



Sorbic acid CAS : 110-44-1	Skin irrit 2 – H315 Eye irrit 2, H319 STOT SE 3 –H335	Xi, R36/37/38	< 1 %	no
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Other components :

*Laminaria digitata* extract  
Magnesium sulfate

**SECTION 4 – FIRST AID MEASURES****4.1. Description of first aid measures**

In case of :

- Inhalation: not specifically concerned (aqueous liquid), provide fresh air.
- Eyes: rinse immediately and abundantly with water for 15 minutes, and consult an ophthalmologist.
- Skin: remove soiled clothes, rinse abundantly for 15 minutes. Consult a doctor in case of itching and redness.
- Ingestion: rinse mouth with water. Consult a doctor immediately. Do not vomit.

**4.2. Most important symptoms and effects, both acute and delayed**

Depending on the type of exposition: redness, stinging, itching, nausea, vomiting, diarrhea...

**4.3. Indication of any immediate attention and special treatment needed**

No further relevant information available.

**SECTION 5 – FIRE FIGHTING MEASURES****5.1. Extinguishing media**

**Suitable extinguishing agents:** all types of extinguishing agents are suitable (CO<sub>2</sub>, extinguishing powder, water spray, alcohol resistant foam...)

**Specific hazards:** possible emission of toxic fumes. Collect contaminated fire extinguishing water separately and eliminate according to applicable regulation

**Protective equipment :** fire-fighting masks

**5.2. Specific hazards arising from the substance or mixture**

No further information available, emissions resulting from combustion may contain sulfur oxides and nitrogen oxides.

**5.3. Advice for firefighters**

Do not enter or stay in hazardous area without protective clothing and autonomous breathing equipment

**SECTION 6 – ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with eyes and skin. Use rubber or latex gloves, and protective eyewear.

**6.2. Environmental precautions**

Contain spills. Do not reject directly in sewer or in the natural environment (surface or groundwater). Inform authorities of any spills.

**6.3. Methods and material for containment and cleaning up**

Do not dilute.

Absorb with liquid binding material. Dispose contaminated material as waste according to item 13.

Do not refill original packaging.

**6.4. Reference to other sections**

See section 8 for information on personal protective equipment

See section 13 for disposal information.

## SECTION 7 – HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Handling : use a chemical protection mask, rubber or latex gloves, protective eyewear  
 Avoid spilling and accidental projections. Avoid contact with skin and eyes. Do not breathe vapors.  
 Do not eat, smoke or drink in work area. Wash hands before breaks and after using product.

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

Storage: in closed container, away from heat or freezing temperatures. Do not store close to food products or drinks, including animal feed. Stacking of pallets must be limited to 2 pallets.  
 Container: 1000 liter tank, 5 or 10 liter tank. Do not transfer to other containers. Keep product in original container, well closed and with original labeling.

### 7.3. Specific end uses

No further relevant information available

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

Advice for the workplace : work outdoors or insure a good ventilation/exhaustion at the workplace  
 Limit values for monitoring at the workplace : no studies have been carried out on the mixture

### 8.2. Exposure controls

Monitoring means : occupational health services

#### Protective equipment

**Breathing equipment :** P2 filter against aerosols

**Protection of skin:** gloves resistant against chemicals. Protective clothing (plastic sleeve covers, apron, gloves with sleeve covers, single use suits...) depending on use

**Protection of eyes :** protective eyewear

**Specific hygiene measures:** wash hands after handling product. Do not eat, smoke or drink during use of product.

**Protection of the environment:** Empty rinsing water of the original container into the spraying tank of machine for fertilizing.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance :</b>	brown liquid
<b>Odor :</b>	typical
<b>Density</b>	1.240 – 1.255
<b>pH :</b>	4.5 – 5.5
<b>Solubility :</b>	fully miscible
<b>Melting point :</b>	not determined
<b>Boiling point:</b>	not determined
<b>Decomposition temperature :</b>	not determined
<b>Vapor pressure:</b>	not applicable
<b>Danger of explosion :</b>	not applicable
<b>Combustive properties :</b>	not applicable

### 9.2. Other information

No further relevant information available

## SECTEUR 10 – STABILITY AND REACTIVITY

### 10.1 Reactivity

No available data (no particular risks expected)

### 10.2 Chemical stability

The product is stable in the normal conditions of use.

