

## SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP), 2015/830, 2020/878 and THE REACH etc. (AMENDMENT etc)(EU EXIT) REGULATIONS 2020

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1 Product identifier

Product Name	Hydrocor 235
CAS No.	Mixture
EC No.	Mixture
REACH Registration No	Not applicable
Unique Formulation Identifier	

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

Identified Use(s)	Cooling system scale and corrosion inhibitor
Uses Advised Against	No specific uses advised against are identified

#### 1.3 Details of the supplier of the safety data sheet

Supplier	
Company Identification	Hydro-X Group Ltd
Address of Supplier	Unit 1, Manor Drive Dinnington South Yorkshire S25 3QU
Postal code	
Telephone:	+44 (0) 1909 565133
Fax	+44 (0) 1909 564301
E-mail	technical@hydro-x.co.uk

#### 1.4 Emergency telephone number

Emergency Phone No.	+44 (0) 1909 565133 (09:00-17:00 UK time)
National response centre	
Address	National Poisons Information Service
Emergency Phone No.	+44 (0) 344 892 0111 (Healthcare Professionals only) NHS Direct +44 111 (Members of the public)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP)	Skin Corrosion	Category 1B
	Eye Damage	Category 1
	Skin Sensitising	Category 1

#### 2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name	Hydrocor 235
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Hazard Pictogram(s)



GHS05

Signal Word(s)	Danger
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Hazard Statement(s)	H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction
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Precautionary Statement(s)	P262: Do not get in eyes, on skin, or on clothing P280: Wear protective gloves/protective clothing/eye protection/face protection P305+P351+P338+P310: IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician P314: Get medical advice/attention if you feel unwell P501: Dispose of contents in accordance with local, state or national legislation
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**Contains:** Hydroxyphosphonoacetic acid

Supplementary precautionary statements

P260: Do not breathe 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  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P363: Wash contaminated clothing before reuse  
P403+P233: Store in a well-ventilated place. Keep container tightly closed  
P405: Store locked up

## 2.3 Other hazards

## 2.4 Additional Information

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH Registration No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Sodium hydroxide	1310-73-2	215-185-5 01-211945789-27-xxxx	1-10	Skin Corr. 1B H314 Eye Dam. 1 H318	GHS05
Hydroxyphosphonoacetic acid	23783-26-8	405-710-8 01-0000015522-77-xxxx	1-10	Acute Tox. 4 H302 Skin Corr. 1B H314 Skin Sens.1 H317 STOT RE2 H373	GHS05 GHS07 GHS08

See Section 16 for full text of abbreviations

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

Inhalation	Remove affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Obtain medical attention if breathing remains difficult.
Skin Contact	Remove contaminated clothing and footwear. Rinse skin thoroughly with water. Get medical attention if symptoms are severe or persevere after washing.  Wash contaminated clothing thoroughly before removing it from the affected person, or wear gloves. Do NOT carry out mouth-to-mouth resuscitation.
Eye Contact	Rinse immediately with plenty of water. Remove contact lenses if present and easy to do so. Continue to rinse for at least 15 minutes. Obtain medical attention
Ingestion	If patient is conscious, wash out mouth with water and make patient drink plenty of water (200-300 ml). Do NOT induce vomiting. If vomiting occurs, keep head low so that vomit does not enter the lungs. Obtain medical attention if discomfort continues.

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

<b>Skin contact</b>	May cause sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness
<b>Ingestion</b>	May cause chemical burns in the mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, Vomiting
<b>Inhalation</b>	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat., headache, fatigue, dizziness and nausea

See also Section 11

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

Treat symptomatically.  
Chemical burns must be treated by a physician

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable Extinguishing media	Extinguish with alcohol resistant foam, carbon dioxide, dry powder or water fog as appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use water jet

### 5.2 Special hazards arising from the substance or mixture

Containers can burst or explode under pressure when heated. Severe corrosive hazard. Water used for extinguishing that has been in contact with product may be corrosive. Combustion evolves toxic or corrosive gases: Carbon monoxide and dioxide (CO<sub>2</sub> and CO), Phosphorus oxides (PO<sub>x</sub>)

### 5.3 Advice for firefighters

Avoid breathing fire gases or vapours. Cool containers exposed to fire with water spray. Remove then from the fire area if it can be done without risk. Ventilate closed spaces before entering them. Avoid discharge to aquatic environment. Contain run-off water to prevent entering sewers and watercourses.

