

**SURFONIC® LF-17**

Version 1.4      Revision Date: 09/06/2022      SDS Number: 400041003606      Date of last issue: 06/10/2022  
Date of first issue: 12/29/2021

Print Date 09/27/2022

**SECTION 1. IDENTIFICATION**

Product name : SURFONIC® LF-17

**Manufacturer or supplier's details**

Company name of supplier : Indorama Ventures Oxides LLC  
Address : 24 Waterway Ave., Suite 1100, The Woodlands, Texas 77380  
United States of America (USA)  
Telephone : (256) 3405200

E-mail address of person : oxide.sds.global@indorama.net  
responsible for the SDS  
Emergency telephone number : CHEMTREC – United States (English)  
Local (City) Northern Virginia: +1 703-741-5970

**Recommended use of the chemical and restrictions on use**

Recommended use : Surfactant

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Skin irritation : Category 2

Short-term (acute) aquatic hazard : Category 3

Chronic aquatic toxicity : Category 3

**GHS label elements**

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H315 Causes skin irritation.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.

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**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Components**

Chemical name	CAS-No.	Concentration (% w/w)
Alcohols, C12-14, ethoxylated propoxylated	68439-51-0	>= 90 - <= 100
Alcohols, C12-14	80206-82-2	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
 Show this safety data sheet to the doctor in attendance.  
 Treat symptomatically.  
 Get medical attention if symptoms occur.
- If inhaled : If inhaled, remove to fresh air.  
 Get medical attention if symptoms occur.
- In case of skin contact : If skin irritation persists, call a physician.  
 If on skin, rinse well with water.  
 If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.  
 Remove contact lenses.  
 Keep eye wide open while rinsing.  
 If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
 Keep respiratory tract clear.  
 Never give anything by mouth to an unconscious person.  
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known

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Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid formation of respirable particles. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers.

Materials to avoid : For incompatible materials please refer to Section 10 of this SDS.

Further information on storage stability : Stable under normal conditions.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

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Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : No data available

Color : cloudy

Odor : slight

Odor Threshold : No data available

pH : 7

Melting point : 28.0 °F / -2.2 °C

Initial boiling point and boiling range : No data available

Flash point : 295.0 °F / 146.1 °C  
Method: open cup

Evaporation rate : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : < 1.333 hPa (68 °F / 20 °C)

Relative vapor density : 1

Relative density : 1

Density : No data available

Solubility(ies)  
Water solubility : soluble

Solubility in other solvents : No data available

Partition coefficient: n- : No data available

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octanol/water  
 Decomposition temperature : No data available

Viscosity  
 Viscosity, dynamic : No data available  
 Viscosity, kinematic : 54.7 mm<sup>2</sup>/s (99.9 °F / 37.7 °C)

Molecular weight : No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No dangerous reaction known under conditions of normal use.  
 Chemical stability : Stable under normal conditions.  
 Possibility of hazardous reactions : No hazards to be specially mentioned.  
 Conditions to avoid : None known.  
 Incompatible materials : None known.  
 Hazardous decomposition products : Carbon monoxide  
 Carbon dioxide (CO<sub>2</sub>)  
 Aldehydes  
 Ketones

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Method: Expert judgement  
 Assessment: The component/mixture is minimally toxic after single contact with skin.

**Components:****Alcohols, C12-14, ethoxylated propoxylated:**

Acute oral toxicity : LD50 (Rat): 3530 ml/kg  
 Assessment: The component/mixture is minimally toxic after single ingestion.

Acute dermal toxicity : LD50 (Rabbit): 2290 ml/kg  
 Assessment: The component/mixture is minimally toxic after single contact with skin.

