



# SAFETY DATA SHEET

according to the Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 11/01/2013

Version 1.0

## SECTION 1. Identification

### Product identifier

Product number	100662
Product name	Sorbic acid EMPROVE® ESSENTIAL Ph Eur,BP,NF,FCC,E 200

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

Identified uses	Pharmaceutical production, Reagent for development and research, Cosmetic raw material
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   400 Summit Drive   Burlington   Massachusetts 01803   United States of America   General Inquiries: +1 800-645-5476   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone number	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Eye irritation, Category 2, H319  
Specific target organ toxicity - single exposure, Category 3, H335  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

*Hazard pictograms*



*Signal word*  
Warning

*Hazard statements*  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

*Precautionary statements*  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number 100662  
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Version 1.0

lenses, if present and easy to do. Continue rinsing.

## OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Formula	C <sub>6</sub> H <sub>8</sub> O <sub>2</sub> (Hill)
CAS-No.	110-44-1
Molar mass	112.13 g/mol

### Hazardous components

*Chemical Name (Concentration)*

CAS-No.

*Sorbic acid (<= 100 % )*

110-44-1

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## SECTION 4. First aid measures

### Description of first aid measures

*Inhalation*

After inhalation: fresh air.

*Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

*Eye contact*

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

*Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

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

irritant effects, Cough, Shortness of breath

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

No information available.

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## SECTION 5. Firefighting measures

### Extinguishing media

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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according to the Hazard Communication Standard (29 CFR 1910.1200)

Product number

100662

Version 1.0

Product name

Sorbic acid EMPROVE® ESSENTIAL Ph Eur,BP,NF,FCC,E 200

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## Special hazards arising from the substance or mixture

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

## Advice for firefighters

*Special protective equipment for firefighters*

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

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### Environmental precautions

Do not empty into drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Store at +15°C to +25°C.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

Contains no substances with occupational exposure limit values.

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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Product number

100662

Version 1.0

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Sorbic acid EMPROVE® ESSENTIAL Ph Eur,BP,NF,FCC,E 200

---

### *Hygiene measures*

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

### *Eye/face protection*

Safety glasses

### *Hand protection*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### *Other protective equipment*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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

Physical state	powder
Colour	white
Odour	weak
Odour Threshold	No information available.
pH	ca. 3.3 at 1.6 g/l 68 °F (20 °C)
Melting point	132 - 135 °C
Boiling point/boiling range	ca. 442 °F (228 °C) at 1,013 hPa (decomposition)
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	0.01 hPa at 68 °F (20 °C)

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Relative vapour density	3.87
Relative density	1.2 g/cm <sup>3</sup> at 68 °F (20 °C)
Water solubility	1.6 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	log Pow: 1.33 (25 °C) (experimental) Bioaccumulation is not expected. (Lit.)
Auto-ignition temperature	No information available.
Decomposition temperature	374 °F (190 °C)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Ignition temperature	> 266 °F (> 130 °C)
Bulk density	ca.650 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### Reactivity

Risk of dust explosion.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Violent reactions possible with:  
Strong oxidizing agents, Bases

### Conditions to avoid

no information available

### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Inhalation, Eye contact, Skin contact, Ingestion

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---

## *Acute oral toxicity*

LD50 rat: 7,360 mg/kg (RTECS)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

## *Acute inhalation toxicity*

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:., damage of respiratory tract

Irritating to respiratory system.

## *Acute dermal toxicity*

LD50 rat: > 2,000 mg/kg

(External MSDS)

## *Skin irritation*

rabbit

Result: No irritation

OECD Test Guideline 404

## *Eye irritation*

rabbit

Result: Eye irritation

OECD Test Guideline 405

Causes serious eye irritation.

## *Sensitisation*

Sensitisation test: guinea pig

Result: negative

(IUCLID)

Sensitisation possible in predisposed persons.

## *Genotoxicity in vivo*

Mutagenicity (mammal cell test): micronucleus.

Result: negative

Method: OECD Test Guideline 474

## *Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

## *Specific target organ toxicity - single exposure*

May cause respiratory irritation.

## *Specific target organ toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

## *Aspiration hazard*

Based on available data the classification criteria are not met.

## **Carcinogenicity**

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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100662

Version 1.0

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---

OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## Further information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

#### *Toxicity to fish*

LC50 Danio rerio (zebra fish): 1,250 mg/l; 96 h

OECD Test Guideline 203

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 353 mg/l; 48 h

OECD Test Guideline 202

#### *Toxicity to algae*

IC50 Desmodesmus subspicatus (green algae): 24.1 mg/l; 72 h (External MSDS)

#### *Toxicity to bacteria*

EC50 Bacteria: 1,009 mg/l; 1 h (IUCLID)

### Persistence and degradability

#### *Biodegradability*

95 %; 6 d

OECD Test Guideline 302B

Easily eliminable.

### Bioaccumulative potential

#### *Partition coefficient: n-octanol/water*

log Pow: 1.33 (25 °C)

(experimental)

Bioaccumulation is not expected. (Lit.)

### Mobility in soil

No information available.

#### *Additional ecological information*

Biological effects:

Harmful effect due to pH shift.

Further information on ecology

Discharge into the environment must be avoided.

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100662

Version 1.0

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---

## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

### Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15. Regulatory information

### United States of America

#### OSHA Hazards

Combustible dust

Eye irritant

Respiratory irritant

Skin irritant

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

#### SARA 311/312 Hazards

Acute Health Hazard

#### SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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---

## Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

## DEA List I

Not listed

## DEA List II

Not listed

## TSCA 12b

### *Components*

Sorbic acid

110-44-1

## US State Regulations

### Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know

#### *Components*

Sorbic acid

### New Jersey Right To Know

#### *Components*

Sorbic acid

### California Prop 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL.

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

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## Full text of H-Statements referred to under sections 2 and 3.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Date of issue: 11/01/2013

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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