



SAFETY DATA SHEET

Hydrocid 306

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name Hydrocid 306

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 (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 STOT SE 3 - H335

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Human health Corrosive to skin and eyes. The product contains a sensitising substance. See Section 11 for additional information on health hazards.

Environmental The product contains a substance which may have hazardous effects on the environment.

2.2. Label elements

Pictogram



Signal word

Danger

Hydrocid 306

Hazard statements	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing vapour/ spray. P280 Wear protective gloves, eye and face protection. P284 [In case of inadequate ventilation] wear respiratory 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	Glutaral, Bronopol (INN), Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P362+P364 Take off contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. 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

Glutaral	2.5 - <5%
CAS number: 111-30-8	EC number: 203-856-5
M factor (Acute) = 1	
Classification	
Acute Tox. 3 - H301	
Acute Tox. 2 - H330	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
STOT SE 3 - H335	
Aquatic Acute 1 - H400	
Aquatic Chronic 2 - H411	

Hydrocid 306

Bronopol (INN)	1 - <2.5%
CAS number: 52-51-7	EC number: 200-143-0
M factor (Acute) = 10	
Classification	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
STOT SE 3 - H335	
Aquatic Acute 1 - H400	
Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	1 - <2.5%
CAS number: 55965-84-9	EC number: 611-341-5
M factor (Acute) = 100	M factor (Chronic) = 100
Classification	
Acute Tox. 3 - H301	
Acute Tox. 2 - H310	
Acute Tox. 2 - H330	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Aquatic Acute 1 - H400	
Aquatic Chronic 1 - H410	
Copper(II) nitrate trihydrate	0.025 - <0.25%
CAS number: 10031-43-3	EC number: 221-838-5
M factor (Acute) = 1	
Classification	
Ox. Sol. 2 - H272	
Acute Tox. 4 - H302	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
Aquatic Acute 1 - H400	
Methanol	<0.025%
CAS number: 67-56-1	EC number: 200-659-6
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
STOT SE 1 - H370	

Hydrocid 306

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person.
Skin contact	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitisation or allergic reactions in sensitive individuals. A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
Specific treatments	Chemical burns must be treated by a physician.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Hydrocid 306

Suitable extinguishing media The product is not flammable. 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 Containers can burst violently or explode when heated, due to excessive pressure build-up. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Do not touch or walk into spilled material. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Hydrocid 306

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Approach the spillage from upwind. Small Spillages: Dilute the spillage with water and mop up. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological 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. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is corrosive. Immediate first aid is imperative. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. 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. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in accordance with local regulations. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class

Corrosive storage.

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

Hydrocid 306

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. Observe any occupational exposure limits for the product or ingredients. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Organic vapour filter. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Light (or pale). Yellow.

Hydrocid 306

Odour	Mild.
Odour threshold	Not available.
pH	pH (concentrated solution): 2.5-3.0
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 applicable.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative 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 See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid Strong alkalis. Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Hydrocid 306

Hazardous decomposition products Does not decompose when used and stored as recommended. Heating may generate the following products: Corrosive gases or vapours. Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Hydrogen chloride (HCl).

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) 2,687.86

Acute toxicity - dermal

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

ATE dermal (mg/kg) 5,590.35

Acute toxicity - inhalation

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

ATE inhalation (dusts/mists mg/l) 5.81

Skin corrosion/irritation

Animal data Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation There is evidence that the product can cause respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation May cause skin sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

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

Carcinogenicity

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

IARC carcinogenicity

None of the ingredients are listed or exempt.

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 STOT SE 3 - H335 May cause respiratory irritation.

Target organs Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Hydrocid 306

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause sensitisation or allergic reactions in sensitive individuals. Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs
Medical considerations	Skin disorders and allergies.

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) 2,001.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 2,001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 0.28

Species Rat

Notes (inhalation LC₅₀) REACH dossier information. Toxic if inhaled.

ATE inhalation (dusts/mists mg/l) 0.28

Skin corrosion/irritation

Hydrocid 306

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

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

Respiratory sensitisation

Respiratory sensitisation Sensitising.

Skin sensitisation

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

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

Aspiration hazard Based on available data the classification criteria are not met.

Bronopol (INN)

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 305.0

Species Rat

Notes (oral LD₅₀) REACH dossier information. Harmful if swallowed.

