensitisation: Not a skin sensitizer (Guinea pigs)

**Chronic effects (Penconazole):**

Mutagenicity: Not observed  
Carcinogenicity: Not observed  
Reproductive toxicity: Possible developmental toxic effects  
STOT- single exposure: No demonstrated  
STOT- repeated exposure: No demonstrated  
Aspiration hazard: No information available

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
Penconazole (ISO) CAS: 66246-88-6 EC: 266-275-6	LD50 oral	971 mg/kg b.w. < 2000 mg/kg b.w.	Rabbits Rats
	LD50 dermal	> 3000 mg/kg b.w.	Rats
	LC50 inhalation	> 4.05 mg/L of air (4 h)	Rats
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	LD50 oral	1890 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (4 h) (ATEI)	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

Endocrine-disrupting properties: The product fails to meet the criteria.

**Other information**

Non-applicable

**SECTION 12: ECOLOGICAL INFORMATION (>)**

**12.1 Toxicity:**

Identification	Acute toxicity		Species	Genus
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	LC50	10000 mg/L (96 h)	<i>Pimephales promelas</i>	Fish
	EC50	1919 mg/L (48 h)	<i>Daphnia magna</i>	Crustacean
	EC50	Non-applicable		
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	LC50	527 mg/L (96 h)	<i>Pimephales promelas</i>	Fish
	EC50	800 mg/L (24 h)	<i>Daphnia magna</i>	Crustacean
	EC50	370 mg/L (192 h)	<i>Scenedesmus quadricauda</i>	Algae
Penconazole (ISO) CAS: 66246-88-6 EC: 266-275-6	LC50	1.13 mg/L (96h) 3.8-4.6 mg/L (96h) 2.1 mg/L (96h)	<i>Oncorhynchus mykiss</i> Carp <i>Bluegill sunfish</i>	Fish
	EC50	6.75 mg/L (48 h)	<i>Daphnia magna</i>	Crustacean
	EC50	4.9 mg/L (72 h)	<i>Selenastrum capricornutum</i>	Algae

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**SECTION 12: ECOLOGICAL INFORMATION (continued) (>)**

**Acute toxicity (Penconazole):**

Birds acute oral LD50: 2424 mg/kg b.w. (*Japanese quail*); > 1590 mg/kg b.w. (Mallard ducks); > 3000 b.w. (Pekin ducks)  
Bee oral LD50 (72 h): > 5 µg/bee  
Bee contact LD50 (72 h): > 5 µg/bee  
Aquatic plants CE50 (7 d): 0.19 mg/L (*Lemna gibba*)

**Acute toxicity (KANTAREL):**

Algae acute EyC50 (72 h): 8.2 mg FP/L (*Selenastrum capricornutum*)  
Bee oral LD50 (48 h): > 215.6 µg FP/bee  
Bee contact LD50 (48h): > 200 µg FP/bee  
Aquatic plants CE50 (7 d): 1.26 mg FP/L (*Lemna gibba*)

**Chronic toxicity (Penconazole):**

Fish chronic NOEC (30 d): 0.32 mg/L (Fathead minnow)  
Aquatic invertebrates chronic NOEC (21 d): 0.060 mg/L (*Daphnia magna*)  
Algae chronic NOEC: NA

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BOD5	Non-applicable	Concentration	Non-applicable
	COD	0 g O2/g	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	73 %
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	87 %

**(Penconazole):**

- Soil: Persistent in soil. Typical and Lab DT50: 117 d; Field DT50: 90 d.  
- Water: Stable in water-sediment systems, DT50: 853 d. Moderately fast chemical degradation in water phase only, DT50: 2 d. Not readily biodegradable. Photodecomposition in water is moderately fast. DT50: 4 d.

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BCF	1
	Pow Log	-0.06
	Potential	Low
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	BCF	2
	Pow Log	0.81
	Potential	Low
Penconazole (ISO) CAS: 66246-88-6 EC: 266-275-6	BCF	320
	Pow Log	3.72 (pH 5.65; 25°C)
	Potential	High

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
Cyclohexanone CAS: 108-94-1 EC: 203-631-1	Koc	17	Henry	9,119E-1 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	3,437E-2 N/m (25 °C)	Moist soil	Yes

**(Penconazole):** Low to slight mobility.

**12.5 Results of PBT and vPvB assessment:**

Product fails to meet PBT/vPvB criteria

**12.6 Disrupting properties of the endocrine system:**

There are no known endocrine disrupting properties.

**12.7 Other adverse effects:**

Not described.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
02 01 08*	agrochemical waste containing hazardous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP14 Ecotoxic, HP10 Toxic for reproduction, HP4 Irritant — skin irritation and eye damage

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION (>)**

**Transport of dangerous goods by land:**

With regard to ADR 2021 and RID 2021:



- 14.1 UN number or ID number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Penconazole (ISO))
- 14.3 Transport hazard class(es):** 9  
Labels: 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**  
Special regulations: 274, 335, 375, 601  
Tunnel restriction code: (-)  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 39-18:



- 14.1 UN number or ID number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Penconazole (ISO))
- 14.3 Transport hazard class(es):** 9  
Labels: 9
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**  
Special regulations: 335, 969, 274  
EmS Codes: F-A, S-F  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L  
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

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**KANTAREL**  
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**SECTION 14: TRANSPORT INFORMATION (continued) (>)**

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2022:



- 14.1 UN number or ID number:** UN3082  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Penconazole (ISO))  
**14.3 Transport hazard class(es):** 9  
 Labels: 9  
**14.4 Packing group:** III  
**14.5 Environmental hazards:** Yes  
**14.6 Special precautions for user**  
 Physico-Chemical properties: see section 9  
**14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**SECTION 15: REGULATORY INFORMATION (>)**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable  
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable  
 Article 95, REGULATION (EU) No 528/2012: Non-applicable  
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Restriction n.º 3 – Not Applicable, based on the uses mentioned on the section 1.2.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation  
 Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION (>)**

**Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (2020/878/EU).

**Texts of the legislative phrases mentioned in section 2:**

H319: Causes serious eye irritation.  
 H411: Toxic to aquatic life with long lasting effects.  
 H361d: Suspected of damaging the unborn child.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3



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SECTION 16: OTHER INFORMATION (continued) (>)

**CLP Regulation (EC) No 1272/2008:**

Acute Tox. 4: H302 - Harmful if swallowed.  
Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.  
Aquatic Acute 1: H400 - Very toxic to aquatic life.  
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.  
Eye Dam. 1: H318 - Causes serious eye damage.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Repr. 2: H361d - Suspected of damaging the unborn child.  
Skin Irrit. 2: H315 - Causes skin irritation.

**Classification procedure:**

Aquatic Chronic 2: Based on test data  
Eye Irrit. 2: Based on test data  
Repr. 2: Calculation method.

**Advice related to training:**

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol-water partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

**Other information:**

Content review: The sections / sub sections marked with (>) were changed with relevant information, from the previous version.  
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The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -