

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

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

· **1.1 Product identifier**

· **Trade name:** *RM 81 ASF eco!efficiency*

· **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** *High pressure cleaner*

· **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)*

GB

(Contd. on page 2)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 1)

## 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.

- **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:**

fatty alcohol ethoxylate

isotridecanoethoxylate + 8 EO

triethanolammonium C10C13-alkylbenzene sulfonate

- **Hazard statements**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

- **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/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.

- **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:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:** Cleaning agent

(Contd. on page 3)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 2)

<b>· Dangerous components:</b>		
CAS: 78330-20-8	fatty alcohol ethoxylate ☠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	1-5%
EC number: 931-138-8 Reg.nr.: 02-2119552461-55-XXXX	isotridecanoethoxylate + 8 EO ☠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	1-5%
CAS: 15763-76-5 EINECS: 239-854-6 Reg.nr.: 01-2119489411-37-xxxx	sodium p-cumenesulphonate ⚠ Eye Irrit. 2, H319	1-5%
CAS: 68411-31-4 EINECS: 270-116-6 Reg.nr.: 01-2119971970-28-XXXX	triethanolammonium C10C13-alkylbenzene sulfonate ☠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315	1-5%
<b>· Regulation (EC) No 648/2004 on detergents / Labelling for contents</b>		
non-ionic surfactants		≥5 - <15%
anionic surfactants		<5%

**· 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**  
Involve doctor immediately.  
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**  
Rinse with warm water.  
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** Corneal damage
- **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**  
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.

(Contd. on page 4)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 3)

- **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**  
Keep people at a distance and stay on the windward side.  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
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**  
Use only in well ventilated areas.  
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:**  
Unsuitable material for receptacle: aluminium.  
Store only in the original receptacle.
- **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:**  
Protect from frost.  
Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

GB

(Contd. on page 5)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 4)

**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.*
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
*Avoid close or long term contact with the skin.  
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.

- **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
- **As protection from splashes gloves made of the following materials are suitable:**  
\* nitril rubber 0,4 mm, 30 min
- **Eye protection:**



Tightly sealed goggles.

- **Body protection:**  
Boots  
Apron

GB

(Contd. on page 6)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 5)

**SECTION 9: Physical and chemical properties**

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	Yellow
· <b>Odour:</b>	Fruit-like
· <b>Odour threshold:</b>	Not determined.

· <b>pH-value at 20 °C:</b>	12.3
· <b>pH-value 1 %:</b>	11.5

· **Change in condition**

· <b>Melting point/freezing point:</b>	undetermined
· <b>Initial boiling point and boiling range:</b>	100 °C

· <b>Flash point:</b>	>100 °C
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· <b>Flammability (solid, gaseous)</b>	Not applicable.
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· <b>Ignition temperature:</b>	not applicable
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· <b>Decomposition temperature:</b>	Not determined.
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· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
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· <b>Explosive properties:</b>	Product does not present an explosion hazard.
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· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· <b>Vapour pressure:</b>	Not determined.
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· <b>Density at 20 °C:</b>	1.094 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with Water:**

Fully miscible

· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
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· **Viscosity:**

· <b>dynamic at 20 °C:</b>	5 mPas
· <b>kinematic:</b>	Not determined.

· **Solvent content:**

· <b>Organic solvents:</b>	0.0 %
· <b>VOC (EC)</b>	0.00 %
· <b>Solids content:</b>	22.0 %

· <b>9.2 Other information</b>	No further relevant information available.
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GB

(Contd. on page 7)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 6)

**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**  
Reacts with strong acids  
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:**

<b>isotridecanoethoxylate + 8 EO</b>		
Oral	ATE	500 mg/kg (Rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **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.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:**

<b>isotridecanoethoxylate + 8 EO</b>	
LC50/96 h	1-10 mg/l (Leuciscus idus)
EC50/48 h	1-10 mg/l (Aquatic invertebrates)
EC50/72 h	1-10 mg/l (Aquatic plants)

(Contd. on page 8)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 7)

· **12.2 Persistence and degradability**

**isotridecanoethoxylate + 8 EO**

Bismuth-act. sup.  $\geq 90\%$  (mod. OECD 301 E)

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **COD-value:** 300000 mg/l

· **General notes:**

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 Directive on liquid waste.

The product does not contain organically bounded halogens (AOX-free).

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

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.

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.

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.

GB

(Contd. on page 9)



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

Printing date 28.07.2017



Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 8)

**SECTION 14: Transport information**

· <b>14.1 UN-Number</b> · <b>ADR, IMDG, IATA</b>	UN3267
· <b>14.2 UN proper shipping name</b> · <b>ADR</b>  · <b>IMDG, IATA</b>	3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (methylglycine diacetic acid, trisodium salt, solution)  CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (methylglycine diacetic acid, trisodium salt, solution)
· <b>14.3 Transport hazard class(es)</b>  · <b>ADR</b>  	8 (C7) Corrosive substances. 8
· <b>Class</b> · <b>Label</b>	
· <b>IMDG, IATA</b>  	8 Corrosive substances. 8
· <b>Class</b> · <b>Label</b>	
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Segregation groups</b> · <b>Stowage Category</b> · <b>Stowage Code</b> · <b>Segregation Code</b>	Warning: Corrosive substances. 80 F-A,S-B Alkalis A SW2 Clear of living quarters. SG35 Stow "separated from" acids.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.

(Contd. on page 10)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 9)

**· Transport/Additional information:**

**· ADR**

- Limited quantities (LQ)
- Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

- Transport category
- Tunnel restriction code

3

E

**· IMDG**

- Limited quantities (LQ)
- Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

- IATA
- Remarks:

Product ist corrosive to aluminium

- UN "Model Regulation":

UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (METHYLGLYCINE DIACETIC ACID, TRISODIUM SALT, SOLUTION), 8, III

\*

**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**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

(Contd. on page 11)

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

Printing date 28.07.2017

Version number 4

Revision: 25.07.2017

**Trade name: RM 81 ASF eco!efficiency**

(Contd. of page 10)

*H319 Causes serious eye irritation.*

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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

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

· 0-011-327-0

RM 81 Eco/1-1

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