ATE oral (mg/kg) 305.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Harmful in contact with skin. Converted acute toxicity point estimate (cATpE)

Hydrocid 306

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ ≥ 0.588 mg/l, Dust/Mist, Rat 4 hours REACH dossier information.

Skin corrosion/irritation

Animal data Dose: 0.5 g, 4 hours, Rabbit Primary dermal irritation index: 6.2 REACH dossier information. Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.1 ml (0.5%, 2%, 5%), 24 hours, Rabbit REACH dossier information. Eye Dam. 1 - H318 Causes serious eye damage.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. REACH dossier information.

Genotoxicity - in vivo Chromosome aberration: Negative. REACH dossier information.

Carcinogenicity

Carcinogenicity Dose level: 7 mg/kg/day, Oral, Rat REACH dossier information.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL > 40 mg/kg/day, Oral, Rat P, F1 REACH dossier information.

Reproductive toxicity - development Maternal toxicity: - LOAEL: 30 mg/kg/day, Oral, Rat REACH dossier information.

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 64.0

Species Rat

Notes (oral LD₅₀) Toxic if swallowed.

ATE oral (mg/kg) 64.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 87.12

Species Rat

Notes (dermal LD₅₀) Toxic in contact with skin.

ATE dermal (mg/kg) 87.12

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 0.169

Hydrocid 306

Species	Rat
Notes (inhalation LC₅₀)	Toxic if inhaled.
ATE inhalation (dusts/mists mg/l)	0.169
<u>Skin corrosion/irritation</u>	
Animal data	Corrosive to skin.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Corrosivity to eyes is assumed.
<u>Skin sensitisation</u>	
Skin sensitisation	Sensitising.

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

Glutaral

Toxicity	Aquatic Acute 1 - H400 Very toxic to aquatic life.
<u>Acute aquatic toxicity</u>	
LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 13 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 14.87 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.75 mg/l, Scenedesmus subspicatus

Bronopol (INN)

Toxicity	Aquatic Acute 1 - H400 Very toxic to aquatic life.
<u>Acute aquatic toxicity</u>	
M factor (Acute)	10
Acute toxicity - fish	LC ₅₀ , 96 days: 35.7 mg/l, Lepomis macrochirus (Bluegill) NOEC, 96 hours: > 20 mg/l, Lepomis macrochirus (Bluegill) REACH dossier information.

Hydrocid 306

Acute toxicity - aquatic invertebrates	EC ₀ , 48 hours: 0.56 mg/l, Daphnia magna EC ₅₀ , 48 hours: 1.4 mg/l, Daphnia magna EC ₁₀₀ , 48 hours: 3.2 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.25 mg/l, Skeletonema costatum NOEC, 72 hours: 0.08 mg/l, Skeletonema costatum REACH dossier information.
Acute toxicity - microorganisms	EC ₂₀ , 150 minutes: 2 mg/l, Activated sludge REACH dossier information.
Acute toxicity - terrestrial	LC ₅₀ , EC ₅₀ , 14 days: > 500 mg/kg, Eisenia Fetida (Earthworm) NOEC, 14 days: 12.8 mg/kg, Eisenia Fetida (Earthworm) REACH dossier information.
Chronic toxicity - fish early life stage	NOEC, 49 days: 21.5 mg/l, Onchorhynchus mykiss (Rainbow trout) LOEC, 49 days: 40 mg/l, Onchorhynchus mykiss (Rainbow trout) LC ₅₀ , 49 days: 39.1 mg/l, Onchorhynchus mykiss (Rainbow trout) REACH dossier information.
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.27 mg/l, Daphnia magna LOEC, 21 days: 0.88 mg/l, Daphnia magna EC ₅₀ , 21 days: 0.27 - 0.88 mg/l, Daphnia magna REACH dossier information.

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

Toxicity	Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.
<u>Acute aquatic toxicity</u>	
LE(C)₅₀	0.001 < L(E)C ₅₀ ≤ 0.01
M factor (Acute)	100
<u>Chronic aquatic toxicity</u>	
NOEC	0.0001 < NOEC ≤ 0.001
Degradability	Non-rapidly degradable
M factor (Chronic)	100

12.2. Persistence and degradability

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

Ecological information on ingredients.

