



## SAFETY DATA SHEET ZERO

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

#### 1.1. Product identifier

**Product name** ZERO  
**Product number** CYROMA0020SGA

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

**Identified uses** Biocidal products (e.g. disinfectants, pest control).

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

**Supplier** Hockley International Ltd  
Hockley House  
3 Longstone Road  
Ashbrook Office Park  
Manchester  
M22 5LB  
TEL: +44 (0) 161 209 7400  
FAX: +44 (0) 161 209 7401  
sds@hockley.co.uk

#### 1.4. Emergency telephone number

**Emergency telephone** +44 (0)800 246 1274 (24 hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

**Physical hazards** Not Classified  
**Health hazards** Not Classified  
**Environmental hazards** Aquatic Chronic 3 - H412

#### 2.2. Label elements

**Hazard statements** H412 Harmful to aquatic life with long lasting effects.  
**Precautionary statements** P273 Avoid release to the environment.  
P501 Dispose of contents/ container in accordance with national regulations.  
P280 Wear protective clothing and gloves.

#### 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

## ZERO

<b>CYROMAZINE</b>	<b>2% min.</b>
CAS number: 66215-27-8	EC number: 266-257-8
<b>Classification</b> Aquatic Chronic 2 - H411	<b>Classification (67/548/EEC or 1999/45/EC)</b> -

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

<b>General information</b>	Remove affected person from source of contamination. CAUTION! First aid personnel must be aware of own risk during rescue! Place unconscious person on the side in the recovery position and ensure breathing can take place.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical attention immediately. If breathing stops, provide artificial respiration.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

<b>Inhalation</b>	No data available.
<b>Ingestion</b>	No data available.
<b>Skin contact</b>	No data available.
<b>Eye contact</b>	No data available.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

<b>Specific hazards</b>	Contain and collect extinguishing water. Avoid releasing into the environment. Do not discharge into drains or watercourses or onto the ground.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

#### 5.3. Advice for firefighters

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**Protective actions during firefighting** In case of fire and/or explosion do not breathe fumes

**Special protective equipment for firefighters** Wear full protective clothing (EN 469). Wear self-contained breathing apparatus.

### 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. Provide adequate ventilation. Warn everybody of potential hazards and evacuate if necessary.

#### 6.2. Environmental precautions

**Environmental precautions** Do not discharge into drains or watercourses or onto the ground. Stop leak if possible without risk.

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

**Methods for cleaning up** Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. This material and its container must be disposed of as hazardous waste.

#### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Handle and open container with care. Wear protective clothing as described in Section 8 of this safety data sheet. Do not release into the environment. Avoid the spillage or runoff entering drains, sewers or watercourses. Do not eat, drink or smoke when using the product. Wash hands after handling. Remove contaminated clothing. Wash contaminated clothing before reuse.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials listed in section 10 of this safety data sheet. Keep out of the reach of children. Store at temperatures not exceeding 30°C.

#### 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

**Ingredient comments** No exposure limits known for ingredient(s).

#### 8.2. Exposure controls

**Appropriate engineering controls** Provide adequate ventilation.

**Eye/face protection** Avoid contact with eyes. Wear approved safety goggles (EN 166).

**Hand protection** Wear protective gloves (EN 374).

**Other skin and body protection** Wear appropriate clothing to prevent any possibility of skin contact.

## ZERO

<b>Hygiene measures</b>	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P1. (EN 140/143)
<b>Thermal hazards</b>	No data available.
<b>Environmental exposure controls</b>	Do not release into the environment.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Granules.
<b>Colour</b>	White/off-white.
<b>Odour</b>	No characteristic odour.
<b>pH</b>	pH (diluted solution): 7.5 @ 1%
<b>Melting point</b>	133 - 135°C
<b>Initial boiling point and range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not relevant.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1.335 @ °C
<b>Bulk density</b>	0.70 g/ml
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	log Pow: - 0.0644
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

#### 9.2. Other information

<b>Particle size</b>	approx. 1-3 mm
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	No data available.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**      None known. Will not polymerise.

### 10.4. Conditions to avoid

**Conditions to avoid**      Avoid exposure to high temperatures or direct sunlight.

### 10.5. Incompatible materials

**Materials to avoid**      Strong oxidising agents. Strong acids. Strong alkalis.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products**      Does not decompose when used and stored as recommended.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)**      Calculation method. Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)**      Based on available data the classification criteria are not met. Calculation method.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)**      Based on available data the classification criteria are not met. Calculation method.

#### Skin corrosion/irritation

**Animal data**      Calculation method. Based on available data the classification criteria are not met.

#### Serious eye damage/irritation

**Serious eye damage/irritation**      Calculation method. Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation**      Calculation method. Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Genotoxicity - in vivo**      Calculation method. Based on available data the classification criteria are not met.

#### Carcinogenicity

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

#### Reproductive toxicity

**Reproductive toxicity - development**      Calculation method. Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure**      Calculation method. Based on available data the classification criteria are not met.

