



SAFETY DATA SHEET

Hydrocor 250

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 Hydrocor 250

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

Identified uses A liquid corrosion inhibitor for the protection of HPHW systems by oxygen scavaging.

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

Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351 STOT SE 3 - H335

Environmental hazards

Aquatic Chronic 3 - H412

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

Xi; R36/37. Carc. Cat. 3 R40. Muta. Cat. 3 R68. R52/53, R43

Human health

Irritating to eyes. May cause skin sensitisation or allergic reactions in sensitive individuals. Contains a substance which may be potentially carcinogenic. 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



Hydrocor 250**Signal word**

Warning

Hazard statements

H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H341 Suspected of causing genetic defects.
 H351 Suspected of causing cancer.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves, eye and face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with national regulations.

Contains

N,N-Diethylhydroxylamine, 1,4-Dihydroxybenzene

Supplementary precautionary statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing vapour/spray.
 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.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 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**

N,N-Diethylhydroxylamine		10 - <25%
CAS number: 3710-84-7 EC number: 223-055-4		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Flam. Liq. 3 - H226	Xn; R20/21. Xi; R37. N; R51/53. R10	
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
STOT SE 3 - H335		
Aquatic Chronic 2 - H411		

Hydrocor 250

1,4-Dihydroxybenzene CAS number: 123-31-9 EC number: 204-617-8 M factor (Acute) = 10		1 - <2.5%
Classification Carc. 2 - H351 Muta. 2 - H341 Acute Tox. 4 - H302 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Acute 1 - H400	Classification (67/548/EEC or 1999/45/EC) Xn; R22. Xi; R41. Carc. Cat. 3 R40. Muta. Cat. 3 R68. N; R50. R43	

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.

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

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. Vapours may cause headache, fatigue, dizziness and nausea.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin contact

May cause skin irritation. May cause an allergic skin reaction.

Eye contact

Irritation of eyes and mucous membranes.

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

Hydrocor 250

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. Control run-off water by containing and keeping it out of sewers and watercourses. 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

Harmful to aquatic life with long lasting effects. Avoid discharge to the aquatic environment. Do not discharge into drains or watercourses or onto the ground.

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. Clear up spills immediately and dispose of waste safely. Do not empty into drains. Absorb spillage with inert, damp, non-combustible material. 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. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

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. Persons susceptible to allergic reactions should not handle this product.

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.

Hydrocor 250

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

1,4-Dihydroxybenzene

Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Provide eyewash station.

Eye/face protection

Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.

Environmental exposure controls

Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance

Liquid.

Colour

Yellow. Brown.

Odour

Characteristic.

Odour threshold

Not available.

pH

Not available.

Melting point

Not available.

Initial boiling point and range

Not available.

Hydrocor 250

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.

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**

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

Hydrocor 250

Materials to avoid

Strong oxidising 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)

50,000.0

Acute toxicity - dermal

Notes (dermal LD50)

Based on available data the classification criteria are not met.

ATE dermal (mg/kg)

6117.64705882

Acute toxicity - inhalation

Notes (inhalation LC50)

Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l)

53.64705882

Skin corrosion/irritation

Animal data

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Irritating to eyes.

Respiratory sensitisation

Based on available data the classification criteria are not met.

Skin sensitisation

Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro

Suspected of causing genetic defects.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Reproductive toxicity - fertility

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

Irritating to respiratory system.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Hydrocor 250

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

Toxicological information on ingredients.

N,N-Diethylhydroxylamine

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

2,190.0

Species

Rat

Notes (oral LD50)

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

ATE oral (mg/kg)

2,190.0

Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

1300.0

Species

Rabbit

Notes (dermal LD50)

REACH dossier information. Harmful in contact with skin.

ATE dermal (mg/kg)

1300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC50 vapours mg/l)

11.4

Species

Rat

Notes (inhalation LC50)

REACH dossier information. Harmful by inhalation.

ATE inhalation (vapours mg/l)

11.4

Skin corrosion/irritation

Animal data

Dose: , 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. 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

No information available.

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro

Gene mutation: 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.

Hydrocor 250

Carcinogenicity

No information available.

