

SAFETY DATA SHEET

ROYAL BLUE



Section 1: Identification

- 1.1 Product identifier:** Royal Blue
Product Description: Liquid
Product Type: Suspension Concentrate Fungicide
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant uses: Fungicide
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet**
Introlab (Pty) Ltd, 12 Oudepont Street, Wellington Industrial Park, Wellington, 7655, South Africa
Tel: +27 21 864 2145/6
- 1.4 Emergency telephone number:** +27 82 446 8946 (Griffon Poison Information Centre)

Section 2: Hazardous Identification

- 2.1 Classification of the substance or mixture**
Classification of this product has been carried out in accordance with CLP regulation (EC) no 1272/2008

Acute Tox. 4; Acute Toxicity, oral category 4, H302
Acute Tox. 2: Acute toxicity, inhalation category 4, H332
Aquatic Chronic 1: Aquatic Chronic, Category 1, H410

- 2.2 Label elements**
Hazard pictogram(s):



Signal word: Warning
Hazardous statement(s): H302 – Harmful if swallowed
H332 – Harmful if inhaled
H410 – Very toxic to aquatic life with long lasting effects

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Precautionary Statement(s):

- P101 – If medical advice is needed, have product container or label at hand.
- P102 – Keep out of reach of children.
- P103 – Read label before use.
- P261 – Avoid breathing dust/fume/gas/mist/vapours/ spray.
- P264 – Wash hands thoroughly after handling.
- P270 – Do not eat, drink or smoke when using product.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 – Avoid releases to the environment.
- P301 + P312 – IF SWALLOWED: call a POISON CENTER/doctor/... IF you feel unwell.
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
- P330 – Rinse mouth.
- P391 – Collect spillage.
- P501 – Dispose of the contents/containers in accordance with the current legislation on waste treatment.

Section 3: Composition / Information on Ingredients**3.1 Components:**

Chemical Name:	Copper (II) Hydroxide
CAS:	20427-59-2
EC:	243-815-9
Formulation:	Copper Hydroxide 538 g/L

Section 4: First Aid Measures**4.1 Description of first aid measures**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.

By skin contact:

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash clothing before re-use.

By eye contact:

Immediately flush eyes with lukewarm water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove any contact lenses after 5 minutes. Get medical attention if necessary.

By ingestion / aspiration:

Have victim rinse mouth thoroughly with water. Do not induce vomiting unless directed by medical personnel. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing

in of vomits. Never give anything by mouth to an unconscious person. Qualified medical personnel should perform administration of oxygen. Seek medical advice if necessary.

4.2 Most important symptoms and effects, both acute and delayed No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: None.

Specific treatments: Treat symptomatically.

Section 5: Fire Fighting Measures

5.1 Fire Extinguishing Media

Suitable extinguishing media: Use dry chemical powder for small fires and CO₂ foam for large fires.

Unsuitable extinguishing media: No information available.

5.2 Special hazards arising from the substance or mixture: Nature of decomposition products not known for the product.

5.3 Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Do not inhale. Wear appropriate personal protective equipment such as splash goggles, gloves and an approved respirator.

6.2 Environmental precautions: Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up

Spills:

Collect in containers for disposal. Wash contaminated surfaces to remove any residues. Minimize use of water to prevent environmental contamination.

Large Spills:

Prevent spillage or further leakage if it is safe to do so. Contain spillage with sand bags or by other means. Absorb with earth, sand or absorbent material. Dig up heavily contaminated soil. Flush with water to remove any residues. Keep product and wash water out of drains, sewers, ditches and waterways.

6.4 Reference to other sections:

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

Section 7: Handling & Storage

7.1 Precautions for safe handling:

Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage Minimum Temp.: 5 °C Maximum Temp.: 30 °C Maximum time: 24 Months

B.- General conditions for storage

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5. Keep containers closed when not in use - check regularly for leaks.

7.3 Specific end use(s)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

Section 8: Exposure Controls / Personal Protection

8.1 **Control parameters:** No specific occupational exposure limit has been established.

8.2 Exposure controls

Appropriate engineering controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Possible: safety glasses with side-shields.

Hand protection: Use chemical resistant gloves.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

Section 9: Physical and Chemical Properties
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9.1 Information on basic physical and chemical properties

For complete information, please refer to product datasheet.