### Special protective equipment

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, gloves and eye/face protection. DO NOT touch spilled material. Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Provide adequate ventilation

### 6.2 Environmental precautions

Avoid discharge to the aquatic environment. If necessary, dike the product with dry earth, sand or similar non-combustible materials.

### 6.3 Methods and material for containment and cleaning up

Wear protective clothing as described in Section 8 of this Safety Data Sheet. Stop leak if possible to do so without risk. Absorb spillage with sand, earth or other non-combustible material. Transfer waste to labelled, sealed containers. Flush contaminated area with plenty of water. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with local and national regulations.

### 6.4 Reference to other sections

See Also Sections 8, 11 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

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.

Follow principles of good occupational hygiene. Wash hands thoroughly after handling. Change contaminated clothes at the end of working shift.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in tightly-closed original container in a cool and well-ventilated place. Store above freezing

Storage temperature  
Storage life  
Incompatible materials

Ambient. Avoid freezing  
Stable under normal conditions.  
Acids. Strong oxidising agents. Aluminium. Powdered metal

### 7.3 Specific end use(s)

Anti-scale/corrosion cooling water treatment and dispersant

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

### 8.1 Control parameters




8.1.1 Occupational Exposure Limits UK (EH40/2005 Fourth Edition 2020)

Ingredient	LTEL (8 hours)	STEL (15 minutes)
Sodium hydroxide	-	2 mg/m <sup>3</sup>

DNEL  
PNEC

Not available  
Not available

## 8.2 Exposure controls

8.2.1. Appropriate engineering controls	Provide adequate ventilation. Use process enclosures and other engineering controls including local exhaust ventilation to minimise worker exposure.	
8.2.2. Personal protection equipment		
 Eye Protection	Wear tightly fitting safety goggles (EN166).	
 Skin protection	Wear protective clothing, footwear and gloves: Impervious gloves (EN 374). Breakthrough time: 480 minutes. Consult supplier regarding glove material and breakthrough times.	
 Respiratory protection	If ventilation is inadequate to control exposure, a suitable mask with a particle filter or organic vapour filter type A (EN136, EN140 EN405 or EN14387) may be appropriate. Ensure that equipment is 'CE' or 'UKCA' marked and respirator fits tightly.	
8.2.3. Environmental Exposure Controls	Keep container tightly sealed when not in use. Check emissions from ventilation or process equipment to ensure that they comply with workplace and environmental legislation.	
Additional comments	Provide eyewash station. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly if skin becomes contaminated. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Liquid
Colour	Pale yellow
Odour	Almost odourless
pH	11-12
Melting point/freezing point	Not available
Initial boiling point and boiling range	~ 100 degC @ 760 mm Hg.
Flash Point	Test not scientifically justifiable: solution in water
Evaporation rate (n-butyl acetate=1)	Not available
Flammability (solid, gas)	Test not scientifically justifiable: solution in water
Upper/lower flammability or explosive limits	Test not scientifically justifiable: solution in water
Vapour pressure at 20 degC	2 kPa (Estimated)
Vapour density	Not applicable : water
Density (g/ml)	1.15-1.25
Relative density	1.15-1.25
Solubility(ies)	Miscible in water
Partition coefficient: n-octanol/water	Test not scientifically justifiable for mixture. See Section 12.3
Auto-ignition temperature	Test not scientifically justifiable: solution in water
Decomposition Temperature (°C)	Test not scientifically justifiable: solution boils at 100 degC
Viscosity at 20 degC	Not available
Explosive properties	Test not scientifically justifiable: solution in water
Oxidising properties	Study does not need to be conducted. On basis of chemical structures of ingredients, product is incapable of reacting exothermically with combustible material.

