



## SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 07/31/2015

Version 1.3

### SECTION 1. Identification

#### Product identifier

|                |   |
|----------------|---|
| Product number | 108330  |
| Product name   | Oxynex® L liquid antioxidant for fats and oils suitable for use as excipient EMPROVE® exp |

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

|                 |   |
|-----------------|---|
| Identified uses | Use restricted under TSCA to research and development or as analytical reagent. Uses regulated under FDA or FIFRA are not affected.<br>Pharmaceutical production, Cosmetic raw material |
|-----------------|---|

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

|         |  |
|---------|--|
| Company | EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) |
|---------|--|

|                     |  |
|---------------------|--|
| Emergency telephone | 800-424-9300 CHEMTREC (USA)<br>+1-703-527-3887 CHEMTREC (International)<br>24 Hours/day; 7 Days/week |
|---------------------|--|

### SECTION 2. Hazards identification

#### GHS Classification

Flammable liquid, Category 2, H225

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### GHS-Labeling

*Hazard pictograms*



*Signal Word*

Danger

*Hazard Statements*

H225 Highly flammable liquid and vapor.

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### *Precautionary Statements*

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.  
Rinse skin with water/ shower.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### **Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

Chemical nature                      Ethanolic solution.

### **Hazardous ingredients**

#### *Chemical Name (Concentration)*

CAS-No.

*ethanol* ( $\geq 30\%$  -  $< 50\%$ )

64-17-5

Exact percentages are being withheld as a trade secret.

*citric acid* ( $\geq 1\%$  -  $< 5\%$ )

77-92-9

Exact percentages are being withheld as a trade secret.

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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 with the eyelid held wide open. Call in ophthalmologist if necessary.

#### *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**

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irritant effects, respiratory paralysis, Dermatitis, Dizziness, narcosis, inebriation, euphoria, Nausea, Vomiting

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

No information available.

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## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

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

*Unsuitable extinguishing media*

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

### Special hazards arising from the substance or mixture

Combustible material

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

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

### Advice for firefighters

*Special protective equipment for fire-fighters*

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

*Further information*

Cool closed containers exposed to fire with water spray. 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. Do not breathe vapors, aerosols.

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. Risk of explosion.

### 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 with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

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EMPROVE<sup>®</sup> exp

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### *Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

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

Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place.

Store at +5°C to +30°C (+41°F to +86°F).

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

### **Exposure limit(s)**

#### *Ingredients*

| Basis                  | Value                             | Threshold limits                     | Remarks |
|------------------------|-----------------------------------|--------------------------------------|---------|
| <i>ethanol 64-17-5</i> |                                   |                                      |         |
| ACGIH                  | Short Term Exposure Limit (STEL): | 1,000 ppm                            |         |
| NIOSH/GUIDE            | Recommended exposure limit (REL): | 1,000 ppm<br>1,900 mg/m <sup>3</sup> |         |
| OSHA_TRANS             | PEL:                              | 1,000 ppm<br>1,900 mg/m <sup>3</sup> |         |
| Z1A                    | Time Weighted Average (TWA):      | 1,000 ppm<br>1,900 mg/m <sup>3</sup> |         |

### **Engineering measures**

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

### **Individual protection measures**

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### *Hygiene measures*

Change contaminated clothing. Application of skin- protective barrier cream recommended.  
Wash hands after working with substance.

### *Eye/face protection*

Safety glasses

### *Hand protection*

full contact:

Glove material: butyl-rubber  
Glove thickness: 0.7 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0.40 mm  
Break through time: > 120 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 730 Camatril® - Velours (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Respiratory protection*

required when vapors/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapors of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

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## SECTION 9. Physical and chemical properties

|                           |   |
|---------------------------|---|
| Physical state            | liquid  |
| Color                     | beige   |
| Odor                      | of ethanol  |
| Odor Threshold            | No information available.                               |
| pH                        | 3 - 4<br>at 20 g/l<br>20 °C (20 °C)<br>(as an emulsion) |
| Melting point             | No information available.                               |
| Boiling point             | No information available.                               |
| Flash point               | 11 °C (11 °C)   |
| Evaporation rate          | No information available.                               |
| Flammability (solid, gas) | No information available.                               |
| Lower explosion limit     | No information available.                               |
| Upper explosion limit     | No information available.                               |
| Vapor pressure            | No information available.                               |
| Relative vapor density    | No information available.                               |

