

**SAFETY DATA SHEET****Hydrocid 315**

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 Hydrocid 315

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

Identified uses Biocides for water treatment.

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

Not Classified

Environmental hazards

Not Classified

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

Human health

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**

NC Not Classified

2.3. Other hazards

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

Hydrocid 315**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

Sodium chlorite 0.25 - <0.5% CAS number: 7758-19-2 EC number: 231-836-6 M factor (Acute) = 1	
Classification Ox. Sol. 2 - H272 Acute Tox. 3 - H301 Acute Tox. 2 - H310 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT RE 2 - H373 Aquatic Acute 1 - H400	Classification (67/548/EEC or 1999/45/EC) O; R8. T+; R27. T; R25. Xn; R48/20/21/22. C; R34. N; R50
Chlorine dioxide 0.025 - <0.25% CAS number: 10049-04-4 EC number: 233-162-8 M factor (Acute) = 10	
Classification Acute Tox. 3 - H301 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 Aquatic Acute 1 - H400	Classification (67/548/EEC or 1999/45/EC) T; R25. C; R34. N; R50

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. Get medical attention if any discomfort continues.

Skin contact

Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

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**

Irritation of nose, throat and airway.

Ingestion

May cause discomfort if swallowed.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed**Notes for the doctor**

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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: Chlorine.

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. Avoid 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. 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

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Store in a cool and well-ventilated place. Protect from freezing and direct sunlight.

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

Chlorine dioxide

Long-term exposure limit (8-hour TWA): WEL 0.1 ppm 0.28 mg/m³

Short-term exposure limit (15-minute): WEL 0.3 ppm 0.84 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Wear eye protection.

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

9.1. Information on basic physical and chemical properties

Appearance

Liquid.

Colour

Orange. Yellow.

Odour

Strong. Chlorine.

Odour threshold

Not available.

pH

pH (concentrated solution): 6 - 9

Melting point

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Not available.

Initial boiling point and range

~ 100°C @ 760 mm Hg

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

Not available.

Bulk density

Not available.

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

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.

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10.5. Incompatible materials

Materials to avoid

None known.

10.6. Hazardous decomposition products

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

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)

30,191.17355578

Acute toxicity - dermal

Notes (dermal LD50)

Based on available data the classification criteria are not met.

ATE dermal (mg/kg)

50909.09090909

Acute toxicity - inhalation

Notes (inhalation LC50)

Based on available data the classification criteria are not met.

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

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

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

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

Toxicological information on ingredients.

Sodium chlorite

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

284.0

Species

Rat

Notes (oral LD50)

REACH dossier information. Toxic if swallowed.

ATE oral (mg/kg)

284.0

Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

140.0

Species

Rabbit

Notes (dermal LD50)

REACH dossier information. Fatal in contact with skin.

ATE dermal (mg/kg)

140.0

Acute toxicity - inhalation

Notes (inhalation LC50)

No information available.

Skin corrosion/irritation

Animal data

Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Very slight oedema - barely perceptible (1). REACH dossier information. Corrosive to skin.

Serious eye damage/irritation

Corrosivity to eyes is assumed.

Respiratory sensitisation

No information available.

Skin sensitisation

Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro

Data lacking.

Genotoxicity - in vivo

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

Carcinogenicity

NOEL 41 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility

One-generation study - LOAEL > 10 mg/kg/day, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.

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Reproductive toxicity - development

Maternal toxicity: - LOAEL: 600 mg/l, Oral, Rabbit REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

LOAEL 25 mg/kg/day, Oral, Rat REACH dossier information.

Target organs

Spleen

Aspiration hazard

Not relevant.

Chlorine dioxide

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

93.86

Species

Rat

Notes (oral LD50)

REACH dossier information. Toxic if swallowed.

ATE oral (mg/kg)

93.86

Acute toxicity - dermal

Notes (dermal LD50)

No information available.

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

Corrosivity to eyes is assumed.

Respiratory sensitisation

No information available.

Skin sensitisation

Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

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

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Data lacking.

Reproductive toxicity

Reproductive toxicity - fertility

One-generation study - LOAEL 100 ppm, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development

Maternal toxicity: - NOAEL: 100 mg/l, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

NOAEL 200 mg/l, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Aspiration hazard

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

SECTION 12: Ecological Information

Ecotoxicity

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

12.1. Toxicity

Not considered toxic to fish.

Ecological information on ingredients.

Sodium chlorite

Acute aquatic toxicity

LE(C)₅₀

0.1 < L(E)C₅₀ ≤ 1

M factor (Acute)

1

Acute toxicity - fish

LC₅₀, 96 hours: 78 mg/l, Cyprinodon variegatus (Sheepshead minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: < 1 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

EC₅₀, 72 hours: 0.2 mg/l, Selenastrum capricornutum REACH dossier information.

Chlorine dioxide

Acute aquatic toxicity

M factor (Acute)

10

Acute toxicity - fish

LC₅₀, 96 hours: 0.021 mg/l, Brachydanio rerio (Zebra Fish) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 0.063 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

EC₅₀, 72 hours: 1.096 mg/l, Selenastrum capricornutum REACH dossier information.

12.2. Persistence and degradability

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Persistence and degradability

No data available.

Ecological information on ingredients.

Sodium chlorite

Persistence and degradability

The degradability of the product is not known.

Chlorine dioxide

Biodegradation

Scientifically unjustified.

12.3. Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Ecological information on ingredients.

Sodium chlorite

No data available on bioaccumulation.

Partition coefficient

log Pow: < -2.7 REACH dossier information.

Chlorine dioxide

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility

The product is soluble in water.

Ecological information on ingredients.

Sodium chlorite

Mobility

The product is water-soluble and may spread in water systems.

Chlorine dioxide

Mobility

No information available.

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

Sodium chlorite

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

Chlorine dioxide

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

12.6. Other adverse effects

Not determined.

Hydrocid 315**Ecological information on ingredients.****Sodium chlorite**

None known.

Chlorine dioxide

None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal methods**

Reuse or recycle products wherever possible. 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

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**Classification procedures according to Regulation (EC) 1272/2008**

Not classified.: Calculation method.

Hydrocid 315**Revision date** 27/08/2014**Supersedes date** 03/02/2011**SDS number** 1134**Risk phrases in full**

NC Not Classified
R25 Toxic if swallowed.
R34 Causes burns.
R50 Very toxic to aquatic organisms.

Hazard statements in full

H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs Spleen through prolonged or repeated exposure.
H400 Very toxic to aquatic life.

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.