The product may change colors in time, without alteration of its properties.

### 10.3 Possibility of hazardous reactions

No available data (no particular risks expected)

### 10.4 Conditions to avoid

Storage at temperatures above 40 °C and below -10°C

### 10.5 Incompatible materials

Do not store in metal containers

### 10.6 Hazardous decomposition products

No dangerous decomposition products known. In case of fire, see section 5.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### 11.1 Information relative to toxicological effects

No tests carried out on mixture

**Acute toxicity** : not classified

#### **Data relatives to components :**

##### Sorbic acid

Ingestion: LD 50 (rat): 7360 mg/kg

Skin administration (rat) : LD50 : 2000 mg/kg

##### Monohydrated citric acid (<0.05%):

DL50 Oral (mouse) = 5400 mg/kg

DL50 Oral (rat) = 3000 mg/kg

**Chronic toxicity** : not classified

##### Monohydrated citric acid (<0.05%):

NOAEL Oral (rat) = 1200 mg/kg 2 years

**Irritation** : not classified

##### Monohydrated citric acid (<0.05%):

Eyes (rabbit) : severe irritation

Skin (rabbit) : slightly irritating

**Sensitization** : no sensitizing effects known

**Carcinogenic properties** : no available data for mixture

**Mutagenicity** : no available data for mixture

##### Monohydrated citric acid (<0.05%):

In vivo (mammal) : Negative

**Toxicity for reproduction** : no available data for mixture

## SECTION 12 – ECOLOGICAL INFORMATION

### 12.1 Toxicity

No studies have been carried out for the mixture.

#### **Components :**

##### Monohydrated citric acid (<0.05%):

CE50 Daphnies = 120 mg/l - 72 h

CE50 Bacteria (*Pseudomonas putida*) > 100000 mg/l - 16 h

CL50 Fish (*Leuciscus idus*) = 440 to 760 mg/l - 96 h

Sorbic acid (< 1 %) :

CL50, fish, 96 h : 1250 mg/l  
CE50, daphnia, 48 h : 353 mg/l  
CE50, algues, 72 h : 24 mg/l

**12.2 Persistence and degradability**

No negative impact expected on wastewater treatment plant. All components are degradable or biodegradable.

**12.3 Bioaccumulative potential****12.4 Mobility in soil**

All components are soluble in water

**12.5 Results of PBT and vPvB assessments**

Not applicable

**12.6 Other adverse effects**

No further relevant information

**SECTION 13 – DISPOSAL CONSIDERATIONS****13.1 Waste treatment method**

Residues: Must be disposed according to applicable regulations.

Must not be disposed in sewage system.

Destruction of packaging: Eliminate cardboard, pallets, containers according to applicable regulation.

Recommended cleaning agent: Empty rinsing water of the original container into the spraying tank of machine for fertilizing.

**SECTION 14 - TRANSPORT INFORMATION**

**14.1. UN number :** not regulated

**14.2 UN shipping name :** not regulated

**14.3 Transport hazard class :**

Road (ADR 2011) : not regulated

Maritime (IDMG 2011) : not regulated

**14.4 Packing group :** not regulated

**14.5 Environmental hazards :** not regulated

**14.6 Specific precautions by the user :** no further information available

**14.7 Transport of bulk according to annex II of MARPOL 73/78 convention and IBC Code :** not applicable

**SECTION 15 – REGULATORY INFORMATION**

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

Hazard pictograms : none

Hazard statements : none

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16 – OTHER INFORMATIONS**

The content and the format of the Material Safety Data Sheet comply with EC regulation 1907/2006 and regulation 453/2010.

Details of revision : new format

Risk phrases in section 2 : none

Risk phrases in section 3 :

Xi : irritant

R 36/37/38: irritating to eyes, respiratory tract and skin.

H315 : Causes skin irritation

H319 : Causes serious eye irritation

H335 : can irritate respiratory tract

P102 : Keep out of reach of children

P103 : Read label before use

P501 : Dispose of contents / container in accordance with local/regional/ national/ international regulations

*This safety data sheet complements the technical instructions of use. The information is based on the current knowledge relative to the product on the date of the update of the document. The manufacturer will not be held responsible for consequences of the use of the product for uses other than the relevant identified use. This document shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*