SAFETY DATA SHEET
Hydro-X Super

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

1.1. Product identifier
Product name: Hydro-X Super

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Boiler water conditioning agent
Uses advised against: No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet
Supplier: Hydro-X Water Treatment Ltd
Eden Place
Outgang Lane
Dinnington
Sheffield
S25 3QT
+44 (0) 1909 565133
+44 (0) 1909 564301
technical@hydro-x.co.uk

1.4. Emergency telephone number
Emergency telephone: +44 (0) 1909 565133 (9am-5pm, Mon-Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification
Physical hazards: Not Classified
Health hazards: Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards: Not Classified

Classification (67/548/EEC or 1999/45/EC): C; R35

Human health: Corrosive to skin and eyes. See Section 11 for additional information on health hazards.
Environmental: The product is not expected to be hazardous to the environment.

2.2. Label elements
Pictogram

Signal word: Danger
Hydro-X Super

Hazard statements
H314 Causes severe skin burns and eye damage.

Precautionary statements
P280 Wear protective gloves, eye and 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.
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 national regulations.

Contains
Sodium hydroxide

Supplementary precautionary statements
P260 Do not breathe vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>CAS number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>10 - &lt;25%</td>
<td>1310-73-2</td>
<td>215-185-5</td>
</tr>
<tr>
<td>Trisodium phosphate</td>
<td>1 - &lt;2.5%</td>
<td>10101-89-0</td>
<td></td>
</tr>
</tbody>
</table>

Classification

<table>
<thead>
<tr>
<th>Sodium hydroxide</th>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1A - H314</td>
<td>C; R35</td>
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<tr>
<td>Eye Dam. 1 - H318</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trisodium phosphate</th>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irrit. 2 - H315</td>
<td>Xi; R36/37/38</td>
</tr>
<tr>
<td>Eye Irrit. 2 - H319</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3 - H335</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion
Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if any discomfort continues.

Skin contact
Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist after washing.
Hydro-X Super

Eye contact
May cause permanent damage if eye is not immediately irrigated. Remove any contact lenses and open eyelids wide apart. Rinse cautiously with water for several minutes. Get medical attention if irritation persists after washing.

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

Inhalation
Severe irritation of nose and throat. Corrosive to the respiratory tract.

Ingestion
May cause chemical burns in mouth, oesophagus and stomach.

Skin contact
Burning pain and severe corrosive skin damage.

Eye contact
Causes serious eye damage.

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

Notes for the doctor
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Specific treatments
Chemical burns must be treated by a physician.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards
The product is non-combustible. Heating may generate the following products: Corrosive gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting
Avoid breathing fire gases or vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Ventilate closed spaces before entering them.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. Take care as floors and other surfaces may become slippery. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions
Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Do not empty into drains. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with national regulations.

6.4. Reference to other sections
Hydro-X Super

Reference to other sections
See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Read and follow manufacturer’s recommendations. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

Advice on general occupational hygiene
No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Store in a cool and well-ventilated place.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
Sodium hydroxide
Short-term exposure limit (15-minute): WEL 2 mg/m³
WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment
Appropriate engineering controls
Provide adequate ventilation. Provide eyewash station.

Eye/face protection
Chemical splash goggles.

Hand protection
Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures
Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection
If ventilation is inadequate, suitable respiratory protection must be worn.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties
Appearance
Liquid.

Colour
Amber.
Hydro-X Super

Odour threshold: Not available.

pH: pH (concentrated solution): 13.5 - 14

Melting point: Not available.
Initial boiling point and range: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Evaporation factor: Not available.
Flammability (solid, gas): Not relevant.
Upper/lower flammability or explosive limits: Not available.

Vapour pressure: Not available.
Vapour density: Not available.
Relative density: 1.18 @ 25°C
Bulk density: Not available.
Solubility(ies): Miscible with water.
Partition coefficient: Not available.
Auto-ignition temperature: Not available.
Decomposition Temperature: Not available.
Viscosity: Not available.

Explosive properties: Not considered to be explosive.
Oxidising properties: Does not meet the criteria for classification as oxidising.

9.2. Other information
Other information: No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity: There are no known reactivity hazards associated with this product.

10.2. Chemical stability
Stability: Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions: Will not polymerise.

10.4. Conditions to avoid
Conditions to avoid: Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials
Materials to avoid: Strong acids. Powdered metal.
Hydro-X Super

10.6. Hazardous decomposition products

Hazardous decomposition products
None at ambient temperatures. Heating may generate the following products: Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation
Animal data Corrosive to skin.