### 9.2 Other information

## SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Flammable hydrogen gas is produced on reaction with aluminium
10.2 Chemical Stability	Stable at normal ambient temperatures and when used as recommended.
10.3 Possibility of hazardous reactions	No potentially hazardous reactions known Will not polymerise
10.4 Conditions to avoid	Avoid excessive heat for prolonged periods of time
10.5 Incompatible materials	Acids. Strong oxidising agents. Aluminium. Powdered metal

## 10.6 Hazardous decomposition products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion may generate corrosive or toxic fumes: Carbon monoxide and dioxide (CO<sub>2</sub> and CO), Phosphorus oxides (PO<sub>x</sub>)

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity - Ingestion	Based on available data, the classification criteria are not met ATE > 2000 mg/kg
Acute toxicity - Skin Contact	Based on available data, the classification criteria are not met ATE > 5 mg/kg
Acute toxicity - Inhalation	Based on available data, the classification criteria are not met ATE > 2000 mg/kg
Skin corrosion/irritation	Causes severe burns (Calculated)
Serious eye damage/irritation	Causes serious eye damage (Corrosive to skin. Corrosivity to eyes is assumed)
Skin sensitization data	May cause an allergic reaction
Respiratory sensitization data	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Does not contain any ingredients classified as mutagenic
Carcinogenicity	Does not contain any ingredients classified as carcinogenic
Reproductive toxicity	Does not contain any ingredients classified as toxic to reproduction
Lactation	Based on available data, the classification criteria are not met
STOT - single exposure	May cause respiratory irritation
STOT - repeated exposure	Data not available
Aspiration hazard	Based on available data, the classification criteria are not met

### 11.1.2 Toxicological Data

	LD50 (Ingestion) mg/kg	LC50 (Inhalation) mg/l	LD50 (Skin Contact) mg/kg
Sodium hydroxide	500	Not available	Not available
Hydroxyphosphonoacetic acid	6500	Not available	Not available

### 11.1.5 Symptoms/routes of exposure

<b>Skin contact</b>	May cause sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness
<b>Ingestion</b>	May cause chemical burns in the mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, Vomiting
<b>Inhalation</b>	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.

### 11.1.6 Symptoms related to the potential physical, chemical and toxicological characteristics

Skin disorders, breathing difficulty

### 11.1.7 Delayed and immediate effects as well as chronic effects from short and long term exposure

Inhalation and ingestion may cause following adverse effects: Irritation of mouth, throat and respiratory tract, coughing, dizziness, drowsiness, headache, nausea, vomiting, stomach pain, central nervous system depression.  
Skin contact may cause irritation, redness and blistering  
Prolonged inhalation of high concentrations may damage respiratory system

### 11.1.10 Mixtures

Mixture has not been tested for effects as a whole.

Sodium hydroxide

Corrosive to eyes and skin. Irritating to respiratory system

Hydroxyphosphonoacetic acid

Harmful if swallowed. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, Vomiting  
May cause an allergic skin reaction  
Prolonged inhalation of high concentrations may damage respiratory system

### 11.2.1 Endocrine disrupting properties

Does not contain any ingredients with endocrine disrupting properties

### 11.2.2 Information on other hazards

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity** Based on available data, the classification criteria are not met

Toxicity - Fish ATE> 500 mg/l  
 Toxicity - Aquatic invertebrates ATE> 500 mg/l  
 Toxicity - Algae ATE> 500 mg/l

	LC50 (Fish) mg/L	EC50 (Daphnia) mg/L	EC50 (Algae) mg/L
Sodium hydroxide	Not available	40	Not available
Hydroxyphosphonoacetic acid	> 820	140	50

**12.2 Persistence and Degradation** Hydroxyphosphonoacetic acid is readily biodegradable

**12.3 Bioaccumulative potential** The ingredients of the product are not bioaccumulative

	Log KoW	BCF
Sodium hydroxide	Not feasible	Test not performed: Low potential for bioaccumulation
Hydroxyphosphonoacetic acid	Not available	Test not performed: Low potential for bioaccumulation

