



SAFETY DATA SHEET

Hydro-X RH1

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name Hydro-X RH1

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

Identified uses Process water additive

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

Elicitation - EUH208

Environmental hazards

Not Classified

Classification (67/548/EEC or 1999/45/EC)

Human health

The product contains a small amount of sensitising substance. 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

Hazard statements

EUH208 Contains glutaral. May produce an allergic reaction.

Precautionary statements

Hydro-X RH1

P302+P352 IF ON SKIN: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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

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**

glutaral		0.025 - <0.25%
CAS number: 111-30-8 EC number: 203-856-5		
M factor (Acute) = 1		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 3 - H301	T; R23/25. C; R34. N; R50. R42/43	
Acute Tox. 3 - H331		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Aquatic Acute 1 - H400		
Methanol		<0.025%
CAS number: 67-56-1 EC number: 200-659-6		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Flam. Liq. 2 - H225	F; R11. T; R23/24/25, R39/23/24/25	
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
STOT SE 1 - H370		

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

Wash skin thoroughly with soap and water. Get medical attention if symptoms are severe or persist after washing.

Eye contact

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**

May cause irritation.

Ingestion

May cause discomfort if swallowed.

Skin contact

Hydro-X RH1

May cause an allergic skin reaction.

Eye contact

May cause temporary eye irritation.

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

Treat symptomatically.

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

Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic 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. Collect and place in suitable waste disposal containers and seal securely. Dispose of contents/container in accordance with national regulations.

6.4. Reference to other sections

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. Wear protective clothing as described in Section 8 of this safety data sheet.

Hydro-X RH1

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

glutaral

Long-term exposure limit (8-hour TWA): WEL 0.05 ppm 0.2 mg/m³

Short-term exposure limit (15-minute): WEL 0.05 ppm 0.2 mg/m³

Sen

Methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Sk

WEL = Workplace Exposure Limit

Sen = Capable of causing occupational asthma.

Sk = Can be absorbed through the skin.

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/manufacture, 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 repeated or prolonged 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

Hydro-X RH1

9.1. Information on basic physical and chemical properties

Appearance

Liquid.

Colour

Off-white.

Odour

Slight.

Odour threshold

Not available.

pH

pH (concentrated solution): 7.0 - 8.0

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

1.2 @ 20°C

Bulk density

Not available.

Solubility(ies)

Soluble in 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.

Hydro-X RH1

9.2. Other information

Other information

No information required.

SECTION 10: Stability and reactivity

10.1. 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

Will not polymerise.

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid

Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

None at ambient temperatures. Thermal decomposition or combustion products may include the following substances: Oxides of carbon.

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.

ATE oral (mg/kg)

285,000.0

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.

ATE inhalation (dusts/mists mg/l)

520.0

Skin corrosion/irritation

Animal data

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Respiratory sensitisation

Based on available data the classification criteria are not met.

Skin sensitisation

May cause skin sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro

Hydro-X RH1

Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Based on available data the classification criteria are not met.

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

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

Toxicological information on ingredients.

glutaral

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

285.0

Species

Rat

Notes (oral LD50)

REACH dossier information. Toxic if swallowed.

ATE oral (mg/kg)

285.0

Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

2001.0

Species

Rabbit

Notes (dermal LD50)

REACH dossier information. Based on available data the classification criteria are not met.

ATE dermal (mg/kg)

2001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC50 dust/mist mg/l)

0.52

Species

Rat

Notes (inhalation LC50)

REACH dossier information. Toxic if inhaled.

ATE inhalation (dusts/mists mg/l)

0.52

Skin corrosion/irritation

Hydro-X RH1

Animal data

Dose: 0.5 mL, 4 hours, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Moderate oedema - raised approximately 1 mm (3). REACH dossier information. Corrosive.

Serious eye damage/irritation

Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

Sensitising.

Skin sensitisation

Guinea pig maximization test (GPMT) - Guinea pig: Sensitising. REACH dossier information. Epidemiological studies have shown evidence of skin sensitisation.

Germ cell mutagenicity

Genotoxicity - in vitro

Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo

Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity

NOAEL 100 ppm, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility

Two-generation study - NOAEL 2000 ppm, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development

Maternal toxicity: - NOAEL: 50 ppm, Oral, Rat REACH dossier information. 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

NOAEL 50 ppm, Oral, Rat REACH dossier information. 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

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

Not considered toxic to fish.

Hydro-X RH1

Ecological information on ingredients.

glutaral

Acute aquatic toxicity

LE(C)₅₀

$0.1 < L(E)C_{50} \leq 1$

M factor (Acute)

1

Acute toxicity - fish

LC₅₀, 96 hours: 13 mg/l, *Lepomis macrochirus* (Bluegill)

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 14.87 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants

EC₅₀, 72 hours: 0.75 mg/l, *Scenedesmus subspicatus*

12.2. Persistence and degradability

Persistence and degradability

No data available.

Ecological information on ingredients.

glutaral

Persistence and degradability

The product is readily biodegradable.

Phototransformation

Air - DT₅₀ : 8.2 hours Estimated value.

Biodegradation

Water - Degradation > 90%: 28 days

12.3. Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Ecological information on ingredients.

glutaral

No data available on bioaccumulation.

Partition coefficient

log Pow: -0.36

12.4. Mobility in soil

Mobility

The product is soluble in water.

Hydro-X RH1

Ecological information on ingredients.

glutaral

Mobility

The product is miscible with water and may spread in water systems.

Adsorption/desorption coefficient

Soil - log K_{oc}: 0.76-3.32 @ 25°C

Henry's law constant

0.011 Pa m³/mol @ 25°C Estimated value.

Surface tension

68 mN/m @ 20°C

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

glutaral

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Not determined.

Ecological information on ingredients.

glutaral

None known.

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

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Hydro-X RH1

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. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date 02/09/2014

SDS number 1249

Hazard statements in full

EUH208 Contains glutaral. May produce an allergic reaction.

Disclaimer

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.