

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

- **1.1 Product identifier**
- **Trade name: *LimonClean Spray***
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
*No further relevant information available.*
- **Application of the substance / the mixture** *Cleaning material/ Detergent*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Cleanfix  
Reinigungssysteme AG  
Stettenstrasse  
9247 Henau  
Tel. +41 (0)71 955 47 47  
Fax +41 (0)71 955 47 60*
- **Further information obtainable from:**  
*info@cleanfix.com  
Tel. +41 (0)71 955 47 47  
Fax +41 (0)71 955 47 60*
- **1.4 Emergency telephone number:**  
*Centre suisse d'information toxicologique, Zurich  
+41 (0)44 251 51 51 ou 145 (depuis la Suisse)  
Schweizerisches Toxikologisches Informationszentrum, Zürich  
+41 (0)44 251 51 51 oder aus der Schweiz: Tel 145  
Centro Svizzero d'informazione tossicologica  
+41 (0)44 251 51 51 o dalla Svizzera: Tel 145*

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

*Aerosol 1                      H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.*



GHS09 environment

*Aquatic Acute 1    H400                      Very toxic to aquatic life.*

*Aquatic Chronic 1 H410                      Very toxic to aquatic life with long lasting effects.*



GHS07

*Skin Irrit. 2                      H315                      Causes skin irritation.*

*Eye Irrit. 2                      H319                      Causes serious eye irritation.*

*Skin Sens. 1                      H317                      May cause an allergic skin reaction.*

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
*The product is classified and labelled according to the CLP regulation.*
- **Hazard pictograms** *GHS02, GHS07, GHS09*
- **Signal word** *Danger*

- **Hazard-determining components of labelling:**

*(R)-p-mentha-1,8-diene*

- **Hazard statements**

*H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.*

# Safety data sheet

## according to 1907/2006/EC, Article 31

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- H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H317 May cause an allergic skin reaction.  
 H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

- 69.9404983 % by mass of the contents are flammable  
 Keep out of the reach of children

**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.  
 · **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**  
 · **Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 5989-27-5 EINECS: 227-813-5 Reg.nr.: 01-2119529223-47	(R)-p-mentha-1,8-diene Flam. Liq. 3, H226; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1, H317	50-100%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1, H220; Press. Gas (Comp.), H280	10-20%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane, pure Flam. Gas 1, H220; Acute Tox. 3, H331; Press. Gas (Comp.), H280	10-20%
CAS: 111-76-2 EINECS: 203-905-0 Reg.nr.: 01-2119475108-36	2-butoxyethanol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≥5-<10%
CAS: 9043-30-5 NLP: 500-027-2	Alcohol C13-iso, ethoxylated 5 EO Eye Dam. 1, H318	≥2.5-<3%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**4.1 Description of first aid measures****After inhalation:**

- Supply fresh air and to be sure call for a doctor.  
 In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed**

- No further relevant information available.

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### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**106-97-8 butane, pure**

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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**111-76-2 2-butoxyethanol**

WEL Short-term value: 246 mg/m<sup>3</sup>, 50 ppm  
Long-term value: 123 mg/m<sup>3</sup>, 25 ppm  
Sk, BMGV

· **DNELs****5989-27-5 (R)-p-mentha-1,8-diene**

Inhalative	DNEL long term systemic effects	8.33 mg/m <sup>3</sup> (general population) 33.3 mg/m <sup>3</sup> (workers)
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· **PNECs****5989-27-5 (R)-p-mentha-1,8-diene**

PNEC aqua	0.0054 mg/l (fresh water)
PNEC sediment	1.32 mg/kg (fresh water)
PNEC ground	262 mg/kg (ground)

· **Ingredients with biological limit values:****111-76-2 2-butoxyethanol**

BMGV	240 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: butoxyacetic acid
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· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.· **Protection of hands:**

Protective gloves

· **Material of gloves:** Rubber gloves· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

