SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	HYDREX 1568
Registration number	-
Synonyms	None.
Issue date	19-December-2017
Version number	01

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

Identified uses	Boiler Water Treatment
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier	VWS UK Ltd T/A Veolia Water Technologies
Address	Windsor Court Kingsmead Business Park High Wycombe-HP11 1JU - United Kingdom
Contact person	Hydrex Product Manager
Telephone	+44 1628 897 000
Fax	+44 1628 897 001
e-mail	hydrex.watertech@veolia.com
National Emergency Number	+44 1628 897 295
Global Emergency Contact	1-760-476-3961 (code: 333239)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classificatior applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 1	H314 - Causes severe skin burns and eye damage.

Hazard summary Causes severe skin burns and eye damage. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Sodium hydroxide

Hazard pictograms

Signal word Danger

Hazard statements

H314	Causes severe skin burns and eye damage.

Precautionary statements

Prevention

P260	Do not breathe mist or vapour.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

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 CENTRE/doctor/paramedic.
P363	Wash contaminated clothing before reuse.

Storage Not available.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Sodium hydroxide	20 - < 30	1310-73-2 215-185-5	01-2119457892-27-xxxx	011-002-00-6	
Classification:	Skin Corr. 1A;H314				
Other components below reportable levels	70 - < 90				

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.
#: This substance has been assigned Union workplace exposure limit(s).
#: This substance has been assigned Community workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all R- and H-phrases is displayed in section 16. The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information In case of shortness of breath, give oxygen. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Keep victim under observation. Keep victim warm.

4.1. Description of first aid measures

Inhalation Move to fresh air. Get medical attention immediately.

Skin contact Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Get medical attention immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. Wash clothing separately before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

4.2. Most important symptoms and effects, both acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear suitable protective equipment.

Special fire fighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.

For emergency responders Keep unnecessary personnel away.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid forming spray/aerosol mists. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Protect from sunlight. Store in original tightly closed container. Use care in handling/storage. Store in accordance with local/regional/national/international regulation. Store in cool, dry place.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	STEL	2 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Do not get in eyes. Before any handling, wear protective glasses side-shields complying with the NF EN 166.
Skin protection	
- Hand protection	Chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
- Other	Do not get this material in contact with skin. Wear appropriate chemical resistant clothing. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Respiratory protection	No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Colour	Colourless.
Odour	Odourless.
pH	13 - 14
Melting point/freezing point	-15 °C (5 °F)
Initial boiling point and boiling range	100 °C (212 °F)
Flash point	Not available.
Flammability (solid, gas)	Not applicable.
Vapour pressure	0.2 kPa
Vapour density	0.62
Solubility(ies)	
Solubility (water)	Not available.
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Viscosity	7.9 cP (20°C)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Density	1.28 g/cm3
Specific gravity	1.28
pH of 5% Solution	14

SECTION 10: Stability and reactivity

10.1. Reactivity	Reacts violently with strong acids. This product may react with oxidizing agents.
10.2. Chemical stability	Material is stable under normal conditions.

10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials. Do not mix with other chemicals.
10.5. Incompatible materials	Strong acids. Acids. Oxidizing agents.
10.6. Hazardous decomposition products	No dangerous reaction known under conditions of normal use.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes severe eye burns.
Ingestion	Harmful if swallowed.
Symptoms	Contact with this material will cause burns to the skin, eyes and mucous membranes. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

11.1. Information on toxicological effects

Acute toxicity Causes severe eye burns. Causes severe burns. Harmful if swallowed.

Product	**Species**	**Test results**
HYDREX 1568		
Acute		
Dermal		
LD50	Rabbit	5595 mg/kg estimated
Oral		
Liquid		
LD50	Rat	1300 mg/kg

Components	**Species**	**Test results**
Sodium hydroxide (CAS 1310-73-2)		
Acute		
Dermal		
Solid		
LD50	Rabbit	1350 mg/kg
Oral		
Solid		
LD50	Rat	> 300 mg/kg
Liquid		
LD50	Rat	> 300 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Corrosive to skin and eyes.
Serious eye damage/eye irritation	Causes severe eye burns.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Causes severe skin burns.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Not expected to be harmful to aquatic organisms. Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Product		Species	Test results
HYDREX 1568			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	>= 130 mg/l, 48 hours
Fish	LC50	Fish	500 mg/l, 96 hours

Components		Species	Test results
Sodium hydroxide (CAS 1310-73-2)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code Waste codes should be assigned by the user based on the application for which the product was used.

Disposal methods/information Consult authorities before disposal. This material and its container must be disposed of as hazardous waste.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN1824

14.2. UN proper shipping name Sodium hydroxide solution

14.3. Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Hazard No. (ADR) 80

Tunnel restriction code E

14.4. Packing group II

14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN1824
14.2. UN proper shipping name	Sodium hydroxide solution
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	UN1824
14.2. UN proper shipping name	Sodium hydroxide solution
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1824
14.2. UN proper shipping name	Sodium hydroxide solution
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	No.
ERG Code	8L
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN1824
14.2. UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
14.6. Special precautions for user	Not available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	Not established.

ADN; ADR; IATA; IMDG; RID

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. This Safety Data Sheet complies with the requirements of Regulation (EC) REACH, Annex II, N° 1907/2006 and REACH (CE) N° 453/2010 and its amendments. This Safety Data Sheet complies with the requirements of regulation CLP (CE) N° 1272/2008 and its amendments. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculatior methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H314 Causes severe skin burns and eye damage.
Revision information	Product and Company Identification: Alternate Trade Names Toxicological Information: Toxicological Data Ecological Information: Ecotoxicity GHS: Classification
Training information	Follow training instructions when handling this material.
Disclaimer	Veolia Water Technologies is not able to anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use and or non respect of Veolia Water Technologies' requirement.