

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

Printing date 28.09.2018

Version: 4

Revision: 28.09.2018

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

· **1.1 Product identifier**

· Trade name: **BOILER DEMI**

· Article number: 94840001

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

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Product category** PC37 Water treatment chemicals

· **Application of the substance / the mixture** Water treatment

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

· **Manufacturer/Supplier:**

ZEP UK Ltd  
Tanhouse Lane  
Widnes Cheshire, WA8 0RD  
United Kingdom  
Tel: +44 (0)151 422 1000  
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Vierlinghweg 30  
4612 PN Bergen op Zoom  
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Tel: (NL) + 31 164 250 100 (B) + 32 2 347 0117  
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· **Further information obtainable from:**

Customer Service  
NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710  
B: Tel: +32 2 347 0117 Fax: +32 2 347 1395  
IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61  
UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011

· **1.4 Emergency telephone number:**

Customer Service  
NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710  
B: Tel: +32 2 347 0117 Fax: +32 2 347 1395  
IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61  
UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011  
EU: Tel. 112

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

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 substance is classified and labelled according to the CLP regulation.

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### Hazard pictograms



GHS05

### Signal word Danger

#### Hazard-determining components of labelling:

Potassium hydroxide

#### Hazard statements

H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P260 Do not breathe dusts or mists.

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.

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.

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 nonhazardous additions.

#### Dangerous components:

CAS: 7757-83-7 EINECS: 231-821-4 Reg.nr.: 01-2119537420-49-xxxx	sodium sulphite	⚠ STOT SE 3, H335	2.5-5%
CAS: 1310-58-3 EINECS: 215-181-3 Reg.nr.: 01-2119487136-33-xxxx	Potassium hydroxide	⚠ Skin Corr. 1A, H314 ⚠ Acute Tox. 4, H302	2.5-5%

· **Ingredients according to Detergents Regulation 648/2004/EC** 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.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

Seek medical treatment.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

#### After swallowing:

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.

· **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:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.

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- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, 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**  
Store in cool, dry place in tightly closed receptacles.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Use only in well ventilated areas.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **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:**

**1310-58-3 Potassium hydroxide (2.5-5%)**

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>

· **DNELs**

**1310-58-3 Potassium hydroxide**

Inhalative DNEL Long term local mg/m<sup>3</sup> 1 mg/m<sup>3</sup> (worker)

· **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  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

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Rubber gloves

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.

Rubber gloves

- **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.

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **Not suitable are gloves made of the following materials:** Strong material gloves

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Alkaline resistant protective 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:** 12.7

- **Change in condition**

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** 102 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** 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 at 20 °C:** 23 hPa

- **Density at 20 °C:** 1.124 g/cm<sup>3</sup>

- **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:** Not determined.

**Kinematic:** Not determined.

- **Solvent content:**

**Organic solvents:** 0.0 %

**Swiss VOC:** 0.00 %

**Solids content:** 10.0 %

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

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **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:

##### 7757-83-7 sodium sulphite

Oral	LD50	>2,610 mg/kg (Rat)
	LC50 / 96 h	220-460 mg/ltr (fish)
	EC50	273 mg/ltr (Daphnia magna (water flea))

##### 1310-58-3 Potassium hydroxide

Oral	LD50	333 mg/kg (Rat)
	LC50/ 24 h	80 mg/ltr (fish)

- **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:

##### 7757-83-7 sodium sulphite

COD	125 (mg O <sub>2</sub> / g product) (calculation)
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- **12.2 Persistence and degradability** No further relevant information available.
- **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:**
- **General notes:**  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
In accordance with the requirements of the RVO in the Act on Detergents and Cleansing Agents, tensides are biodegradable up to at least 90 %.  
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.

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- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations
- **Uncleaned packaging:**
- **Recommendation:** Disposal in accordance with administrative provisions

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1814
- **14.2 UN proper shipping name**
- **ADR** 1814 POTASSIUM HYDROXIDE SOLUTION mixture
- **IMDG, IATA** POTASSIUM HYDROXIDE SOLUTION mixture
- **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** II
- **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
- **Stowage Category** A
- **Segregation Code** SG35 Stow "separated from" acids.
- **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

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· **IMDG**

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

1L

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":**

UN 1814 POTASSIUM HYDROXIDE SOLUTION MIXTURE, 8, II

### SECTION 15: Regulatory information

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

Reg. (EC) n. 1272/2008 - CLP;

Reg. (EC) n. 1907/2006 – Reach;

Reg. (EC) n. 2015/830 annex II of REACH;

Reg. (EC) n. 648/04 (Detergents);

Reg. (EC) n. 528/12 (Biocides BPR);

Reg. (EC) n. 1223/2009 (Cosmetics);

Dir. 06/08 ADR – RID - IMDG - IATA;

Dir. 47/08 (Aerosols); Dir. 12/18 (Seveso III);

Dir. 2008/98/CE and Reg. (EC) n.1357/2014 (Waste management)

- **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:**

- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

- **Department issuing SDS:**

Customer Service

NL: Tel: +31 164 250 100 Fax: +31 164 266 710

B: Tel: +32 2 347 0117 Fax: +32 2 347 1395

IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61

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- **Contact:**

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IT: Tel: +39 069 266 91 Fax: +39 06.927 470 61

UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

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*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*  
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*  
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*  
· **\* Data compared to the previous version altered.**

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### Annex: Exposure scenario

· **Short title of the exposure scenario**

For the finished product.

BOILER DEMI

BOIL-CARE D20 LP

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Product category PC37** Water treatment chemicals

· **Description of the activities / processes covered in the Exposure Scenario** See section 1 of the annex to the Safety Data Sheet.

· **Conditions of use**

· **Duration and frequency** 5 workdays/week.

· **Physical parameters**

· **Physical state** Fluid

· **Concentration of the substance in the mixture** The substance is main component.

· **Used amount per time or activity** According to directions for use.

· **Other operational conditions**

· **Other operational conditions affecting environmental exposure** No special measures required.

· **Other operational conditions affecting worker exposure**

Avoid contact with eyes.

Avoid contact with the skin.

· **Other operational conditions affecting consumer exposure** Keep out of the reach of children.

· **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

· **Risk management measures**

· **Worker protection**

· **Organisational protective measures** No special measures required.

· **Technical protective measures** Ensure that suitable extractors are available on processing machines

· **Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

Protective gloves

Rubber gloves

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

· **Measures for consumer protection**

Ensure adequate labelling.

Keep locked up and out of the reach of children.

· **Environmental protection measures**

· **Water** Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

· **Disposal measures**

Disposal in accordance with administrative provisions

Ensure that waste is collected and contained.

· **Disposal procedures** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Waste type** Partially emptied and uncleaned packaging

· **Exposure estimation**

· **Consumer** Not relevant for this Exposure Scenario.

· **Guidance for downstream users** No further relevant information available.