

Safety Data Sheet dated 29/4/2016, version 1 In compliance with Regulation (EC) 2015/830

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

1.1. Product identifier

Mixture identification:

Trade name: CARBOFF PLUS Product type: Caustic cleaner

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Washing and cleaning products (including solvent based products)

Uses advised against:

Not available

1.3. Details of the supplier of the safety data sheet

Supplier:

AirChem Consumables, LOB 10, Office # 10F14, JAFZA, Dubai, UAE- Tel: +971-4-881 8084, Fax: +971-4-881 6022, Email: airacc@acc.ae

Competent person responsible for the safety data sheet:

airacc@acc.ae

1.4. Emergency telephone number

AirChem Consumables, Tel: +971-4-881 8084, Fax: +971-4-881 6022, Email: airacc@acc.ae (from Sunday to Thursday from 09 AM to 6 PM; Saturdays 09 AM to 2:30 PM)

A list of Poison Control Centers is available at the following link: http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

Danger, Eye Dam. 1, Causes serious eye damage.

Adverse physicochemical, human health and environmental effects:

The product is highly corrosive and, if brought into contact with the skin, causes serious burning, with the rapid destruction of the entire thickness of skin tissue.

2.2. Label elements

EC regulation criteria 1272/2008 (CLP)

Hazard pictograms:



Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P280 Wear protective gloves/clothing and eye/face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contents:

Potassium hydroxide

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Alchylpolyglucoside

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification: 10-20 % Potassium hydroxide

REACH N° 01-2119487136-33-XXXX, Index number: 019-002-00-8, CAS: 1310-58-3,

EC: 215-181-3

- ♦ 2.16/1 Met. Corr. 1 H290
- ♦ 3.2/1A Skin Corr. 1A H314
- 3.1/4/Oral Acute Tox. 4 H302

5-10 % 2-(2-butoxyethoxy)ethanol

REACH N°: 01-2119475104-44-XXXX, Index number: 603-096-00-8, EC: 203-961-6

3.3/2 Eye Irrit. 2 H319

1-5 % (1-Hydroxyethylidene) diphosphonic acid, potassium salt

CAS: 67953-76-8, EC: 267-956-0

4.1/C2 Aquatic Chronic 2 H411

1-5 % Alchylpolyglucoside

CAS: 68515-73-1, EC: 500-220-1

3.3/1 Eye Dam. 1 H318

1-5% Sodium Xylenesulphonate

REACH N°: 01-2119513350-56-0003, CAS: 1300-72-7, EC: 215-090-9

- 3.3/2 Eye Irrit. 2 H319
- 3.2/2 Skin Irrit. 2 H315
- 1 -5% Sodium metasilicate

REACH N°. 01-2119449811-37-XXXX, Index number: 014-010-00-8, CAS: 10213-79-3,

EC: 229-912-9

- ♦ 3.2/1B Skin Corr. 1B H314
- ◆ 3.8/3 STOT SE 3 H335
- 2.16/1 Met. Corr. 1 H290

<0.1% Fhosphoric acid

Index number: 015-011-00-6, CAS: 7664-38-2, EC: 231-633-2

- ♦ 3.2/1B Skin Corr. 1B H314
- ♦ 3.3/1 Eye Dam. 1 H318
- 2.16/1 Met. Corr. 1 H290

Declaration of ingredients according to Detergent Regulation 648/2004: phosphonates, anionic surfactants, non-ionic surfactants < 5 %

For the complete text of the hazard and risk phrases refer to paragraph 16

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

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OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

None

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

For more information see Technical date bulletin

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contained substances

Potassium hydroxide - CAS: 1310-58-3

ACGIH - STE mg/m3(15min): C 2 - STE ppm: C 0.87 - Behaviour: Binding - Critical effects: C irritation of the skin, respiratory and eye.