#### Toxicological information on ingredients.

### CYROMAZINE

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)**      LD<sub>50</sub> = 3387 mg/kg, Oral, Rat Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**ZERO**

<b>Notes (dermal LD<sub>50</sub>)</b>	LD <sub>50</sub> > 3100 mg/kg, Dermal, Rabbit Based on available data the classification criteria are not met.
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	LC50 > 3.6 mg/l, Inhalation, Rat Based on available data the classification criteria are not met.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Slightly irritating. Erythema/eschar score: Very slight erythema - barely perceptible (1). Oedema score: Very slight oedema -barely perceptible (1). Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Not irritating.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	M & K test - Guinea pig: Not sensitising. Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Chromosome aberration: Negative.
<b>Genotoxicity - in vivo</b>	Micronucleus formation: Negative. Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	NOAEL 156 mg/kg/day, Oral, Rat Based on available data the classification criteria are not met.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Two-generation study - NOAEL 51 mg/kg/day, Oral, Rat P
<b>Reproductive toxicity - development</b>	Maternal toxicity: - NOAEL: 10 mg/kg/day, Oral, Rabbit No reproductive or developmental effects occurred at non-parentally toxic doses. Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Data lacking.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not applicable.

**SECTION 12: Ecological Information****12.1. Toxicity**

**Toxicity** Not classified.

**Ecological information on ingredients.**

**ZERO****CYROMAZINE**

<b>Toxicity</b>	Toxic to aquatic life with long lasting effects.
<b>Acute toxicity - fish</b>	LC50, 96 hours: > 100 mg/l, Onchorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: > 100 mg/l, Daphnia magna
<b>Chronic toxicity - fish early life stage</b>	NOEC, 32 days: 14 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.31 mg/l, Daphnia magna

**12.2. Persistence and degradability****Ecological information on ingredients.****CYROMAZINE**

<b>Persistence and degradability</b>	The product is not readily biodegradable.
<b>Biodegradation</b>	Water - DT <sub>50</sub> : < 56 days

**12.3. Bioaccumulative potential**

**Partition coefficient**            log Pow: - 0.0644

**Ecological information on ingredients.****CYROMAZINE**

<b>Bioaccumulative potential</b>	The product does not contain any substances expected to be bioaccumulating. BCF: < 1,
<b>Partition coefficient</b>	log Pow: = - 0.069

**12.4. Mobility in soil****Ecological information on ingredients.****CYROMAZINE**

<b>Mobility</b>	Semi-mobile.
<b>Adsorption/desorption coefficient</b>	Water - K <sub>foc</sub> : < 1784 @ °C

**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.****CYROMAZINE**

<b>Results of PBT and vPvB assessment</b>	This product does not contain any substances classified as PBT or vPvB.
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**12.6. Other adverse effects**

**Other adverse effects**            None known.

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## Ecological information on ingredients.

### CYROMAZINE

**Other adverse effects**      None known.

#### **SECTION 13: Disposal considerations**

##### **13.1. Waste treatment methods**

**General information**      Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods**      Dispose of waste via a licensed waste disposal contractor. Waste is suitable for incineration. Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

#### **SECTION 14: Transport information**

**General**      The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

##### **14.1. UN number**

Not applicable.

##### **14.2. UN proper shipping name**

Not applicable.

##### **14.3. Transport hazard class(es)**

No transport warning sign required.

##### **14.4. Packing group**

Not applicable.

##### **14.5. Environmental hazards**

**Environmentally hazardous substance/marine pollutant**

No.

##### **14.6. Special precautions for user**

Not applicable.

##### **14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**

**Transport in bulk according to**      Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

#### **SECTION 15: Regulatory information**

##### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**      The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).



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<b>EU legislation</b>	Dangerous Substances Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. 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).
<b>Health and environmental listings</b>	Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (as amended). Regulation (EC) 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals (as amended). None of the ingredients are listed.
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	No specific restrictions on use are known for this product.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	PBT - Persistent, bioaccumulative and toxic. vPvB - Very persistent and very bioaccumulative EN - European standard adopted by the European Committee for Standardisation.
<b>Key literature references and sources for data</b>	The International Union of Pure and Applied Chemistry (IUPAC) pesticide properties database - <a href="http://sitem.herts.ac.uk/aeru/iupac/index.htm">http://sitem.herts.ac.uk/aeru/iupac/index.htm</a> World Health Organisation (WHO)/Food and Agriculture Organisation of the United Nations (FAO) Joint Meeting on Pesticide Residues monographs and evaluations. Available from <a href="http://www.inchem.org">www.inchem.org</a> . Conclusion regarding the peer review of the pesticide risk assessment of the active substance completed by the European Food Safety Authority - <a href="http://www.efsa.europa.eu/cs/Satellite">http://www.efsa.europa.eu/cs/Satellite</a> United States National Library of Medicine Hazardous Substances Data Bank (HSDB) - <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB</a> Supplier safety data sheet (SDS).
<b>Revision date</b>	05/01/2018
<b>Revision</b>	5.1
<b>Supersedes date</b>	29/04/2015
<b>SDS number</b>	20565
<b>Hazard statements in full</b>	H411 Toxic to aquatic life with long lasting effects. H412 Harmful 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.