

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

Printing date 31.10.2014

Version number 1

Revision: 31.10.2014

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

- **1.1 Product identifier**
- **Trade name:** **-EM 40-**
- **Article number:** **3.614**
- **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 agent/ Cleaner
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

EMSA-Technik

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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. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
C; Corrosive
R34: Causes burns.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **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:**
potassium hydroxide

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- **Hazard statements**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

- **2.3 Other hazards**

- **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: 1312-76-1	Silicic acid, potassium salt mol ratio SiO ₂ / K ₂ O >2,6 < 3,2	5-10%
EINECS: 215-199-1	Xi R36/38	
Reg.nr.: 01-2119456888-17-XXXX	Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 28348-53-0	sodium cumenesulfonate	3-7%
EINECS: 248-983-7	Xi R36	
	Eye Irrit. 2, H319	
CAS: 1310-58-3	potassium hydroxide	3-7%
EINECS: 215-181-3	C R35; Xn R22	
Index number: 019-002-00-8	Met. Corr.1, H290; Skin Corr. 1A, H314; Acute Tox. 4, H302	
Reg.nr.: 01-2119487136-33-XXXX		
CAS: 7320-34-5	tetrapotassium pyrophosphate	1<3%
EINECS: 230-785-7	Xi R36	
Reg.nr.: 01-2119489369-18-XXXX	Eye Irrit. 2, H319	
CAS: 146340-16-1	modified fatty alcohol polyglycol ether	1<3%
EC number: 604-522-5	Xi R38; N R50	
	Aquatic Acute 1, H400; Skin Irrit. 2, H315; Aquatic Chronic 3, H412	

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

anionic surfactants, phosphates	5 - 15%
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non-ionic surfactants	< 5%
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- **Additional information:** 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:** Immediately remove any clothing soiled by the product.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Rinse opened eye for several minutes under running water.

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Protect unharmed eye.
Seek medical treatment.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
A person vomiting while laying on their back should be turned onto their side.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Information for doctor:**

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

· **Hazards** Danger of gastric perforation.

· **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:**

The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**

After evaporation of water (in case of a mass fire for example) the following substances may be formed, if heating goes on:

Incomplete combustion may cause Carbon monoxide, toxic fumes and smouldering gases.

Phosphorus oxides

Sulphur dioxide (SO₂)

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear fully protective suit.
Wear self-contained respiratory protective device.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.

· **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.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
For large amounts: Pump off product.

· **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.
- **Information about fire - and explosion protection:**
The product is not flammable.
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.
Provide alkali-resistant floor.
- **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from foodstuffs.
- **Further information about storage conditions:**
Keep container tightly sealed.
The shelf life stated on the label is subject to correct storage of the product.
- **Recommended storage temperature:** Not store under -6 °C - sensitive to freeze
- **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:**

1310-58-3 potassium hydroxide (3-7%)

WEL (Great Britain) Short-term value: 2 mg/m³

- **DNELs**

1312-76-1 Silicic acid, potassium salt mol ratio SiO₂ / K₂O >2,6 < 3,2

Oral DNEL Langzeit, systemische Wirkung 0.74 mg/kg bw/d (general population)

Dermal DNEL Langzeit, systemische Wirkung 1.49 mg/kg bw/d (worker)

0.74 mg/kg bw/d (general population)

Inhalative DNEL Langzeit, systemische Wirkung 5.61 mg/m³ (worker)1.38 mg/m³ (general population)

1310-58-3 potassium hydroxide

Inhalative DNEL Langzeit, lokale Wirkung 1 mg/m³ (worker)1 mg/m³ (general population)

- **PNECs**

1312-76-1 Silicic acid, potassium salt mol ratio SiO₂ / K₂O >2,6 < 3,2

PNEC - Abwasserbehandlungsanlage 348 mg/l (sewage treatment plant)

PNEC - wässrige Systeme 1 mg/l (water (marine water))

7.5 mg/l (water (freshwater))

7.5 mg/l (water (intermittent releases))

- **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

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Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Do not eat, drink, smoke or sniff while working.

Use skin protection cream for skin protection.

- **Respiratory protection:** Use suitable respiratory protective device only when aerosol or mist is formed.

- **Recommended filter device for short term use:** filter FFP2

- **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

Chloroprene rubber, CR

- **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:** Safety glasses with side-shields (frame goggles) (e.g. EN 166)

- **Body protection:**

Choose personal protective equipment according to activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to DIN-EN 465).

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Fluid

Colour: Colourless

Clear

- **Odour:** Characteristic

- **pH-value:** 11,6 (10g/l)

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 100 °C

- **Flash point:** Not applicable.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapour pressure at 20 °C:** 23 hPa

- **Density at 20 °C:** 1.17 g/cm³

- **Solubility in / Miscibility with water:** Fully miscible.

- **Solvent content:**

Organic solvents: 0.0 %

VOC (EC) 0.00 %

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- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
No dangerous reactions if handled and stored according to regulations and instructions.
Reacts with acids.
Reacts with base metals forming hydrogen.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Reacts with base metals as aluminium.
Acids
- **10.6 Hazardous decomposition products:**
None if used correctly.
Concerning decomposition products in the event of fire, see Chapter 5.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:**

1312-76-1 Silicic acid, potassium salt mol ratio SiO₂ / K₂O >2,6 < 3,2
 Oral LD 50 > 2000 mg/kg (rat)
28348-53-0 sodium cumenesulfonate
 Oral LD 50 > 2000 mg/kg (rat)
1310-58-3 potassium hydroxide
 Oral LD 50 333 mg/kg (rat)
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitisation:** No sensitising effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

SECTION 12: Ecological information

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

28348-53-0 sodium cumenesulfonate
 EC 50 (48h) > 100 mg/l (Daphnia magna)
 EC 50 (72h) > 100 mg/l (Scenedesmus subspicatus)
 LC 50 (96h) > 100 mg/l (Cyprinus carpio)
- **12.2 Persistence and degradability** The organic portion of the product is biodegradable.
- **Biodegradability**

28348-53-0 sodium cumenesulfonate
 Biolog. Abbaubarkeit > 60 % (OECD 301 B)
- **12.3 Bioaccumulative potential** No further relevant information available.

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- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **AOX-indication:** The product does not contain organically bonded halogen compounds.
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system.
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.
- **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.
- **Waste disposal key:**
The mentioned waste codes are recommendations based on the product application as suggested by the manufacturer. Special applications and special disposal conditions at the applier's place may however require another waste code.
- **European waste catalogue**
11 01 13* degreasing wastes containing dangerous substances
12 03 01* aqueous washing liquids
16 03 03* inorganic wastes containing dangerous substances
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** 1814
- **14.2 UN proper shipping name**
- **ADR** UN1814 POTASSIUM HYDROXIDE SOLUTION
- **IMDG, IATA** POTASSIUM HYDROXIDE SOLUTION
- **14.3 Transport hazard class(es)**
- **ADR**



- **Class** 8 (C5) Corrosive substances.

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· 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

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

· Transport/Additional information:

· ADR

· Limited quantities (LQ) LQ7

· Transport category 3

· Tunnel restriction code E

· UN "Model Regulation": UN1814, POTASSIUM 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.

· Other regulations, limitations and prohibitive regulations

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.

· 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.

· Relevant phrases

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

R22 Harmful if swallowed.

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- R35 Causes severe burns.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R50 Very toxic to aquatic organisms.

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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
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
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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