EU - LTE mg/m3(8h): 2 - STE mg/m3(15min): 2 - STE ppm: 0.87 - Behaviour: Binding

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

EU - LTE mg/m3(8h): 67.5 - LTE ppm: 10 - STE mg/m3(15min): 101.2 - STE ppm: 15 - Behaviour: Binding

Fhosphoric acid - CAS: 7664-38-2

EU - LTE mg/m3(8h): 1 - LTE ppm: 0.25 - STE mg/m3(15min): 2 - STE ppm: 0.75 - Behaviour: Binding

ACGIH - LTE mg/m3(8h): 1 - STE mg/m3(15min): 3 - Behaviour: Binding - Critical effects: Skin and eye respiratory irritation.

NIOSH - LTE mg/m3(10h): 1 - STE mg/m3(15min): 3 - Behaviour: Binding OSHA - LTE mg/m3(8h): 1 - STE mg/m3(15min): 3 - Behaviour: Binding

DNEL Exposure Limit Values

Potassium hydroxide - CAS: 1310-58-3

Worker Professional: 1 mg/m3 - Consumer: 1 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Worker Professional: 67.5 mg/m3 - Consumer: 34 - U.M.: mg/m3 - Exposure:

Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 101.2 mg/m3 - Consumer: 50.6 - U.M.: mg/m3 - Exposure:

Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 20 mg/kg - Exposure: Human Dermal - Frequency: Long Term, local effects

Consumer: 10 - U.M.: mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 34 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 1.25 - U.M.: mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Sodium Xylenesulphonate - CAS: 1300-72-7

Consumer: 3.8 - U.M.: mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 53.6 mg/m3 - Consumer: 13.2 - U.M.: mg/m3 - Exposure:

Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 7.6 mg/kg - Consumer: 3.8 - U.M.: mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Sodium metasilicate - CAS: 10213-79-3

Worker Professional: 6.22 mg/m3 - Consumer: 1.55 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 1.49 mg/kg - Consumer: 0.74 - U.M.: mg/kg - Exposure:

Human Dermal - Frequency: Long Term, systemic effects

Consumer: 0.74 - U.M.: mg/kg - Exposure: Human Oral - Frequency: Long Term,

systemic effects

Fhosphoric acid - CAS: 7664-38-2

Worker Professional: 2.92 mg/m3 - Consumer: 0.73 - U.M.: mg/m3 - Exposure:

Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 1 mg/m3 - Exposure: Human Inhalation - Frequency: Long

Term, local effects

Worker Professional: 2 mg/m3 - Exposure: Human Inhalation - Frequency: Short

Term, local effects

PNEC Exposure Limit Values

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Target: Fresh Water - Value: 1 mg/l Target: Marine water - Value: 0.1 mg/l Target: Occasional issue - Value: 3.9 mg/l Target: Freshwater sediments - Value: 4 mg/kg

Target: Soil - Value: 0.4 mg/kg

Sodium Xylenesulphonate - CAS: 1300-72-7

Target: Fresh Water - Value: 0.23 mg/l Target: Occasional issue - Value: 2.3 mg/l

Target: Sewerage treatment plants - Value: 100 mg/l

Sodium metasilicate - CAS: 10213-79-3 Target: Fresh Water - Value: 7.5 mg/l Target: Marine water - Value: 1 mg/l

Target: Occasional issue - Value: 7.5 mg/l

Target: Sewerage treatment plants - Value: 1000 mg/l

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

. None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Clear brown liquid		
Odour:	Glycolic		
Odour threshold:	n.av. mg/m3		
pH:	13		
Melting point / freezing	<0℃		

		1	
point:			
Initial boiling point and boiling range:	initial 100 ℃		
Flash point:	None ℃		
Evaporation rate:	na		
Solid/gas flammability:	na		
Upper/lower flammability or explosive limits:	na % v/v		
Vapour pressure:	3.2 kPa		
Vapour density (air=1):	> 1		
Relative density:	1.15 g/ml		
Solubility in water:	Complete		
Solubility in oil:	na		
Partition coefficient (n-octanol/water):	n.av.		
Auto-ignition temperature:	Doesn't self ignite℃		
Decomposition temperature:	na ℃		
Viscosity:	n.av. mPa.s		
Explosive properties:	Not explosive		
Oxidizing properties:	Not Oxidant		

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Complete in water		
Fat Solubility:	na		
Conductivity:	n.av.		
Substance Groups relevant properties:	n.av.		

