

Revision Date 22-Feb-2012

Revision Number 2

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product Description:

Fumaric acid monoethyl ester

Cat No.

156200000; 156200100; 156201000; 156200250

Synonyms

Monoethyl fumarate

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

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

### Details of the supplier of the safety data sheet

#### Company

Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

### Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

## SECTION 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

Xi - Irritant

R-phrases

Risk Combination Phrases

R36/37/38 - Irritating to eyes, respiratory system and skin

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## SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Warning

### Hazard Statements

H319 - Causes serious eye irritation

H315 - Causes skin irritation

H335 - May cause respiratory irritation

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing/ 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

### Other Hazards

No information available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Ethyl fumarate 2459-05-4	EEC No. 219-544-7	95	2459-05-4	Xi;R36/37/38	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

## SECTION 4. FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.



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<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
<b>Notes to Physician</b>	Treat symptomatically

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

### Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

### Environmental precautions

Should not be released into the environment.

### Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

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## Specific End Uses

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location Ensure adequate ventilation, especially in confined areas

#### Personal protective equipment

##### Eye Protection

Safety glasses with side-shields Goggles

##### Hand Protection

Protective gloves

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

#### Environmental exposure controls

No information available.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical State

Solid

#### Appearance

Light cream

#### pH

No information available.

#### Boiling Point/Range

147°C / 296.6°F @ 16 mmHg

#### Melting Point/Range

64 - 69°C / 147.2 - 156.2°F

#### Flash Point

No information available.

#### Autoignition Temperature

No information available.

#### Molecular Formula

C6 H8 O4

#### Molecular Weight

144.13

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

### Chemical Stability

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Stable under normal conditions.

## Possibility of Hazardous Reactions

<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions .</b>	None under normal processing..

## Conditions to Avoid

Incompatible products, Excess heat, Avoid dust formation.

## Incompatible Materials

Strong oxidizing agents, Bases.

## Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

# SECTION 11. TOXICOLOGICAL INFORMATION

## Information on Toxicological Effects

### Acute Toxicity

<b>Product Information</b>	No acute toxicity information is available for this product
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### Component Information

### Chronic Toxicity

<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product
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<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Target Organs</b>	Skin Respiratory system Eyes
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Endocrine Disruptor Information</b>	None known

# SECTION 12. ECOLOGICAL INFORMATION

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**SECTION 12. ECOLOGICAL INFORMATION****Toxicity****Ecotoxicity effects** Do not empty into drains**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment****Other adverse effects**

No information available

**SECTION 13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste from Residues / Unused Products** Dispose of in accordance with local regulations**Contaminated Packaging** Empty containers should be taken to local recyclers for disposal**SECTION 14. TRANSPORT INFORMATION****IMDG/IMO** Not regulated**ADR** Not regulated**IATA** Not regulated**SECTION 15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

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WGK Classification : Hazardous to water/Class 1

## International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Ethyl fumarate	219-544-7	-		-	-	-	X	-	-	-	-

## Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

## Chemical Safety Assessment

### SECTION 16. OTHER INFORMATION

#### Full text of R-phrases referred to under sections 2 and 3

R36/37/38 - Irritating to eyes, respiratory system and skin

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Revision Summary

(M)SDS sections updated, 2, 3, 15, 16.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

#### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet