



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## Lemon Fresh AF

Version number: 2.0  
Replaces version of: 2020-09-11 (1)

Revision: 2021-03-09  
First version: 2020-09-11

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

<b>Trade name</b>	<b>Lemon Fresh AF</b>
<b>Registration number (REACH)</b>	Not relevant (mixture).
<b>CAS number</b>	not relevant (mixture)

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

<b>Relevant identified uses</b>	Surface disinfectant
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#### 1.3 Details of the supplier of the safety data sheet

PLIWA Hygiene GmbH	Telephone: +495661 / 7317 0
Pliwa-Straße 2	Telefax: +495661 / 7317 10
34323 Malsfeld-Ostheim	e-mail: info@pliwa.de
Germany	Website: www.pliwa.de

**e-mail (competent person)** [sdb@csb-online.de](mailto:sdb@csb-online.de)

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact PLIWA Hygiene GmbH.

#### 1.4 Emergency telephone number

<b>Emergency information service</b>	PLIWA Hygiene GmbH +49 5661 / 7317 0 This number is only available during the following office hours: Monday-Friday 07:00 - 16:00.
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As above or nearest toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
2.6	flammable liquid	3	Flam. Liq. 3	H226

# Lemon Fresh AF

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16

## The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

**Signal word** warning

### Pictograms

GHS02, GHS07



### Hazard statements

**H226** Flammable liquid and vapour.

**H319** Causes serious eye irritation.

### Precautionary statements

**P102** Keep out of reach of children.

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**P261** Avoid breathing vapours.

**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.

**P337+P313** If eye irritation persists: Get medical advice/attention.

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

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

## 2.3 Other hazards

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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## SECTION 3: Composition/information on ingredients








### 3.1 Substances

Not relevant (mixture).

### 3.2 Mixtures

#### Description of the mixture

Alcoholic solution.

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
ethanol	CAS No 64-17-5  EC No 200-578-6  Index No 603-002-00-5  REACH Reg. No 01-2119457610- 43-xxxx	25 – < 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319	 	GHS-HC
propan-2-ol	CAS No 67-63-0  EC No 200-661-7  Index No 603-117-00-0	10 – < 25	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336	 	GHS-HC
Didecyldimethylammonium chloride	CAS No 7173-51-5  EC No 230-525-2	0.01 – < 0.1	Acute Tox. 3 / H301 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411	  	GHS-HC

#### Notes

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to  
HC: 1272/2008/EC, Annex VI)

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
ethanol	Eye Irrit. 2; H319: C ≥ 50 %	-	-	
propan-2-ol	-	-	20 mg <sub>i</sub> /4h	inhalation: vapour
Didecyldimethylammonium chloride	-	M-factor (acute) = 10.0	238 mg <sub>g</sub> /kg	oral

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes.

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

If eye irritation persists: Get medical advice/attention.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

None.

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

Following inhalation: narcotic effects, Dizziness. May cause respiratory irritation.

Following skin contact: Has degreasing effect on the skin. Repeated exposure may cause skin dryness or cracking.

Following eye contact: Causes serious eye irritation.

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

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

## 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

Solvent vapours are heavier than air and may spread along floors.

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

### Hazardous combustion products

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

### Special protective equipment for firefighters

self-contained breathing apparatus (EN 133)

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not breathe vapour/spray.

Avoid contact with skin and eyes.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

#### Appropriate containment techniques

Use of adsorbent materials.

## **Other information relating to spills and releases**

Place in appropriate containers for disposal.  
Ventilate affected area.

## **6.4 Reference to other sections**

Hazardous combustion products: see section 5.  
Personal protective equipment: see section 8.  
Incompatible materials: see section 10.  
Disposal considerations: see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.  
Keep away from sources of ignition - No smoking.  
Take precautionary measures against static discharge.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.

#### **Specific notes/details**

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

#### **Measures to protect the environment**

Avoid release to the environment.

#### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.  
Wash hands after use.  
Preventive skin protection (barrier creams/ointments) is recommended.  
Remove contaminated clothing and protective equipment before entering eating areas.

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

#### **Explosive atmospheres**

Keep container tightly closed and in a well-ventilated place.  
Use local and general ventilation.  
Keep cool.  
Protect from sunlight.

#### **Flammability hazards**

Keep away from sources of ignition - No smoking.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Take precautionary measures against static discharge.  
Protect from sunlight.

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## Incompatible substances or mixtures

Incompatible materials: see section 10.

## Protect against external exposure, such as

high temperatures

## Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

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

## Ventilation requirements

Provision of sufficient ventilation.

## Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
GB	ethanol	64-17-5	WEL	1,000	1,920				EH40/2005
GB	propan-2-ol	67-63-0	WEL	400	999	500	1,250		EH40/2005

#### Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethanol	64-17-5	DNEL	950 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
ethanol	64-17-5	DNEL	343 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	500 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
propan-2-ol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Didecyldimethylammonium chloride	7173-51-5	DNEL	8.6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Didecyldimethylammonium chloride	7173-51-5	DNEL	18.2 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
ethanol	64-17-5	PNEC	0.96 mg/l	freshwater
ethanol	64-17-5	PNEC	580 mg/l	sewage treatment plant (STP)
ethanol	64-17-5	PNEC	3.6 mg/kg	freshwater sediment
ethanol	64-17-5	PNEC	0.63 mg/kg	soil
ethanol	64-17-5	PNEC	2.9 mg/kg	marine sediment
propan-2-ol	67-63-0	PNEC	140.9 mg/l	water
propan-2-ol	67-63-0	PNEC	140.9 mg/l	marine water
propan-2-ol	67-63-0	PNEC	2,251 mg/l	sewage treatment plant (STP)
propan-2-ol	67-63-0	PNEC	552 mg/kg	freshwater sediment
propan-2-ol	67-63-0	PNEC	552 mg/kg	marine sediment
propan-2-ol	67-63-0	PNEC	140.9 mg/l	freshwater
propan-2-ol	67-63-0	PNEC	28 mg/kg	soil
Didecyldimethylammonium chloride	7173-51-5	PNEC	2 µg/l	freshwater
Didecyldimethylammonium chloride	7173-51-5	PNEC	0.2 µg/l	marine water
Didecyldimethylammonium chloride	7173-51-5	PNEC	0.595 mg/l	sewage treatment plant (STP)
Didecyldimethylammonium chloride	7173-51-5	PNEC	2.82 mg/kg	freshwater sediment



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Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Didecyldimethylammonium chloride	7173-51-5	PNEC	0.28 mg/kg	marine sediment
Didecyldimethylammonium chloride	7173-51-5	PNEC	1.4 mg/kg	soil
ethanol: PNEC Oral - Predators - Secondary poisoning - 0,38 g/kg				
propan-2-ol: PNEC Oral - Predators - Secondary poisoning - 160 mg/kg				

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
FKM: fluoro-elastomer	≥ 0,4 mm	>60 minutes (permeation: level 3)
IIR: isobutene-isoprene (butyl) rubber	≥ 0,5 mm	>60 minutes (permeation: level 3)
CR: chloroprene (chlorobutadiene) rubber	≥ 0,5 mm	>60 minutes (permeation: level 3)
NBR: acrylonitrile-butadiene rubber	≥ 0,11 mm	>10 minutes (permeation: level 1)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	liquid
<b>Colour</b>	clear - colourless
<b>Odour</b>	like alcohol
<b>Melting point/freezing point</b>	<0 °C
<b>Boiling point or initial boiling point and boiling range</b>	~78 °C
<b>Flammability</b>	flammable liquid in accordance with GHS criteria
<b>Lower and upper explosion limit</b>	50 g/m <sup>3</sup> - 335 g/m <sup>3</sup> / 2 vol% - 15 vol%
<b>Flash point</b>	>21 - <24 °C
<b>Auto-ignition temperature (liquids and gases)</b>	>360 °C
<b>Decomposition temperature</b>	not relevant
<b>pH (value)</b>	5 - 6 (20 °C)
<b>Kinematic viscosity</b>	not determined
<b>Dynamic viscosity</b>	not determined
<b>Solubility(ies)</b>	
Water solubility	miscible in any proportion
<b>Partition coefficient n-octanol/water (log value)</b>	not determined
<b>Vapour pressure</b>	~60 hPa at 20 °C
<b>Density and/or relative density</b>	
Density	0.9 - 0.92 g/cm <sup>3</sup> at 20 °C
<b>Particle characteristics</b>	not relevant (liquid)

### 9.2 Other information

<b>Information with regard to physical hazard classes</b>	there is no additional information
<b>Other safety characteristics</b>	
Temperature class (EU, acc. to ATEX)	T2 (maximum permissible surface temperature on the equipment: 300°C)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Risk of ignition.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Take precautionary measures against static discharge.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

### 10.5 Incompatible materials

oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Classification procedure

If not otherwise specified the classification is based on:  
Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
ethanol	64-17-5	inhalation: vapour	LC50	124.7 mg/l/4h	rat	OECD Guideline 403	ECHA
ethanol	64-17-5	oral	LD50	10,470 mg/kg	rat	OECD Guideline 401	ECHA

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Acute toxicity of components of the mixture							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
propan-2-ol	67-63-0	inhalation: vapour	LC50	>20 mg/l/4h	rat	OECD Guideline 403	ECHA
propan-2-ol	67-63-0	oral	LD50	5,840 mg/kg	rat	OECD Guideline 401	ECHA
propan-2-ol	67-63-0	dermal	LD50	13,100 mg/kg	rabbit	OECD Guideline 402	ECHA
Didecyldimethylammonium chloride	7173-51-5	oral	LD50	329 mg/kg	rat	OECD Guideline 401	ECHA
Didecyldimethylammonium chloride	7173-51-5	dermal	LD50	>1,000 mg/kg	rat	OECD Guideline 402	ECHA

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

### Carcinogenicity

Based on available data, the classification criteria are not met.

### Reproductive toxicity

Based on available data, the classification criteria are not met.

### Specific target organ toxicity - single exposure

Based on available data, the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

Based on available data, the classification criteria are not met.

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## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Information on other hazards

There is no additional information.

## Endocrine disrupting properties

None of the ingredients are listed.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Test data are not available for the complete mixture.

#### Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time	Method	Source
ethanol	64-17-5	LC50	5,012 mg/l	Ceriodaphnia dubia (water flea)	48 h	ASTM E729-80	ECHA
ethanol	64-17-5	LC50	14.2 g/l	fathead minnow (Pimephales promelas)	96 h	US EPA method E03-05	ECHA
ethanol	64-17-5	EC50	>10,000 mg/l	Ceriodaphnia dubia (water flea)	48 h	DIN 38412 Teil 11	ECHA
ethanol	64-17-5	EC50	12.9 g/l	fathead minnow (Pimephales promelas)	96 h	US EPA method E03-05	ECHA
ethanol	64-17-5	ErC50	275 mg/l	algae (Chlorella vulgaris)	72 h	OECD Guideline 201	ECHA
propan-2-ol	67-63-0	LC50	9,640 mg/l	fathead minnow (Pimephales promelas)	96 h	OECD Guideline 203	ECHA
propan-2-ol	67-63-0	LC50	>10,000 mg/l	daphnia magna	24 h	OECD Guideline 202	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	EC50	0.029 mg/l	daphnia magna	48 h	OECD Guideline 202	ECHA

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Name of substance	CAS No	Endpoint	Value	Species	Exposure time	Method	Source
Didecyl-dimethylammonium chloride	7173-51-5	LC50	0.49 mg/l	zebra fish (Danio rerio)	96 h	OECD Guideline 203	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	ErC50	0.062 mg/l	algae (pseudokirchneriella subcapitata)	72 h	OECD Guideline 201	ECHA

### Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

### Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time	Method	Source
ethanol	64-17-5	LC50	454 mg/l	daphnia magna	9 d		ECHA
ethanol	64-17-5	LC50	1,806 mg/l	Ceriodaphnia dubia (water flea)	10 d		ECHA
ethanol	64-17-5	NOEC	2 mg/l	Ceriodaphnia dubia (water flea)	10 d		ECHA
ethanol	64-17-5	NOEC	250 mg/l	zebra fish (Danio rerio)	120 h	OECD Guideline 212	ECHA
ethanol	64-17-5	growth rate (ErCx) 10%	11.5 mg/l	algae (Chlorella vulgaris)	3 d	OECD Guideline 201	ECHA
ethanol	64-17-5	growth rate (ErCx) 10%	86 mg/l	algae (Chlorella vulgaris)	4 d	OECD Guideline 201	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	EC50	0.031 mg/l	daphnia magna	21 d	OECD Guideline 211	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	NOEC	0.013 mg/l	algae (pseudokirchneriella subcapitata)	72 h	OECD Guideline 201	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	NOEC	0.021 mg/l	daphnia magna	21 d	OECD Guideline 211	ECHA

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Name of substance	CAS No	Endpoint	Value	Species	Exposure time	Method	Source
Didecyl-dimethylammonium chloride	7173-51-5	LOEC	0.047 mg/l	daphnia magna	21 d	OECD Guideline 211	ECHA

### 12.2 Persistence and degradability

#### Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
ethanol	64-17-5	oxygen depletion	~84 %	20 d		ECHA
propan-2-ol	67-63-0	oxygen depletion	53 %	5 d	EU method C.5	ECHA
Didecyl-dimethylammonium chloride	7173-51-5	oxygen depletion	69 %	28 d	OECD 301D	ECHA

#### Biodegradation

The relevant substances of the mixture are readily biodegradable.

#### Persistence

No data available.

### 12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

#### Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
ethanol	64-17-5		-0.35 (pH value: 7.4, 24 °C)
Didecyl-dimethylammonium chloride	7173-51-5		2.59 (pH value: 7, 20 °C)

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

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## 12.7 Other adverse effects

Data are not available.

### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADR/RID/ADN UN1987

IMDG-Code UN1987

ICAO-TI UN1987

### 14.2 UN proper shipping name

ADR/RID/ADN ALCOHOLS, N.O.S.

IMDG-Code ALCOHOLS, N.O.S.

ICAO-TI Alcohols, n.o.s.

Technical name (hazardous ingredients) ethanol, isopropanol

### 14.3 Transport hazard class(es)

ADR/RID/ADN 3

IMDG-Code 3

ICAO-TI 3

### 14.4 Packing group

ADR/RID/ADN III

IMDG-Code III

ICAO-TI III




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- 14.5 Environmental hazards** -
- 14.6 Special precautions for user** -
- 14.7 Maritime transport in bulk according to IMO instruments** -

**14.8 Information for each of the UN Model Regulations**

**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)  
Additional information**

Particulars in the transport document	UN1987, ALCOHOLS, N.O.S., (ethanol, isopropanol, solution), 3, III, (D/E)
Classification code	F1
Danger label(s)	3
	
Special provisions (SP)	274, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30
Emergency Action Code	3Y

**International Maritime Dangerous Goods Code (IMDG) Additional information**

Marine pollutant	-
Danger label(s)	3
	
Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	A

**International Civil Aviation Organization (ICAO-IATA/DGR) Additional information**

Danger label(s)	3
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Special provisions (SP)	A3, A180
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)			
Name of substance	Name acc. to inventory	CAS No	Restriction
Lemon Fresh AF	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3
ethanol	flammable / pyrophoric		R40
propan-2-ol	flammable / pyrophoric		R40

#### Legend

- R3
1. Shall not be used in:
    - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
    - tricks and jokes,
    - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
  2. Articles not complying with paragraph 1 shall not be placed on the market.
  3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
    - can be used as fuel in decorative oil lamps for supply to the general public, and,
    - present an aspiration hazard and are labelled with R65 or H304,
  4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
  5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
    - (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
    - (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
    - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
  6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
  7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with

# Lemon Fresh AF

## Legend

- R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.
- R40
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
    - metallic glitter intended mainly for decoration,
    - artificial snow and frost,
    - 'whoopee' cushions,
    - silly string aerosols,
    - imitation excrement,
    - horns for parties,
    - decorative flakes and foams,
    - artificial cobwebs,
    - stink bombs.
  2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:  
'For professional users only'.
  3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
  4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

## List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

## Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
P5c	flammable liquids (cat. 2, 3)	5,000	50,000	51)

### Notation

51) flammable liquids, categories 2 or 3 not covered by P5a and P5b

## Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

## Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

## Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

Not all ingredients are listed.

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## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.  
Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1	The most important adverse physicochemical, human health and environmental effects: The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.	The most important adverse physicochemical, human health and environmental effects: The product is combustible and can be ignited by potential ignition sources.	yes
3.2		Hazardous ingredients: change in the listing (table)	yes
3.2		Hazardous ingredients: change in the listing (table)	yes
8.1		Relevant PNECs of components of the mixture: change in the listing (table)	yes
14.1	UN number: 1987	UN number or ID number	yes
14.1		ADR/RID/ADN: UN1987	yes
14.1		IMDG-Code: UN1987	yes
14.1		ICAO-TI: UN1987	yes
14.2	UN proper shipping name: ALCOHOLS, N.O.S.	UN proper shipping name	yes
14.2		ADR/RID/ADN: ALCOHOLS, N.O.S.	yes
14.2		IMDG-Code: ALCOHOLS, N.O.S.	yes
14.2		ICAO-TI: Alcohols, n.o.s.	yes
14.3	Class: 3		yes
14.3		ADR/RID/ADN: 3	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.3		IMDG-Code: 3	yes
14.3		ICAO-TI: 3	yes
14.4	Packing group: III	Packing group	yes
14.4		ADR/RID/ADN: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.8	UN number: 1987		yes
14.8	Proper shipping name: UN1987, ALCOHOLS, N.O.S., (ethanol, isopropanol, solution), 3, III, (D/E)		yes
14.8	Class: 3		yes
14.8	Packing group: III		yes
14.8		Particulars in the transport document: UN1987, ALCOHOLS, N.O.S., (ethanol, isopropanol, solution), 3, III, (D/E)	yes
14.8	UN number: 1987		yes
14.8	Proper shipping name: UN1987, ALCOHOLS, N.O.S., (ethanol, isopropanol, solution), 3, III, >21°C c.c.		yes
14.8	Class: 3		yes
14.8	Packing group: III		yes
14.8	UN number: 1987		yes
14.8	Proper shipping name: UN1987, Alcohols, n.o.s., (ethanol, isopropanol, solution), 3, III		yes
14.8	Class: 3		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8	Packing group: III		yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye

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Abbr.	Descriptions of used abbreviations
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

# Lemon Fresh AF

Abbr.	Descriptions of used abbreviations
WEL	Workplace exposure limit

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

## Responsible for the safety data sheet

C.S.B. GmbH  
Düsseldorfer Str. 113  
47809 Krefeld, Germany

Telephone: +49 (0) 2151 - 652086 - 0  
Telefax: +49 (0) 2151 - 652086 - 9  
e-Mail: [info@csb-online.de](mailto:info@csb-online.de)  
Website: [www.csb-online.de](http://www.csb-online.de)

## Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.