**12.4 Mobility in soil** Data not available

**12.5 Results of PBT and vPvB assessment**  
 The ingredients of the product are not classified as PBT or vPvB

**12.6 Endocrine disrupting properties** The European Chemical Agency Endocrine Disruptor Assessment List does not include any of the product's ingredients

**12.7 Other adverse effects**

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods** Minimise or avoid the generation of waste wherever possible. Reuse or recycle products wherever possible. When handling waste, follow the safety precautions that apply to the handling of the product. Dispose of this product in accordance with local and national legislation. Disposal is normally by a licensed waste disposal contractor

**13.2 Additional Information** Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION**

**14.1 UN number** UN3266  
 (ADR, RID, ADN, IATA, ICAO, IMDG)

**14.2 UN proper shipping name** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.  
 (HYDROXYPHOSPHONOACETIC ACID, SODIUM HYDROXIDE)

**14.3 Transport hazard class(es)** 8 ADR/RID classification code: Corrosive substances

**Transport labels**



**14.4 Packing group** III

**14.5 Environmental hazards** Not a marine pollutant

**14.6 Special precautions for user**

**EmS** F-A, S-B

**ADR Transport category** 2

**Emergency Action Code** 2X

**Hazard Identification Number** 80  
 (ADR/RID)

Tunnel restriction code	E
14.7 Maritime transport in bulk According to IMO instruments	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"] The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 EH40/2005 Workplace Exposure Limits The REACH etc. (Amendment etc)(EU Exit) Regulations 2020
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#### European Regulations - Authorisations and/or Restrictions On Use

(EC) 1907/2006 (REACH) and amendments  
(EC)1272/2008 - Classification, Labelling & Packaging Regulation

15.2 Chemical Safety Assessment	A REACH chemical safety assessment has not been carried out by the supplier
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## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: #1 to #16

### LEGEND

Hazard Pictogram(s)  
Section #2 and Section #3



GHS05



GHS07



GHS08

Hazard classification  
Section #2

Skin Corrosion  
Eye Damage  
Skin Sensitising

Category 1B  
Category 1  
Category 1

Hazard Statement(s)  
Section #2 and Section #3

**H314: Causes severe skin burns and eye damage**  
**H317: May cause an allergic skin reaction**

*H318: Causes serious eye damage*

*H373: May cause damage to organs through prolonged or repeated exposure*

### Acronyms

AND: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways  
ADR: European Agreement on the International Carriage of Dangerous Goods by Road  
ATE: Acute Toxicity Estimate  
BCF: Bioaccumulation Concentration Factor  
CAS : Chemical Abstracts Service  
CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures  
DNEL : Derived No Effect Level  
EC : European Community  
ECHA: European Chemical Agency  
EH40: UK Health and Executive EH40/2005 publication – Workplace exposure limits  
EINECS : European Inventory of Existing Commercial Chemical Substances  
IATA: International Air Transport Authority  
IBC: International Bulk Carriers  
ICAO:International Civil Aviation Organisation

IEC: International Electrotechnical Commission  
 IMDG: International Maritime Dangerous Goods (Code)  
 LTEL : Long term exposure limit  
 PBT : Persistent, Bioaccumulative and Toxic  
 PNEC : Predicted No Effect Concentration  
 REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals  
 RID: Agreement on the International Carriage of Dangerous Goods by Rail  
 STEL : Short term exposure limit  
 STOT : Specific Target Organ Toxicity  
 vPvB : very Persistent and very Bioaccumulative

Sources of information	UK Health and Executive EH40/2005 publication – Workplace exposure limits European Chemical Agency : Guidance and Registered Substances Database Suppliers' Safety Data Sheets
Calculation, classification and labelling methods	(EC) 1272/2008: Annex I Additivity Method (Acute Toxicity) " Summation Method (Aquatic toxicity) Tables 3.2.3, 3.3.3 and 3.7.2 (Irritation etc) Annex IV ECHA Guidance Notes
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