

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.09.2018

Version number 6

Revision: 04.09.2018

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

· **1.1 Product identifier**

· **Trade name: RM 821**

· **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** Drying aid for vehicle washing plants

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Alfred Kärcher SE & Co. KG
Alfred-Kärcher-Str. 28-40
D - 71364 Winnenden

Postfach 160
D - 71349 Winnenden

Tel.: +49-7195-14-0
Fax : +49-7195-14-2212

www.karcher.com

· **Further information obtainable from:**

Department PCD-D
Tel.: +49-7195-14-2548
Fax : +49-7195-14-3164
safetydata@karcher.com

· **1.4 Emergency telephone number:**

For Hazardous Materials [or Dangerous Goods] Incidents
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

* **SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **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** Void

· **Signal word** Void

· **Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P273 Avoid release to the environment.

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

· **Additional information:**

Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.

· **2.3 Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:**

541-02-6	decamethylcyclopentasiloxane
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SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:**

CAS: 94095-35-9 EC number: 302-242-5 Reg.nr.: 01-211947230933	fatty acids, (C10-C20 and C16-C18-unsat.), reaction products with triethanolamine, di- ME sulfate- quaternized TEA esterquat ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	1-5%
CAS: 541-02-6 EINECS: 208-764-9 Reg.nr.: 01-2119511367-43-0000	decamethylcyclopentasiloxane non-classified vPvB substance	1-5%
CAS: 5131-66-8 EINECS: 225-878-4 Index number: 603-052-00-8 Reg.nr.: 01-2119475527-28-XXXX	propylene glycol monobutyl ether ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	1-5%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr.: 01-2119457558-25-xxxx	propan-2-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	1-5%
CAS: 5989-27-5 EINECS: 227-813-5 Index number: 601-029-00-7	(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	≥0.25-<1%
CAS: 68424-85-1 EINECS: 270-325-2 Reg.nr.: 01-2119965180-41	N - A l k y l - N , N - d i m e t h y l - N - benzylammoniumchloride ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	≥0.1-<0.25%

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

cationic surfactants, perfumes	<5%
LIMONENE, alpha-Hexylcinnamaldehyde	

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· **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; consult doctor in case of complaints.
 - **After skin contact** Rinse with warm water.
 - **After eye contact** Rinse opened eye for several minutes under running water.
 - **After swallowing**
Rinse out mouth and then drink plenty of water.
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.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents**
CO₂, 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.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
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.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Keep away from food, beverages and feed.
- **Further information about storage conditions:** Protect from frost.
- **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

67-63-0 propan-2-ol

Oral	DNEL	26 mg/kg*d (consumer)
Dermal	DNEL	888 mg/kg*d (employee) 319 mg/kg*d (consumer)
Inhalative	DNEL	500 mg/m ³ (employee) 89 mg/m ³ (consumer)

- **8.2 Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Not necessary if room is well-ventilated.
- **Protection of hands:**
* chemical resistant protective gloves (EN 374)
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves.

- **Material of gloves** Butyl rubber, BR
- **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.
- **For the permanent contact gloves made of the following materials are suitable:**
* butyl rubber 0,7 mm, 480 min (EN 374)
- **As protection from splashes gloves made of the following materials are suitable:**
* nitril rubber 0,4 mm, 30 min (EN 374)
- **Eye protection:** Goggles recommended during refilling.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	Blue
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value at 20 °C:	4
· pH-value 1 %:	5.0

· **Change in condition**

· Melting point/freezing point:	0 °C
· Initial boiling point and boiling range:	100 °C

· Flash point:	Not applicable
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· Flammability (solid, gaseous)	Not applicable.
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· Ignition temperature:	not applicable
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· Decomposition temperature:	Not determined.
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· Auto-ignition temperature:	Product is not selfigniting.
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· Explosive properties:	Product does not present an explosion hazard.
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· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· Vapour pressure at 20 °C:	23 hPa
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· Density at 20 °C:	0.994 g/cm ³
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· Relative density	<i>Not determined.</i>
· Vapour density	<i>Not determined.</i>
· Evaporation rate	<i>Not determined.</i>
· Solubility in / Miscibility with Water:	<i>Fully miscible</i>
· Partition coefficient: n-octanol/water:	<i>Not determined.</i>
· Viscosity:	
dynamic at 20 °C:	<i>3 mPas</i>
kinematic:	<i>Not determined.</i>
· Solvent content:	
Organic solvents:	<i>2.6 %</i>
VOC (EC)	<i>2.59 %</i>
· 9.2 Other information	<i>No further relevant information available.</i>

SECTION 10: Stability and reactivity

- **10.1 Reactivity** corresponds to 10.3
- **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:**

541-02-6 decamethylcyclopentasiloxane		
Dermal	LD50	>15,000 mg/kg (Rat)
Inhalative	LC50	>5,000 mg/kg (Rat)
5131-66-8 propylene glycol monobutyl ether		
Oral	LD50	3,300 mg/kg (Rat)
67-63-0 propan-2-ol		
Dermal	LD50	12,800 mg/kg (can) 12,800 mg/kg (rabbit)
Inhalative	LC50	5,280 mg/kg (Rat)
68424-85-1 N-Alkyl-N,N-dimethyl-N-benzylammoniumchloride		
Oral	LD50	344 mg/kg (Rat)

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Dermal	LD50	3,340 mg/kg (can)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

5131-66-8 propylene glycol monobutyl ether

LC50/96 h 560-1,000 mg/l (fish)

67-63-0 propan-2-ol

LC50/96 h 9,640 mg/l (*Pimephales promelas*)

EC50/48 h 13,299 mg/l (*Daphnia magna*)

EC50/72 h >1,000 mg/l (*Desmodesmus subspicatus*)

EC10/18 h >1,000 mg/l (*Pseudomonas putida*) (DIN 38412)

68424-85-1 N-Alkyl-N,N-dimethyl-N-benzylammoniumchloride

LC50/96 h 0.28 mg/l (*Pimephales promelas*) (US-EPA)

IC50/72 h 0.03 mg/l (Algae)

EC50/48 h 0.016 mg/l (*Daphnia magna*)

ErC50/96h 0.049 mg/l (*Pseudokirchneriella subcapitata*)

NOEC 0.032 mg/l (*Pimephales promelas*)

0.0042 mg/l (*Daphnia magna*)

- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** The product is biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **COD-value:** 219000 mg/l
- **General notes:**

The product does not contain organic complexing agents.

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.

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In compliance with the prescribed application parameters, the product does not lead to stable emulsions.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB:

541-02-6	decamethylcyclotrasiloxane
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· 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.

Must be specially treated adhering to official regulations.

· European waste catalogue

07 06 01*	aqueous washing liquids and mother liquors
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· Uncleaned packaging:

· Recommendation:

Packaging may be reused or recycled after cleaning.

Non contaminated packagings may be recycled.

· Recommended cleansing agents: Water, if necessary together with cleaning agents.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, ADN, IMDG, IATA Void

· 14.2 UN proper shipping name

· ADR, ADN, IMDG, IATA Void

· 14.3 Transport hazard class(es)

· ADR, ADN, IMDG, IATA

· Class Void

· 14.4 Packing group

· ADR, IMDG, IATA Void

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user Not applicable.

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|--|--|
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

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.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40, 70
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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. A product information sheet can be provided if requested.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** PCD-D
- **Contact:**
Department PCD-D
Tel.: +49-7195-14-2548
Fax : +49-7195-14-3164
safetydata@karcher.com
- **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

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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)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
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
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

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