Reproductive toxicity

Reproductive toxicity - development

Maternal toxicity: - NOAEL: 87.4 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

Irritating to respiratory system.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

NOAEC 150 ppm, Inhalation, 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.

Hydrocor 250

1,4-Dihydroxybenzene

Acute toxicity - oral

Notes (oral LD50)

> 375 mg/kg Rat REACH dossier information. Harmful if swallowed.

Acute toxicity - dermal

Notes (dermal LD50)

>2000 mg/kg mg/kg Rabbit REACH dossier information. Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC50)

Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

No information available.

Skin sensitisation

Local Lymph Node Assay (LLNA) - Mouse: Sensitising. REACH dossier information. Epidemiological studies have shown evidence of skin sensitisation.

Germ cell mutagenicity

Genotoxicity - in vitro

Gene mutation: Positive. REACH dossier information. Suspected of causing genetic defects.

Genotoxicity - in vivo

Chromosome aberration: Positive. REACH dossier information. May induce heritable mutations in the germ cells of humans.

Carcinogenicity

LOAEL 50 mg/kg/day, Oral, Rat REACH dossier information. Suspected of causing cancer.

Reproductive toxicity

Reproductive toxicity - fertility

Two-generation study - NOAEL 15 mg/kg/day, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development

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

Specific target organ toxicity - single exposure

STOT - single exposure

Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

LOAEL 50 mg/kg/day, Oral, Rat REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Based on available data the classification criteria are not met.

SECTION 12: Ecological Information

Ecotoxicity

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

Hydrocor 250

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

N,N-Diethylhydroxylamine

Acute toxicity - fish

LC₅₀, 96 hours: > 134 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 8.2 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

EC₅₀, 72 hours: > 101 mg/l, Pseudokirchneriella subcapitata REACH dossier information.

1,4-Dihydroxybenzene

Acute aquatic toxicity

M factor (Acute)

10

Acute toxicity - fish

LC₅₀, 96 hours: 0.638 mg/kg/day, Onchorhynchus mykiss (Rainbow trout) REACH dossier information.

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 0.134 mg/l, Daphnia magna REACH dossier information.

Acute toxicity - aquatic plants

EC₅₀, 72 hours: 0.33 mg/l, Pseudokirchneriella subcapitata REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability

No data available.

Ecological information on ingredients.

N,N-Diethylhydroxylamine

Biodegradation

Water - Degradation 11: 28 days REACH dossier information. No biodegradation observed under test conditions.

1,4-Dihydroxybenzene

Phototransformation

Air - DT₅₀ : 16.58 hours REACH dossier information.

Biodegradation

Water - Degradation 70: 14 days REACH dossier information. The substance is readily biodegradable.

12.3. Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Ecological information on ingredients.

N,N-Diethylhydroxylamine

No data available on bioaccumulation.

Partition coefficient

log Pow: < 0.5 REACH dossier information.

1,4-Dihydroxybenzene

BCF: 3.162, REACH dossier information. The product is not bioaccumulating.

12.4. Mobility in soil

Hydrocor 250

Mobility

The product is soluble in water.

Ecological information on ingredients.

N,N-Diethylhydroxylamine

Mobility

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

Surface tension

25.6 mN/m @ 20°C REACH dossier information.

1,4-Dihydroxybenzene

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.

N,N-Diethylhydroxylamine

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

1,4-Dihydroxybenzene

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.

N,N-Diethylhydroxylamine

None known.

1,4-Dihydroxybenzene

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. Do not discharge into drains or watercourses or onto the ground. 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.

Hydrocor 250

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

Eye Irrit. 2 - H319, Skin Sens. 1 - H317, Carc. 2 - H351, Muta. 2 - H341, Aquatic Chronic 3 - H412: Calculation method.

Revision date 22/10/2014

SDS number 1246

Risk phrases in full

R10 Flammable.
R20/21 Harmful by inhalation and in contact with skin.
R22 Harmful if swallowed.
R36/37 Irritating to eyes and respiratory system.
R37 Irritating to respiratory system.
R40 Limited evidence of a carcinogenic effect.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R50 Very toxic to aquatic organisms.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68 Possible risk of irreversible effects.

Hazard statements in full

Hydrocor 250

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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.