SECTION 10: Stability and reactivity 10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with halogenated organic substances, and elementary metals.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

Not applicable

Toxicological information of the main substances found in the mixture:

Potassium hydroxide - CAS: 1310-58-3

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: = - Value: 333 - U.M.: mg/kg

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: = - Value: 2410 - U.M.: mg/kg

Test: LD50 - Route: Skin - Species: Rabbit - Op.: = - Value: 2764 - U.M.: mg/kg

Alchylpolyglucoside - CAS: 68515-73-1

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: = - Value: 3730 - U.M.: mg/kg

Test: LD50 - Route: Skin - Species: Rabbit - Op.: > - Value: 8000 - U.M.: mg/kg

Sodium Xylenesulphonate - CAS: 1300-72-7

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: > - Value: 7200 - U.M.: mg/kg

Test: LD50 - Route: Skin - Species: Rabbit - Op.: > - Value: 2000 - U.M.: mg/kg

Test: LC50 - Route: Inhalation - Species: Rat - Op.: > - Value: 6.41 - U.M.: mg/l -

Duration: 4 hours - Notes: Vapours

Sodium metasilicate - CAS: 10213-79-3

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: > - Value: 1152 - U.M.: mg/kg

Test: LD50 - Route: Oral - Species: Rat - Op.: < - Value: 1349 - U.M.: mg/kg

Test: LD50 - Route: Oral - Species: Mouse - Op.: > - Value: 1152 - U.M.: mg/kg

Test: LD50 - Route: Oral - Species: Mouse - Op.: < - Value: 1349 - U.M.: mg/kg

Test: LC50 - Route: Inhalation - Species: Rat - Op.: > - Value: 2.06 - U.M.: g/m3 -

Duration: 4 hours

Test: LD50 - Route: Skin - Species: Rat - Op.: > - Value: 5000 - U.M.: mg/kg - Notes: bw

Type: b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rat - Op.: Positive - Source: OECD 404

Type: c) serious eye damage/irritation:

Test: Eye Irritant - Route: EYES - Species: Rabbit - Op.: Positive - Source: OECD 405

Fhosphoric acid - CAS: 7664-38-2

Type: a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat - Op.: = - Value: 1250 - U.M.: mg/kg

Test: LD50 - Route: Oral - Species: Rat - Op.: = - Value: 2600 - U.M.: mg/kg

Test: LD50 - Route: Skin - Species: Rabbit - Op.: = - Value: 2740 - U.M.: mg/kg

Test: LC50 - Route: Inhalation - Species: Rat - Op.: = - Value: 850 - U.M.: mg/l - Duration:

2 hours

Type: b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Rabbit - Op.: = - Value: 595 - U.M.: mg/kg -

Duration: 24 hours

Type: c) serious eye damage/irritation:

Test: Eye Irritant - Route: EYES - Species: Rabbit - Op.: = - Value: 119 - U.M.: mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity:
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Based on the information available it is not expected that this product may cause any adverse environmental effect when use instructions and disposal recommendations are followed. Adopt good working practices, so that the product is not released into the environment.

List of substances hazardous to the environment and eco-toxicological information available:

Potassium hydroxide - CAS: 1310-58-3

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 80 - U.M.: mg/l - Duration h: 96 -

Notes: Gambusia affinis

Endpoint: LC50 - Species: Bacteria - Op.: = - Value: 80 - U.M.: mg/l - Duration h: 24

- Notes: Mosquito

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 1300 - U.M.: mg/l - Duration h: 96 -

Notes: lepomis macrochirus

Endpoint: EC50 - Species: Daphnia - Op.: > - Value: 100 - U.M.: mg/l - Duration h:

48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae - Op.: > - Value: 100 - U.M.: mg/l - Duration h: 96

- Notes: Selenastrum capricornutum

Alchylpolyglucoside - CAS: 68515-73-1

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 198 - U.M.: mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia - Op.: = - Value: 280 - U.M.: mg/l - Duration h:

40

Sodium Xylenesulphonate - CAS: 1300-72-7

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 400 - U.M.: mg/l - Duration h: 98 -