Serious eye damage/irritation
Serious eye damage/irritation Corrosivity to eyes is assumed.

Respiratory sensitisation
Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation
Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity
Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard
Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.

Sodium hydroxide

Acute toxicity - oral
Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Hydro-X Super

**Notes (inhalation LCₜ₀)**

Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

**Animal data**

Skin Corr. 1A - H314 REACH dossier information.

**Serious eye damage/irritation**

Serious eye damage/irritation

Corrosive to skin. Corrosivity to eyes is assumed.

**Respiratory sensitisation**

Respiratory sensitisation

Based on available data the classification criteria are not met.

**Skin sensitisation**

Skin sensitisation

Patch test - Human: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Genotoxicity - in vitro

Bacterial reverse mutation test: Negative. REACH dossier information. Based on available data the classification criteria are not met.

**Carcinogenicity**

Carcinogenicity

Based on available data the classification criteria are not met.

**Reproductive toxicity**

Reproductive toxicity - fertility

Based on available data the classification criteria are not met.

Reproductive toxicity - development

Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

STOT - single exposure

Based on available data the classification criteria are not met.

**Specific target organ toxicity - repeated exposure**

STOT - repeated exposure

Based on available data the classification criteria are not met.

**Aspiration hazard**

Aspiration hazard

Not anticipated to present an aspiration hazard, based on chemical structure.

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**Trisodium phosphate**

**Skin corrosion/irritation**

Animal data

Irritating.

**Serious eye damage/irritation**

Serious eye damage/irritation

Causes serious eye irritation.

**Specific target organ toxicity - single exposure**

STOT - single exposure

STOT SE 3 - H335 May cause respiratory irritation.

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**SECTION 12: Ecological Information**

**Ecotoxicity**

The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

**12.1. Toxicity**
Hydro-X Super

Toxicity
Not considered toxic to fish.

Ecological information on ingredients.

Sodium hydroxide

Toxicity
Based on available data the classification criteria are not met.

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 40.4 mg/l, Ceriodaphnia dubia
REACH dossier information.

Trisodium phosphate

Toxicity
No negative effects on the aquatic environment are known.

12.2. Persistence and degradability

Persistence and degradability
No data available.

Ecological information on ingredients.

Sodium hydroxide

Persistence and degradability
The degradability of the product is not known.

Trisodium phosphate

Persistence and degradability
The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient
Not available.

Ecological information on ingredients.

Sodium hydroxide

Bioaccumulative potential
No data available on bioaccumulation.

Trisodium phosphate

Bioaccumulative potential
No data available on bioaccumulation.

12.4. Mobility in soil

Mobility
The product is soluble in water.

Ecological information on ingredients.

Sodium hydroxide

Mobility
The product is soluble in water.

Trisodium phosphate

Mobility
No information available.

12.5. Results of PBT and vPvB assessment
Hydro-X Super

Results of PBT and vPvB assessment
This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Sodium hydroxide
Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

Trisodium phosphate
Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects
Other adverse effects
Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Disposal methods
Reuse or recycle products wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 1824
UN No. (IMDG) 1824
UN No. (ICAO) 1824
UN No. (ADN) 1824

14.2. UN proper shipping name
Proper shipping name (ADR/RID) SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG) SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO) SODIUM HYDROXIDE SOLUTION
Proper shipping name (ADN) SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)
ADR/RID class 8
ADR/RID classification code C5
ADR/RID label 8
IMDG class 8
ICAO class/division 8
ADN class 8
Hydro-X Super

Transport labels

14.4. Packing group

ADR/RID packing group  II
IMDG packing group    II
ICAO packing group    II
ADN packing group    II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS                  F-A, S-B
ADR transport category 2
Emergency Action Code 2R
Hazard Identification Number (ADR/RID) 80
Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations
EH40/2005 Workplace exposure limits.

EU legislation

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008

Revision date 13/11/2015
Hydro-X Super

SDS number 1257

Risk phrases in full R35 Causes severe burns.
R36 Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.

Hazard statements in full 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.

The information contained in this safety data sheet does not constitute an assessment of workplace risks. The customer should undertake a formal COSHH assessment which should ensure that employees are aware of the hazards/precautions detailed in this safety data sheet. The COSHH assessment should also ensure that recommended safety equipment is available and where applicable, that the exposure limits detailed in Section 8 are not being exceeded. The above information is based on current knowledge at the time of publication and is given in good faith. Hydro-X Water Treatment Ltd implies no warranty as to the suitability of the product for any purpose other than outlined on the Product Data Sheet.