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

Printing date 08.12.2017 *Version number 3* *Revision: 13.06.2017*

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

· **1.1 Product identifier**

· **Trade name: RM 838**

· **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** Detergent

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

· **Manufacturer/Supplier:**

Alfred Kärcher GmbH & 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

Distributor:
Kaercher (UK) Ltd.
Kaercher House
Beaumont Road
Banbury
Oxon OX16 1TB
Great Britain

Tel.: +44-1295-752-000
Fax : +44-1295-266-436

· **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)

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SECTION 2: Hazards identification

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

Met. Corr.1	H290	May be corrosive to metals.
Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
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**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labelling:**
(C12-C18)Alkyl dimethylamine oxide
2-aminoethanol
sodium hydroxide
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
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**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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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:***

EC number: 931-292-6 *Reg.nr.: 01-2119490061-47-0008*	*Amines, C12-14-alkyldimethyl, N-oxides* *Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Irrit. 2, H315*	*5-<10%*
CAS: 141-43-5 *EINECS: 205-483-3* *Index number: 603-030-00-8* *Reg.nr.: 01-2119486455-28-xxxx*	*2-aminoethanol* *Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 3, H412*	*2.5-<5%*
CAS: 1310-73-2 *EINECS: 215-185-5* *Index number: 011-002-00-6* *Reg.nr.: 01-2119457892-27-xxxx*	*sodium hydroxide* *Met. Corr.1, H290; Skin Corr. 1A, H314*	*0.5-<2%*
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*	*0.1-<0.25%*

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

amphoteric surfactants	*≥5 - <15%*
perfumes	*<5%*
LIMONENE	

· ***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***
· ***General information*** *Immediately remove any clothing soiled by the product.*
· ***After inhalation***
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.
· ***After skin contact***
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
· ***After eye contact*** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
· ***After swallowing***
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
· ***4.2 Most important symptoms and effects, both acute and delayed***
No further relevant information available.

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· ***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 equipment. Keep unprotected persons away.
· ***6.2 Environmental precautions:***
Do not allow product to reach sewage system or any water course.
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).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
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***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Avoid contact with eyes and skin.
· ***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:*** *Store only in the original receptacle.*

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· ***Information about storage in one common storage facility:***
Do not store together with acids.
Keep away from food, beverages and feed.
· ***Further information about storage conditions:*** *Keep receptacle tightly sealed.*
· ***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:**	
141-43-5 2-aminoethanol	
WEL	Short-term value: 7.6 mg/m³, 3 ppm Long-term value: 2.5 mg/m³, 1 ppm Sk
1310-73-2 sodium hydroxide	
WEL	Short-term value: 2 mg/m³

· **DNELs**		
(C12-C18)Alkyl dimethylamine oxide		
Dermal	DNEL	11 mg/kg*d (employee)
Inhalative	DNEL	15.5 mg/m3 (Employee)
141-43-5 2-aminoethanol		
Oral	DNEL	3.75 mg/kg*d (consumer)
Dermal	DNEL	1 mg/kg*d (employee)
Inhalative	DNEL	3.3 mg/m3 (employee)
		2 mg/m3 (consumer)

· ***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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· ***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:***

Protective gloves.

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· ***Material of gloves*** *Butyl rubber, BR*
· ***Penetration time of glove material***
The exact break trough 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:***	
Form:	*Fluid*
Colour:	*Orange*
· ***Odour:***	*citrus-like*
· ***Odour threshold:***	*Not determined.*
· ***pH-value at 20 °C:***	*13.3*
· ***pH-value 1 %:***	*10.5*
· ***pH 1 % dem.***	*11.6*
· ***Change in condition***	
Melting point/freezing point:	*-10 °C*
Initial boiling point and boiling range:	*>100 °C*
· ***Flash point:***	*Not applicable*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	*not applicable*
· ***Decomposition temperature:***	*Not determined.*
· ***Auto-ignition temperature:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*Not determined.*
Upper:	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density at 20 °C:***	*1.076 g/cm³*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*

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· ***Solubility in / Miscibility with Water:***	*Fully miscible*
· ***Partition coefficient: n-octanol/water:***	*Not determined.*
· ***Viscosity:***	
dynamic at 20 °C:	*34 mPas*
kinematic:	*Not determined.*
· ***Solvent content:***	
Organic solvents:	*5.0 %*
VOC (EC)	*5.01 %*
Solids content:	*31.5 %*
· ***9.2 Other information***	*No further relevant information available.*