Notes: Pimephales promelas

Endpoint: LC50 - Species: Fish - Op.: = - Value: 1000 - U.M.: mg/l - Duration h: 96 -

Notes: Oncorhynchus mykiss

Endpoint: EC50 - Species: Daphnia - Op.: = - Value: 1000 - U.M.: mg/l - Duration h:

48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae - Op.: > - Value: 230 - U.M.: mg/l - Duration h: 96

- Notes: Selenastrum capricornutum

Type: b) Aquatic chronic toxicity:

Endpoint: NOEC - Op.: = - Value: 31 - U.M.: mg/l - Duration h: 96 - Notes:

Selenastrum capricornutum

Sodium metasilicate - CAS: 10213-79-3

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 210 - U.M.: mg/l - Duration h: 96 -

Notes: Brachydanio rerio

Endpoint: LC50 - Species: Fish - Op.: = - Value: 2320 - U.M.: mg/l - Duration h: 96 -

Notes: Gambusia affinis

Endpoint: EC50 - Species: Daphnia - Op.: = - Value: 1700 - U.M.: mg/l - Duration h:

48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae - Op.: = - Value: 207 - U.M.: mg/l - Duration h: 72

- Notes: Scenedesmus subspicatus

Fhosphoric acid - CAS: 7664-38-2

Type: a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish - Op.: = - Value: 138 - U.M.: mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia - Op.: > - Value: 100 - U.M.: mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae - Op.: > - Value: 100 - U.M.: mg/l - Duration h: 72

12.2. Persistence and degradability

Potassium hydroxide - CAS: 1310-58-3

Biodegradability: Non-readily biodegradable - Test: Not applicable - Duration: Not applicable - %: Not applicable - Notes: Not applicable

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Biodegradability: Readily biodegradable - Test: OCSE TG 302B: Test Zahn–Wellens modified, Theoretical carbon demand (ThCO2) - Duration: 28 days - %: 100 - Notes: Not applicable

Biodegradability: Readily biodegradable - Test: OCSE 301 E: Modified OCSE Screening, exhaustion of COD - Duration: 28 days - %: 89 - Notes: Not applicable

Sodium Xylenesulphonate - CAS: 1300-72-7

Biodegradability: Readily biodegradable - Test: OCSE 301 B: Evolution of CO2, Modified Sturm. - Duration: Not applicable - %: Not applicable - Notes: Not applicable

Regulation (EC) No. 648/2004 on Detergents and amendments:

Surfactant(s) contained in this preparation comply with biodegradability criteria as defined in (EC) regulations on detergents.

12.3. Bioaccumulative potential

Sodium Xylenesulphonate - CAS: 1300-72-7

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient -3.12 - Duration: Not applicable - Notes: Not applicable

Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentrantion factor Not applicable - Duration: Not applicable - Notes: Not applicable

Sodium metasilicate - CAS: 10213-79-3

Bioaccumulation: Not bioaccumulative - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable

Fhosphoric acid - CAS: 7664-38-2

Bioaccumulation: Not bioaccumulative - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable

12.4. Mobility in soil

2-(2-butoxyethoxy)ethanol - Index number: 603-096-00-8

Mobility in soil: Mobile - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product and its residue:

Do not dispose in the canals of wastewater, waterways and soil.

The codes indicating the type of waste are considered based on the recommendations and scheduled use of this product. Different codes may be assigned bused on the end user's use and the characteristics of the disposal.

Waste code CER/EWC (2000/532/CE), attributable to the product as:

07 06 01* Aqueous solution of washing and mother liquors

Any remaining product should be disposed of with the material.

Containers/contaminated packaging

Containers, even completely empty, must not be disposed in the environment. The packigings which can not be cleaned should be disposed of as the material.

