SAFETY DATA SHEET

Hydrocid 360

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 360

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

Identified uses 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

Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards

Not Classified

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

C; R34

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

Hydrocid 360

Signal word Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective clothing, 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 chlorite

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

Sodium chlorite **5 - <10%**

CAS number: 7758-19-2 **EC number:** 231-836-6
M factor (Acute) = 1

Classification	Classification (67/548/EEC or 1999/45/EC)
Ox. Sol. 2 - H272	O; R8. T+; R27. T; R25. Xn; R48/20/21/22. C; R34. N; R50
Acute Tox. 3 - H301	
Acute Tox. 2 - H310	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
STOT RE 2 - H373	
Aquatic Acute 1 - H400	

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.

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

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

Specific hazards

The product is non-combustible. Heating may generate the following products: Toxic and 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. 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

Provide adequate ventilation. 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. 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

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

Ingredient comments

No exposure limits known for ingredient(s).

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

Hydrocid 360

9.1. Information on basic physical and chemical properties

Appearance
Liquid.

Colour
Colourless to pale yellow. Green.

Odour
Chlorine.

Odour threshold
Not available.

pH
pH (concentrated solution): 12-13

Melting point
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. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid

Avoid contact with strong oxidising agents. Acids. Strong reducing agents.

10.6. Hazardous decomposition products

None at ambient temperatures. Heating may generate the following products: Oxygen. Chlorides.

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)

4,544.0

Acute toxicity - dermal

Notes (dermal LD50)

Based on available data the classification criteria are not met.

ATE dermal (mg/kg)

2240.0

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

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.

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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.

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.

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.

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.

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

LC_{50}, 96 hours: 78 mg/l, Cyprinodon variegatus (Sheepshead minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC_{50}, 48 hours: < 1 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

EC_{50}, 72 hours: 0.2 mg/l, Selenastrum capricornutum REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability

No data available.

Ecological information on ingredients.

Sodium chlorite

Persistence and degradability

The degradability of the product is not known.

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.

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.

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.

12.6. Other adverse effects

Not determined.

Ecological information on ingredients.

Sodium chlorite

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

14.1. UN number

UN No. (ADR/RID)	1908
UN No. (IMDG)	1908
UN No. (ICAO)	1908
UN No. (ADN)	1908

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14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CHLORITE SOLUTION
Proper shipping name (IMDG)	CHLORITE SOLUTION
Proper shipping name (ICAO)	CHLORITE SOLUTION
Proper shipping name (ADN)	CHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C9
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels

14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2X
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

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

Skin Corr. 1B - H314, Eye Dam. 1 - H318: Calculation method.

Revision date	29/08/2014
Supersedes date	01/07/2011
SDS number	1177

Risk phrases in full

R34 Causes burns.

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.
H373 May cause damage to organs Spleen through prolonged or repeated exposure.
H400 Very toxic to aquatic life.