Glutaral

Persistence and degradability	The product is readily biodegradable.
Phototransformation	Water - DT ₅₀ : 8.2 hours Estimated value.
Biodegradation	Water - Degradation > 90%: 28 days

Hydrocid 306

Bronopol (INN)

Phototransformation	Water - DT ₅₀ : 12.1 days, Calculation method. Water - Degradation (50%): 2 days REACH dossier information.
Stability (hydrolysis)	pH4 - Half-life : 120 hours @ 25°C pH7 - Half-life : 2.4 hours @ 25°C pH9 - Half-life : 2.4 hours @ 25°C REACH dossier information.
Biodegradation	Water - Degradation (70 - 80%): 28 days Water - Degradation (99%): 1 hour Water - Half-life : 8.3 minutes REACH dossier information. The substance is readily biodegradable.

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

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.

Glutaral

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	log Pow: -0.36

Bronopol (INN)

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	log Pow: -0.34 - 0.22 REACH dossier information.

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

Bioaccumulative potential	No data available on bioaccumulation.
----------------------------------	---------------------------------------

12.4. Mobility in soil

Mobility	No data available.
-----------------	--------------------

Ecological information on ingredients.

Glutaral

Mobility	The product is miscible with water and may spread in water systems.
Adsorption/desorption coefficient	Water - log Koc: 0.76-3.32 @ 25°C

Hydrocid 306

Henry's law constant	0.011 Pa m ³ /mol @ 25°C Estimated value.
Surface tension	68 mN/m @ 20°C

Bronopol (INN)

Mobility	The product is soluble in water.
Adsorption/desorption coefficient	Koc: 5 REACH dossier information. Calculation method.
Henry's law constant	0.00000116 Pa m ³ /mol @ 25°C REACH dossier information. Calculation method.
Surface tension	72 mN/m @ 20°C REACH dossier information.

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

Mobility	No information available.
-----------------	---------------------------

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

Glutaral

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

Bronopol (INN)

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

Reaction mass of: 5-Chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-Methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

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 None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Hydrocid 306

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

UN No. (ADN) 1760

14.2. UN proper shipping name

Proper shipping name (ADR/RID) CORROSIVE LIQUID, N.O.S. (CONTAINS GLUTARAL, MIXTURE of 5- CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 247-500-7) AND 2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 220-239-6) 3:1)

Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S. (CONTAINS GLUTARAL, MIXTURE of 5- CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 247-500-7) AND 2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 220-239-6) 3:1)

Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S. (CONTAINS GLUTARAL, MIXTURE of 5- CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 247-500-7) AND 2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 220-239-6) 3:1)

Proper shipping name (ADN) CORROSIVE LIQUID, N.O.S. (CONTAINS GLUTARAL, MIXTURE of 5- CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 247-500-7) AND 2-METHYL-4-ISOTHIAZOLIN-3-ONE (EC 220-239-6) 3:1)

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

Hydrocid 306

ADN packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

14.7. Transport in bulk according to Annex II of MARPOL 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	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
EU legislation	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). Commission Regulation (EU) No 2015/830 of 28 May 2015. 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).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Hydrocid 306

Abbreviations and acronyms used in the safety data sheet	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>CAS: Chemical Abstracts Service.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Eye Dam. = Serious eye damage</p> <p>Resp. Sens. = Respiratory sensitisation</p> <p>Skin Corr. = Skin corrosion</p> <p>Skin Sens. = Skin sensitisation</p> <p>STOT SE = Specific target organ toxicity-single exposure</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
Classification procedures according to Regulation (EC) 1272/2008	<p>Eye Dam. 1 - H318: Skin Corr. 1B - H314: STOT SE 3 - H335: Resp. Sens. 1 - H334: Skin Sens. 1 - H317: : Calculation method. Aquatic Acute 1 - H400: Aquatic Chronic 1 - H410: : Calculation method.</p>
Training advice	<p>Read and follow manufacturer's recommendations. Only trained personnel should use this material.</p>
Revision date	24/03/2017
Revision	1
Supersedes date	05/09/2014
SDS number	1185

Hydrocid 306

Hazard statements in full

H225 Highly flammable liquid and vapour.
H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H370 Causes damage to organs .
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.