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

· **1.1 Product identifier**

· **Trade name: RM 81 Super ASF**
· **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

· **Further information obtainable from:**
Department PDE-D
Tel.: +49-7195-14-2398
Fax : +49-7195-14-3164
safetydata@karcher.com
· **1.4 Emergency telephone number:** Tel.: 0049 30 30686 790 Giftnotruf Berlin

*
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.
Carc. 2	H351	Suspected of causing cancer.

· **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 GHS08

· **Signal word** Danger

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· ***Hazard-determining components of labelling:***
nitrilotriacetate, trisodium salt
sodium hydroxide
· ***Hazard statements***
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H351 Suspected of causing cancer.
· ***Precautionary statements***
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.
P310 Immediately call a POISON CENTER/doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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:***
Mixture of substances listed below with non-hazardous additions.
Cleaning agent

· ***Dangerous components:***

CAS: 5064-31-3 *EINECS: 225-768-6* *Index number: 607-620-00-6* *Reg.nr.: 01-2119519239-36-XXXX*	*nitrilotriacetate, trisodium salt* *Carc. 2, H351; Acute Tox. 4, H302; Eye Irrit. 2, H319*	*3,0-10%*
CAS: 15763-76-5 *EINECS: 239-854-6* *Reg.nr.: 01-2119489411-37-XXXX*	*sodium p-cumenesulphonate* *Eye Irrit. 2, H319*	*3,0-10%*
CAS: 10213-79-3 *EINECS: 229-912-9* *Index number: 014-010-00-8*	*sodium silicate* *Met. Corr.1, H290; Skin Corr. 1B, H314; STOT SE 3, H335*	*3,0-10%*
CAS: 68411-30-3 *EINECS: 270-115-0* *Reg.nr.: 01-2119489428-22-XXXX*	*alkylbenzene sulfonic acid, sodium salt* *Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; Aquatic Chronic 3, H412*	*3,0-10%*

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CAS: 69011-36-5 *EC number: 931-138-8* *Reg.nr.: 02-2119552461-55-XXXX*	*isotridecanolethoxylate + 8 EO* *Eye Dam. 1, H318; Acute Tox. 4, H302*	*< 3,0%*
Reg.nr.: 02-2119549526-31-0000	*fatty alcohol ethoxylate* *Eye Dam. 1, H318*	*< 3,0%*

· ***Regulation (EC) No 648/2004 on detergents / Labelling for contents***	
TRISODIUM NTA	*5 - 15%*
anionic surfactants, non-ionic surfactants	*< 5%*

· ***Additional information***
Specific concentration limits available for isotridecanolethoxylate + 8 EO (CAS 69011-36-5) based on test reports (see Section 11).
For the wording of the listed risk phrases refer to section 16.

*
SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***General information*** *Involve doctor immediately.*
· ***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.*
· ***After eye contact***
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· ***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*** *Redness and irritation of the eyes*
· ***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.*

*
SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective clothing.

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· ***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).
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.
· ***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.*
· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:*** *Keep receptacle tightly sealed.*
· ***Storage class*** *VCI-storage class: 8B - not flammable corrosive substances*
· ***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.

· ***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:***
Filter A/P2.
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.

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· ***Protection of hands:***

Protective gloves.

· ***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.
· ***For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material 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:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Fluid*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*Not determined.*
· ***pH-value at 20 °C:***	*13*
	1 % 10,5
· ***pH-value 1 %:***	*11*
· ***Change in condition***	
Melting point/Melting range:	*-8 °C*
Boiling point/Boiling range:	*100 °C*
· ***Flash point:***	*> 100 °C*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	*200 °C*
· ***Decomposition temperature:***	*Not determined.*
· ***Self-igniting:***	*Product is not selfigniting.*
· ***Danger of explosion:***	*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*
· ***Density at 20 °C:***	*1,113 g/cm³*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*
· ***Solubility in / Miscibility with***	
Water:	*Fully miscible*
· ***Partition coefficient (n-octanol/water):***	*Not determined.*
· ***Viscosity:***	
dynamic at 20 °C:	*5 mPas*
kinematic:	*Not determined.*
· ***Solvent content:***	
Organic solvents:	*0,0 %*
VOC (EC)	*0,00 %*
Solids content:	*23,0 %*
· ***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***
Reacts with light alloys to form hydrogen
Corrodes aluminium
Reacts with strong acids
· ***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:***

· ***LD/LC50 values relevant for classification:***		
5064-31-3 nitrilotriacetate, trisodium salt		
Dermal	*LD50*	*> 10000 mg/kg (can)*