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***
Strong exothermic reaction with acids
Reacts with light alloys to form hydrogen
Corrodes aluminium
· ***10.4 Conditions to avoid*** *No further relevant information available.*
· ***10.5 Incompatible materials:***
Not compatible with alkali-sensitive substances like Sn, Zn, Al and paintings.
· ***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:***		
(C12-C18)Alkyl dimethylamine oxide		
Oral	*LD50*	*1,064 mg/kg (Rat)*
Inhalative	*LC50*	*3,600 mg/kg (Rat)*
141-43-5 2-aminoethanol		
Oral	*LD50*	*1,515 mg/kg (Rat) (OECD 401)*
Dermal	*LD50*	*1,025 mg/kg (Rat)*
Inhalative	*LC50/6h*	*>1.3 mg/l (Rat)*

· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes severe skin burns and eye damage.

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· ***Serious eye damage/irritation***
Causes serious eye damage.
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*
· ***CMR effects (carcinogenity, 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:**	
(C12-C18)Alkyl dimethylamine oxide	
LC50	*2.67 mg/l (fish)*
141-43-5 2-aminoethanol	
LC50/96 h	*>100 mg/l (Cyprinus carpio) (OECD 203)*
	329 mg/l (Lepomis macrochirus)
EC50/48 h	*65 mg/l (Daphnia magna)*
1310-73-2 sodium hydroxide	
LC50/96 h	*125 mg/l (Gambusia affinis)*
EC50/48 h	*76 mg/l (Daphnia magna)*
EC50/15 min	*22 mg/l (Photobacterium phosphoreum)*

· ***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.*
· ***Additional ecological information:***
· ***COD-value:*** *611000 mg/l*
· ***General notes:***
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.
The contained organic complexing agents reach a DOC-elimination grade of 80% (corresponding to No. 406 of Annex "Analytic and measuring methods") and with this meet the tightened demands of Annex 49 of the revised Direction on liqid waste.
The product does not contain organically bounded halogens (AOX-free).
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.

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Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **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.
Must be specially treated adhering to official regulations.

· **European waste catalogue**	
07 06 01*	aqueous washing liquids and mother liquors

· **Uncleaned packaging:**
· **Recommendation:** 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, IMDG, IATA** UN1760

· **14.2 UN proper shipping name**
· **ADR** 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, ETHANOLAMINE)
· **IMDG, IATA** CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, ETHANOLAMINE)

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 8 (C9) Corrosive substances.

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· ***Label***	*8*
· ***IMDG, IATA***	
	
· ***Class***	*8 Corrosive substances.*
· ***Label***	*8*
· ***14.4 Packing group***	
· ***ADR, IMDG, IATA***	*II*
· ***14.5 Environmental hazards:***	
· ***Marine pollutant:***	*No*
· ***14.6 Special precautions for user***	*Warning: Corrosive substances.*
· ***Danger code (Kemler):***	*88*
· ***EMS Number:***	*F-A,S-B*
· ***Segregation groups***	*Alkalis*
· ***Stowage Category***	*B*
· ***Stowage Code***	*SW2 Clear of living quarters.*
· ***14.7 Transport in bulk according to Annex II of Marpol and the IBC Code***	*Not applicable.*
· ***Transport/Additional information:***	
· ***ADR***	
· ***Limited quantities (LQ)***	*1L*
· ***Excepted quantities (EQ)***	*Code: E2* *Maximum net quantity per inner packaging: 30 ml* *Maximum net quantity per outer packaging: 500 ml*
· ***Transport category***	*2*
· ***Tunnel restriction code***	*E*
· ***IMDG***	
· ***Limited quantities (LQ)***	*1L*
· ***Excepted quantities (EQ)***	*Code: E2* *Maximum net quantity per inner packaging: 30 ml* *Maximum net quantity per outer packaging: 500 ml*
· ***UN "Model Regulation":***	*UN 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, ETHANOLAMINE), 8, II*

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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*

· ***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***
H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful 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
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

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
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 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

· *0·011-324·0* *RM 838/4* *2·138*