<b>Form:</b>	Aerosol
<b>Colour:</b>	Colourless

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· <b>Odour:</b>	<i>Characteristic</i>
· <b>Odour threshold:</b>	<i>Not determined.</i>
· <b>pH-value at 20 °C:</b>	<i>-</i>
· <b>Change in condition</b>	
<b>Melting point/freezing point:</b>	<i>Undetermined.</i>
<b>Initial boiling point and boiling range:</b>	<i>&gt;34 °C</i>
· <b>Flash point:</b>	<i>1 °C</i>
· <b>Flammability (solid, gas):</b>	<i>Not applicable.</i>
· <b>Ignition temperature:</b>	<i>240 °C</i>
· <b>Decomposition temperature:</b>	<i>Not determined.</i>
· <b>Auto-ignition temperature:</b>	<i>Product is not selfigniting.</i>
· <b>Explosive properties:</b>	<i>Not determined.</i>
· <b>Explosion limits:</b>	
<b>Lower:</b>	<i>0.7 Vol %</i>
<b>Upper:</b>	<i>10.9 Vol %</i>
· <b>Vapour pressure at 20 °C:</b>	<i>8 hPa</i>
· <b>Density at 20 °C:</b>	<i>0.755 g/cm<sup>3</sup></i>
· <b>Relative density</b>	<i>Not determined.</i>
· <b>Vapour density</b>	<i>Not determined.</i>
· <b>Evaporation rate</b>	<i>Not applicable.</i>
· <b>Solubility in / Miscibility with water:</b>	<i>Not miscible or difficult to mix.</i>
· <b>Partition coefficient: n-octanol/water:</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined.</i>
<b>Organic solvents:</b>	<i>96.7 %</i>
<b>Water:</b>	<i>0.8 %</i>
· <b>9.2 Other information</b>	<i>No further relevant information available.</i>

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions** *No dangerous reactions known.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** *Based on available data, the classification criteria are not met.*

· **LD/LC50 values relevant for classification:**

**5989-27-5 (R)-p-mentha-1,8-diene**

Oral	LD50	>2,000 mg/kg (Rat)
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Dermal	LD50	>5,000 mg/kg (Rabbit)
<b>106-97-8 butane, pure</b>		
Inhalative	LC50/4 h	658 mg/l (Rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity:

#### 5989-27-5 (R)-p-mentha-1,8-diene

EC50 (48h)	0.36 mg/l (Daphnia magna)
EC50 (72h)	8 mg/l (Desomdemus subspicatus)
LC50 (96h)	0.72 mg/l (Pimephales promelas)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· **European waste catalogue**

16 00 00 WASTES NOT OTHERWISE SPECIFIED IN THE LIST

16 05 00 gases in pressure containers and discarded chemicals

16 05 04\* gases in pressure containers (including halons) containing hazardous substances

· **Uncleaned packaging:**· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.**SECTION 14: Transport information**· **14.1 UN-Number**· **ADR, IMDG, IATA**

UN1950

· **14.2 UN proper shipping name**· **ADR**

1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS

· **IMDG**

AEROSOLS, MARINE POLLUTANT

· **IATA**

AEROSOLS, flammable

· **14.3 Transport hazard class(es)**· **ADR**· **Class**

2.1 5F

· **Label**

2.1

· **IMDG**· **Class**

2.1

· **Label**

2.1

· **IATA**· **Class**

2.1

· **Label**

2.1

· **14.4 Packing group**· **ADR, IMDG, IATA**

Void

· **14.5 Environmental hazards:**· **Marine pollutant:**

Yes

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Not applicable.

· **EMS Number:**

F-D,S-U

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· <b>Stowage Code</b>	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· <b>Segregation Code</b>	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	(D)
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
E1 Hazardous to the Aquatic Environment  
P3a FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **National regulations:**

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

perfumes (LIMONEN), aliphatic hydrocarbons

≥30%

non-ionic surfactants

<5%

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Relevant phrases**

- H220 Extremely flammable gas.
- H226 Flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas (Comp.): Gases under pressure – Compressed gas
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity - oral – Category 4
- Acute Tox. 3: Acute toxicity - inhalation – Category 3
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **\* Data compared to the previous version altered.**