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Inhalative	*LC50*	*1000-2000 mg/kg (Rat)*
	LC50/4 h	*> 5 mg/l (Rat)*
15763-76-5 sodium p-cumenesulphonate		
Dermal	*LD50*	*> 2000 mg/kg (can)*
Inhalative	*LC50*	*> 2000 mg/kg (Rat) (OECD 401)*
68411-30-3 alkylbenzene sulfonic acid, sodium salt		
Oral	*LD50*	*650 mg/kg (Rat)*
Inhalative	*LC50*	*> 2000 mg/kg (Rat) (OECD 401)*
69011-36-5 isotridecanolethoxylate + 8 EO		
Oral	*ATE*	*500 mg/kg (Rat)*
fatty alcohol ethoxylate		
Inhalative	*LC50*	*>2000 mg/kg (Rat)*

· ***Primary irritant effect:***
· ***on the skin:*** *Strong caustic effect on skin and mucous membranes.*
· ***on the eye:***
69011-36-5 isotridecanolethoxylate + 8 EO: specific concentration limit for H318: 10% (BCOP test, OECD 437)
· ***Additional toxicological information:***
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
Harmful
Irritant
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
Limited evidence of a carcinogenic effect.
Carc. 2

*
SECTION 12: Ecological information

· ***12.1 Toxicity***

· ***Aquatic toxicity:***	
5064-31-3 nitrilotriacetate, trisodium salt	
LC50/96 h	*> 100 mg/l (Pimephales promelas) (APHA 1971)*
15763-76-5 sodium p-cumenesulphonate	
EC50/48 h	*> 100 mg/l (Daphnia magna)*
EC50/96 h	*> 100 mg/l (Algae)*
LC50	*> 5 mg/l (Rat) (232 min)*
LC50/96 h	*> 100 mg/l (Oncorhynchus mykiss)*
10213-79-3 sodium silicate	
EC0/0,5 h	*> 1000 mg/l (Pseudomonas putida)*
EC50/96 h	*216 mg/l (Daphnia magna)*
LC50/96 h	*210 mg/l (Brachydanio rerio)*

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68411-30-3 alkylbenzene sulfonic acid, sodium salt	
EC50/48 h	*> 1 - 10 mg/l (Daphnia magna) (OECD 202)*
EC50/72 h	*> 10 - 100 mg/l (Desmodesmus subspicatus) (OECD 201)*
LC50/96 h	*> 1 - 10 mg/l (Cyprinus carpio) (OECD 203)*
69011-36-5 isotridecanolethoxylate + 8 EO	
EC50/48 h	*1 - 10 mg/l (Aquatic invertebrates)*
EC50/72 h	*1 - 10 mg/l (Aquatic plants)*
LC50/96 h	*1 - 10 mg/l (Leuciscus idus)*

· ***12.2 Persistence and degradability***	
69011-36-5 isotridecanolethoxylate + 8 EO	
Bismuth-act. sup.	*≥ 90 % (-) (mod. OECD 301 E)*

· ***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.*
· ***Additional ecological information:***
· ***CSB-value:*** *283.000 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.
In compliance with the prescribed application parameters, the product does not lead to stable emulsions.
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.
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.

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· **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** UN1824

· **14.2 UN proper shipping name**
· **ADR** 1824 SODIUM HYDROXIDE SOLUTION
· **IMDG, IATA** SODIUM HYDROXIDE SOLUTION

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 8 (C5) Corrosive substances.
· **Label** 8

· **IMDG, IATA**

· **Class** 8 Corrosive substances.
· **Label** 8

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

· **14.5 Environmental hazards:**
· **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Corrosive substances.
· **Danger code (Kemler):** 80
· **EMS Number:** F-A,S-B
· **Segregation groups** Alkalis

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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· ***Transport/Additional information:***

· ***ADR***	
· ***Limited quantities (LQ)***	*5L*
· ***Excepted quantities (EQ)***	*Code: E1* *Maximum net quantity per inner packaging: 30 ml* *Maximum net quantity per outer packaging: 1000 ml*
· ***Transport category***	*3*
· ***Tunnel restriction code***	*E*
· ***IMDG***	
· ***Limited quantities (LQ)***	*5L*
· ***Excepted quantities (EQ)***	*Code: E1* *Maximum net quantity per inner packaging: 30 ml* *Maximum net quantity per outer packaging: 1000 ml*
· ***UN "Model Regulation":***	*UN1824, SODIUM HYDROXIDE SOLUTION, 8, III*

*
SECTION 15: Regulatory information

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

· ***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***
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

· ***Department issuing MSDS:*** *PDE-D*

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· ***Contact:***
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Tel.: +49-7195-14-2398
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
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
Met. Corr.1: Corrosive to metals, Hazard Category 1
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

· *0.011-685.0* *RM 81 S/3* *1.999*