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|  |  |
|--|--|
| Density                                | 0.89 g/cm <sup>3</sup><br>at 20 °C (20 °C) |
| Relative density                       | No information available.                  |
| Water solubility                       | at 20 °C (20 °C)<br>(as an emulsion)       |
| Partition coefficient: n-octanol/water | No information available.                  |
| Autoignition temperature               | No information available.                  |
| Decomposition temperature              | No information available.                  |
| Viscosity, dynamic                     | No information available.                  |
| Explosive properties                   | Not classified as explosive.               |
| Oxidizing properties                   | none                                       |

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### SECTION 10. Stability and reactivity

#### Reactivity

Vapors may form explosive mixture with air.

#### Chemical stability

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

#### Possibility of hazardous reactions

Risk of explosion with:, Risk of ignition or formation of inflammable gases or vapors with:  
chromium(VI) oxide, hydrogen peroxide, uranium hexafluoride, nitrogen dioxide, Nitric acid,  
Oxides of phosphorus, permanganic acid, perchloric acid, sulfuric acid, potassium permanganate,  
perchlorates, Fluorine, Ethylene oxide, chromyl chloride, halogen-halogen compounds, Strong  
oxidizing agents, alkali oxides, Alkaline earth metals, Alkali metals

#### Conditions to avoid

Warming.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

#### Incompatible materials

various plastics, rubber

#### Hazardous decomposition products

no information available

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### SECTION 11. Toxicological information

#### Information on toxicological effects

*Likely route of exposure*

Eye contact, Skin contact

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## *Target Organs*

Eyes  
Skin  
Respiratory system  
Central nervous system  
Liver  
Blood  
reproductive system

## *Acute oral toxicity*

Symptoms: Nausea, Vomiting

## *Acute inhalation toxicity*

Symptoms: slight mucosal irritations  
absorption

## *Skin irritation*

Drying-out effect resulting in rough and chapped skin. After long-term exposure to the chemical:  
Dermatitis

## *Eye irritation*

slight irritation

## *Carcinogenicity*

Carcinogen classifications of IARC, NTP, California proposition 65 for Ethanol CAS 64-17-5 apply to beverage use only. This product is NOT intended for this use.

## *Specific target organ systemic toxicity - single exposure*

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

## *Specific target organ systemic toxicity - repeated exposure*

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

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

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

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Quantitative data on the toxicity of this product are not available.

Systemic effects:

euphoria

After absorption of large quantities:

Dizziness, inebriation, narcosis, respiratory paralysis

Further data:

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

### Ingredients

#### *ethanol*

##### *Acute oral toxicity*

LD50 Rat: 10,470 mg/kg  
OECD Test Guideline 401

##### *Acute inhalation toxicity*

LC50 Rat: 124.7 mg/l; 4 h ; vapor  
OECD Test Guideline 403

##### *Skin irritation*

Rabbit  
Result: No skin irritation  
OECD Test Guideline 404

##### *Eye irritation*

Rabbit  
Result: Eye irritation  
OECD Test Guideline 405

##### *Sensitization*

Sensitization test (Magnusson and Kligman):  
Result: negative  
(IUCLID)

##### *Germ cell mutagenicity*

##### *Genotoxicity in vitro*

Ames test  
Salmonella typhimurium  
Result: negative  
Method: OECD Test Guideline 471

##### *In vitro mammalian cell gene mutation test*

MOUSE LYMPHOMA TEST  
Result: negative  
Method: OECD Test Guideline 476

#### *citric acid*

##### *Acute oral toxicity*

LD50 Rat: 3,000 mg/kg (RTECS)

##### *Skin irritation*

Rabbit  
Result: No irritation  
OECD Test Guideline 404

##### *Eye irritation*

Rabbit  
Result: Severe irritations  
OECD Test Guideline 405



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### *Germ cell mutagenicity*

#### *Genotoxicity in vitro*

Ames test

Result: negative

(Lit.)

### *Reproductive toxicity*

No impairment of reproductive performance in animal experiments. (Lit.)

### *Teratogenicity*

Did not show teratogenic effects in animal experiments. (Lit.)

---

## SECTION 12. Ecological information

### **Ecotoxicity**

No information available.

### **Persistence and degradability**

No information available.

### **Bioaccumulative potential**

No information available.