**Alcohols, C12-14:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
 Method: OECD Test Guideline 401  
 Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.9 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist

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Method: see user defined free text

GLP: no

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation****Product:**

Species : Rabbit  
Result : Severe skin irritation

**Components:****Alcohols, C12-14, ethoxylated propoxylated:**

Species : Rabbit  
Result : Skin irritation

**Alcohols, C12-14:**

Species : Human  
Method : OECD Test Guideline 404  
Result : No skin irritation

**Serious eye damage/eye irritation****Product:**

Species : Rabbit  
Result : No eye irritation

**Components:****Alcohols, C12-14, ethoxylated propoxylated:**

Species : Rabbit  
Result : No eye irritation

**Alcohols, C12-14:**

Species : Rabbit  
Result : Eye irritation  
Method : OECD Test Guideline 405

**Respiratory or skin sensitization****Product:**

Routes of exposure : Inhalation  
Remarks : No data available

Routes of exposure : Skin  
Remarks : No data available

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**Components:****Alcohols, C12-14:**

Routes of exposure : Skin  
 Species : Guinea pig  
 Method : OECD Test Guideline 406  
 Result : Does not cause skin sensitization.

Assessment : No skin irritation, No eye irritation  
 Does not cause skin sensitization.

**Germ cell mutagenicity****Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

**Components:****Alcohols, C12-14:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative

Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 476  
 Result: negative

Genotoxicity in vivo : Method: OECD Test Guideline 474  
 Result: negative

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects., Animal testing did not show any mutagenic effects.

**Carcinogenicity****Product:**

Remarks : No data available

**Components:****Alcohols, C12-14:**

Species : Mouse  
 Application Route : Intraperitoneal injection  
 Exposure time : 5 days  
 Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

**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.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is





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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:****Ecotoxicology Assessment**

Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

**Components:****Alcohols, C12-14:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1.01 mg/l  
 Exposure time: 96 h  
 Test Type: flow-through test  
 Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50: 0.765 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Test substance: Fresh water  
 Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): 320 mg/l  
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0.66 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Test substance: Fresh water  
 Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.014 mg/l  
 Exposure time: 21 d  
 Test Type: semi-static test  
 Test substance: Fresh water  
 Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

**Persistence and degradability****Product:**

Biodegradability : Remarks: No data available

**Components:****Alcohols, C12-14:**

Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 79 - 92 %

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Exposure time: 28 d

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: No data available

**Components:****Alcohols, C12-14:**

Bioaccumulation : Bioconcentration factor (BCF): 59  
 Bioconcentration factor (BCF): 3,801 - 33,900

Partition coefficient: n-octanol/water : log Pow: 5.4 - 6.4 (73 °F / 23 °C)  
 pH: 7.1  
 Method: OECD Test Guideline 117

**Mobility in soil****Product:**

Stability in soil : Remarks: No data available

**Components:****Alcohols, C12-14:**

Distribution among environmental compartments : Koc: 17980 - 50828

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
 Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
 Harmful to aquatic life.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Send to a licensed waste management company.  
 Dispose of as hazardous waste in compliance with local and national regulations.  
 Dispose of contents/ container to an approved waste disposal

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Contaminated packaging : plant.  
Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### Domestic regulation

##### 49 CFR

Not regulated as a dangerous good

### SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ethylene oxide	75-21-8	10	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ethylene oxide	75-21-8	10	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Skin corrosion or irritation

**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.

#### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

methyloxirane	75-56-9	>= 0 - < 0.1 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

methyloxirane	75-56-9	>= 0 - < 0.1 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations****Massachusetts Right To Know**

ethylene oxide	75-21-8
methyloxirane	75-56-9

**Pennsylvania Right To Know**

Alcohols, C12-14, ethoxylated propoxylated	68439-51-0
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**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

**WARNING:** This product can expose you to chemicals including ethylene oxide, methyloxirane, which is/are known to the State of California to cause cancer, and ethylene oxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The ingredients of this product are reported in the following inventories:**

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory

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### TSCA list

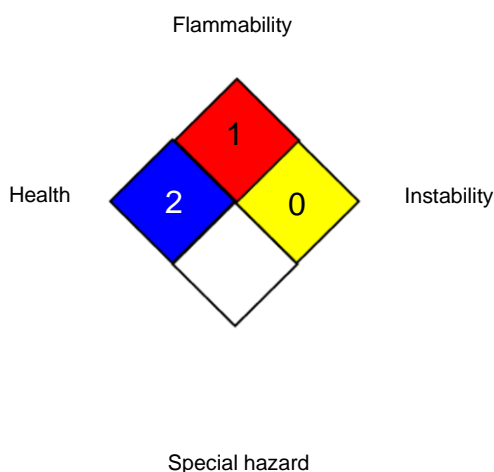
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-

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lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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