



## SAFETY DATA SHEET HOKOEX®

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

#### 1.1. Product identifier

Product name HOKOEX®  
Chemical name CYROMAZINE 2% SOLUBLE GRANULE

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

Identified uses Insect Growth Regulator

#### 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

Manufacturer Hokochemie GmbH  
Pannerhofstrasse 7  
CH-6353 Weggis

#### 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 (SI 2019 No. 720)

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



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

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

General information	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.
Inhalation	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.
Ingestion	Rinse mouth thoroughly with water. Get medical attention immediately. If breathing stops, provide artificial respiration.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	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

Inhalation	No data available.
Ingestion	No data available.
Skin contact	No data available.
Eye contact	No data available.

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

Notes for the doctor	Treat symptomatically.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

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

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

Specific hazards	Contain and collect extinguishing water. Avoid releasing into the environment. Do not discharge into drains or watercourses or onto the ground.
Hazardous combustion products	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

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

Advice on general occupational hygiene    Avoid breathing dust.

#### 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

##### Occupational exposure limits

Implement COSHH controls at levels of: 8-hour TWA for respirable dust = 5 mg/m<sup>3</sup> or 8-hour TWA for total inhalable dust = 10 mg/m<sup>3</sup>.

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.



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Hygiene measures	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.
Respiratory protection	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)
Thermal hazards	No data available.
Environmental exposure controls	Do not release into the environment.

### SECTION 9: Physical and chemical properties

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

Appearance	Granules.
Colour	White/off-white.
Odour	No characteristic odour.
pH	pH (diluted solution): 7.5 @ 1%
Melting point	133 - 135°C
Initial boiling point and range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not relevant.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.335 @ °C
Bulk density	0.70 g/ml
Solubility(ies)	Soluble in water.
Partition coefficient	log Pow: - 0.0644
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

Particle size	approx. 1-3 mm
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reactivity	No data available.
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#### 10.2. Chemical stability

Stability	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.

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#### 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



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Notes (dermal LD <sub>50</sub> )	LD <sub>50</sub> > 3100 mg/kg, Dermal, Rabbit Based on available data the classification criteria are not met.
Acute toxicity - inhalation	
Notes (inhalation LC <sub>50</sub> )	LC50 > 3.6 mg/l, Inhalation, Rat Based on available data the classification criteria are not met.
Skin corrosion/irritation	
Animal data	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.
Serious eye damage/irritation	
Serious eye damage/irritation	Not irritating.
Respiratory sensitisation	
Respiratory sensitisation	Based on available data the classification criteria are not met.
Skin sensitisation	
Skin sensitisation	M & K test - Guinea pig: Not sensitising. Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	Chromosome aberration: Negative.
Genotoxicity - in vivo	Micronucleus formation: Negative. Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	NOAEL 156 mg/kg/day, Oral, Rat Based on available data the classification criteria are not met.
Reproductive toxicity	
Reproductive toxicity - fertility	Two-generation study - NOAEL 51 mg/kg/day, Oral, Rat P
Reproductive toxicity - development	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.
Specific target organ toxicity - single exposure	
STOT - single exposure	Data lacking.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Based on available data the classification criteria are not met.
Aspiration hazard	
Aspiration hazard	Not applicable.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

CYROMAZINE



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

### 12.2. Persistence and degradability

Ecological information on ingredients.

#### CYROMAZINE

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

### 12.3. Bioaccumulative potential

Partition coefficient                      log Pow: - 0.0644

Ecological information on ingredients.

#### CYROMAZINE

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

### 12.4. Mobility in soil

Ecological information on ingredients.

#### CYROMAZINE

Mobility	Semi-mobile.
Adsorption/desorption coefficient	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

Results of PBT and vPvB assessment	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).
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##### 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 Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
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#### 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).
Health and environmental listings	None of the ingredients are listed.
Authorisations (SI 2020 No. 1577 Annex XIV)	No specific authorisations are known for this product.
Restrictions (SI 2020 No. 1577 Annex XVII)	No specific restrictions on use are known for this product.





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### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	PBT - Persistent, bioaccumulative and toxic. vPvB - Very persistent and very bioaccumulative EN - European standard adopted by the European Committee for Standardisation.
Key literature references and sources for data	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).
Revision date	12/01/2023
Revision	5.3
Supersedes date	06/12/2018
Hazard statements in full	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.