### **Mobility in soil**

No information available.

### *Additional ecological information*

Discharge into the environment must be avoided.

## **Ingredients**

### *ethanol*

#### *Toxicity to fish*

LC50 *Leuciscus idus* (Golden orfe): 8,140 mg/l; 48 h (IUCLID)

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

EC50 *E.sulcatum*: 65 mg/l; 72 h (Lit.)

EC50 *Daphnia magna* (Water flea): 9,268 - 14,221 mg/l; 48 h (IUCLID)

#### *Toxicity to algae*

IC50 *Scenedesmus quadricauda* (Green algae): 5,000 mg/l; 7 d (Lit.)

#### *Toxicity to bacteria*

EC50 *Pseudomonas putida*: 6,500 mg/l; 16 h (IUCLID)

#### *Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*

semi-static test NOEC *Daphnia magna* (Water flea): 9.6 mg/l; 9 d (ECHA)

### *Biodegradability*

94 %

OECD Test Guideline 301E

Readily biodegradable.

### *Biochemical Oxygen Demand (BOD)*

930 - 1,670 mg/g (5 d)

(Lit.)

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*Theoretical oxygen demand (ThOD)*

2,100 mg/g  
(Lit.)

*Ratio COD/ThBOD*

90 %  
(Lit.)

*Partition coefficient: n-octanol/water*

log Pow: -0.31  
(experimental)  
(Lit.) Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

### *citric acid*

*Toxicity to fish*

LC50 *Leuciscus idus* (Golden orfe): 440 - 760 mg/l; 96 h (IUCLID)

*Toxicity to daphnia and other aquatic invertebrates*

EC5 *E.sulcatum*: 485 mg/l; 72 h (Lit.)

EC50 *Daphnia magna* (Water flea): ca. 120 mg/l; 72 h (IUCLID)

*Toxicity to algae*

IC5 *Scenedesmus quadricauda* (Green algae): 640 mg/l; 7 d (maximum permissible toxic concentration) (Lit.)

IC5 *M.aeruginosa*: 80 mg/l; 8 d (maximum permissible toxic concentration) (Lit.)

*Toxicity to bacteria*

EC5 *Pseudomonas putida*: > 10,000 mg/l; 16 h (maximum permissible toxic concentration) (Lit.)

*Biodegradability*

98 %; 2 d  
OECD Test Guideline 302B  
Readily eliminated from water

*Biochemical Oxygen Demand (BOD)*

526 mg/g (5 d)  
(IUCLID)

*Chemical Oxygen Demand (COD)*

728 mg/g  
(IUCLID)

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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)

|                           |                  |
|---------------------------|------------------|
| UN number                 | UN 1170          |
| Proper shipping name      | ETHANOL SOLUTION |
| Class                     | 3                |
| Packing group             | II               |
| Environmentally hazardous | --               |

### Air transport (IATA)

|                              |                  |
|------------------------------|------------------|
| UN number                    | UN 1170          |
| Proper shipping name         | ETHANOL SOLUTION |
| Class                        | 3                |
| Packing group                | II               |
| Environmentally hazardous    | --               |
| Special precautions for user | no               |

### Sea transport (IMDG)

|                              |                  |
|------------------------------|------------------|
| UN number                    | UN 1170          |
| Proper shipping name         | ETHANOL SOLUTION |
| Class                        | 3                |
| Packing group                | II               |
| Environmentally hazardous    | --               |
| Special precautions for user | yes              |
| EmS                          | F-E S-D          |

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## SECTION 15. Regulatory information

### United States of America

#### 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

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

### US State Regulations

#### Massachusetts Right To Know

*Ingredients*

ethanol

#### Pennsylvania Right To Know

*Ingredients*

ethanol

#### New Jersey Right To Know

*Ingredients*

ethanol

#### California Prop 65 Components

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

### Notification status

|       |  |
|-------|--|
| TSCA: | Not Listed on TSCA inventory. For Research and Development Use only. Not For Manufacturing or Commercial Purposes. |
| DSL:  | This product contains one or several components that are not on the Canadian DSL nor NDSL.                         |

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



*Signal Word*

Danger

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### *Hazard Statements*

H225 Highly flammable liquid and vapor.

### *Precautionary Statements*

#### Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

#### Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

H225 Highly flammable liquid and vapor.

### **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).

Revision Date 07/31/2015

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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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