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1 UN number:

ADR-UN Number: 1814 IATA-UN Number: 1814 IMDG-UN Number: 1814

14.2. UN proper shipping name

ADR-Shipping Name: POTASSIUM HYDROXIDE SOLUTION IATA-Shipping Name: POTASSIUM HYDROXIDE SOLUTION IMDG-Shipping Name: POTASSIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR-Class: 8

ADR - Hazard identification number: 80

IATA-Class: 8 IATA-Label: 8 **IMDG-Class:** 8

14.4. Packing group

ADR-Packing Group: Ш IATA-Packing group: Ш IMDG-Packing group: Ш

14.5. Environmental hazards

ADR-Environmental Pollutant: No IMDG-Marine pollutant: 14.6. Special precautions for user

ADR-Subsidiary risks: ADR-S.P.:

ADR-Transport category (Tunnel restriction code): (E)

IATA-Passenger Aircraft: 851 IATA-Subsidiary risks: IATA-Cargo Aircraft: 855 IATA-S.P.: A3 A803 IATA-ERG: IMDG-EmS: F-A , S-B IMDG-Subsidiary risks:

IMDG-Stowage and handling: Category A

IMDG-Segregation: "Separated from" acids.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) 2015/830

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP) Regulation (EU) n. 487/2013 (ATP 4 CLP) Regulation (EU) n. 944/2013 (ATP 5 CLP) Regulation (EU) n. 605/2014 (ATP 6 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Volatile Organic compounds - VOCs = 5.50 %

Volatile Organic compounds - VOCs = 63.25 g/l

Volatile CMR substances = 0.00 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %

Organic Carbon - C = 0.00

Where applicable, refer to the following regulatory provisions:

Regulation (EC) n°648/2004 (detergents).

15.2. Chemical safety assessment

Not available

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

H318 Causes serious eye damage.

H315 Causes skin irritation.

H335 May cause respiratory irritation.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

This safety data sheet has been completely updated in compliance to Regulation 2015/830. This document was prepared by a competent person who has received appropriate training.

This MSDS cancels and replaces any preceding release.

Where applicable, refer to the following regulatory provisions:

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments; Regulation (EC) n°1272/2 008; Regulation (EC) N. 790/2009 (annex VI), Regulation (EC) n. 1907/2006 (REACH).

Commission Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparation) and subsequent amendments; Commission Directive n. 2006/8/CE. Directive 2012/18/EU (Seveso III)

Directive 2013/10/EU (aerosols) amending Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) n°1272/2008 on class ification, labelling and packaging of substances and mixtures and subsequent amendments.

Regulation (EC) No 1223/2009 on cosmetic products and subsequent amendments. Regulation (EU) No 126/2013 amending Annex XVII to Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and subsequent amendments. Regulation (EC) N. 304/2003 and subsequent amendments. Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products and subsequent amendments.

Directives 91/156/CEE, 91/689/CEE, 94/62/CE (Disposal of waste) and subsequent amendments.

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), current edition.

Regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition.

RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition.

IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition.

Main bibliographic sources:

ESIS: European chemical Substances Information System and Environmental hazard classification.

Occupational exposure limit values (Commission Directives 2000/39/EC and 2006/15/CE)

NIOSH - Registry of toxic effects of chemical substances (1983)

Material Safety Data Sheets of chemicals, REACH database

Material Safety Data Sheet and Technical Data of raw material as by Supplier.

Abbreviations and acronyms:

TLV-TWA = Threshold Limit Value- time-weighed average, 8-hour workday, 40-hour workweek; TLV-STEL-15 min = Threshold Limit Values - Short Term Exposure Limit; TLV-C = Ceiling exposure limit; Notes: IBE= Biological Exposure Indices; SEN= sensitizer; Skin= Can be absorbed through the skin. Carcinogenicity categories: A1 / A2 = confirmed / suspected human carcinogen; A3 = Animal carcinogen; A4 / A5 = Not Classificable/not suspected as a human carcinogen. ACGIH = American Conference on Governmental Industrial Hygienists. OEL =Occupational Exposure Limit. VLPE = Occupational Exposure Limit Values. LTE =long term exposure, STE=short term exposure.

n.av.= Not Available, n.a. = not applicable; LD50=lethal dose (solids and liquids), LC50=lethal concentration (gases) that will kill 50% of the test animals; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. Regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition.

RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition. IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition.

PBT = Persistent, Bioaccumulative and Toxic substances.; vPvB = very Persistent and very Bioaccumulative substances; CMR = Carcinogenic, mutagenic or reproduction toxic substances.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.