Appearance

Physical state:	Liquid
Aspect:	Homogenous Suspension
Colour:	Blue
Odour:	Slight Chemical Odour

Volatility:

Boiling Point at atmospheric pressure:	N/A
Vapour pressure at 20 °C:	No significant volatility, aqueous liquid
Vapour pressure at 50 °C:	No significant volatility, aqueous liquid
Evaporation rate 20 °C:	No data available

Product description:

Density at 20 °C:	1.4 – 1.45 g/ml
Molecular weight:	N/A
Relative density at 20 °C:	N/A
Dynamic viscosity at 20 °C:	N/A
Kinematic viscosity at 20 °C:	N/A
pH (1% solution):	8.94 – 8.76
Vapour density at 20 °C:	N/A
Partition coefficient n-octanol/water at 20 °C:	N/A
Solubility in water at 20 °C:	Soluble
Stability:	This product is stable.
Decomposition temperature:	N/A
Melting point/freezing point:	Decomposes without melting
Explosive properties:	No explosive properties
Oxidising properties:	N/A
Particle Size (D50%):	1.663 – 1.561 µm
Particle Size (D90%):	2.418 – 2.196 µm

Flammability:

Flash point:	N/A
Auto-ignition temperature:	N/A
Lower flammability limit:	N/A
Upper flammability limit:	N/A

9.2 Other Information: No additional information.

Section 10: Stability and Reactivity

10.1 Reactivity: Product is stable under normal conditions.

10.2 Chemical stability: Chemically stable under the conditions of storage, handling and use for 2 years.

10.3 Possibility of hazardous reactions: Slightly reactive with oxidising agents

10.4 Conditions to avoid: No information available.

10.5 Incompatible materials: Oxidising agent.

10.6 Hazardous decomposition products: No information available

Section 11: Toxicological Information

11.1 Information on toxicological effects:

LD₅₀ Oral (Rat): 1440 mg/kg (Published data)

LD₅₀ Dermal (Rat): >2020 mg/kg (Published data)

LC₅₀ Inhalation (Rat): > 1.59 mg/L (Published data)

Dangerous health implications: Harmful if swallowed; Causes serious eye damage; Fatal if inhaled

Carcinogenicity: No information available.

Section 12: Ecological Information

12.1 Toxicity:

Copper (II) Hydroxide			
	Acute Toxicity	Species	Genus
LC ₅₀	0.023 mg/L (96h) 0.08 mg/L (24h) >180 mg/L (96h)	Fathead Minnows Rainbow trout Bluegill sunfish	Fish
LC ₅₀	3400 mg/kg >5000 mg/kg >10000 ppm >10000 ppm	Bobwhite quail Mallard Duck Bobwhite Quail Mallard Duck	Bird
EC ₅₀	6.5 ppm	Daphnia Magna	Aquatic Invertebrates

Summary:

Toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has potential for runoff for several months after application

12.2 Persistence and degradability:

Copper is an inorganic compound that cannot be degraded in soils. Copper can be present under different forms, most of which are strongly bound to inorganic and organic ligands contained within soil

and sediments. The fate and behaviour of copper, as its bio availability, strongly depend on the distribution of these different forms.

12.3 Bio accumulative potential: Copper is strongly bio-accumulated

12.4 Mobility in soil:

Poorly draining soils and soils with shallow water tables are more prone to produce runoff contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas

12.5 Results of PBT and vPvB assessment: No information available

12.6 Other adverse effects: High concentration in receiving water will injure aquatic life

Section 13: Disposal Considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).





13.1 Waste treatment methods: Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulation





13.2 Product/ packaging disposal: Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations. Waste packaging should be recycled

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14: Transportation Information

	Land transport (ADR/RID)	Inland waterway transport (AND/ADNR)	Sea Transport (IMDG)	Air Transport (ICAO-TI / IATA- DGR)
14.1 UN Number	3010	3010	3010	3010
14.2 UN proper shipping name	Environmentally hazardous substance, liquid. N.O.S (Copper dihydroxide Copper (II) Hydroxide)	Environmentally hazardous substance, liquid. N.O.S (Copper dihydroxide Copper (II) Hydroxide)	Environmentally hazardous substance, liquid. N.O.S (Copper dihydroxide Copper (II) Hydroxide)	Environmentally hazardous substance, liquid. N.O.S (Copper dihydroxide Copper (II) Hydroxide)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing Group	III	III	III	III

14.5 Environmental hazards	Yes 	Yes 	Yes 	Yes 
14.6 Special precautions for user	No data available	No data available	No data available	No data available
14.7 Transport in bulk according to Annex II of Marpol and IBC Code:	No data available	No data available	No data available	No data available

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances

Other legislation:

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP]

Other National regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996).

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management: Waste Act 59 of 2008.

15.2 Chemical Safety Assessment:

The supplier has not carried out evaluation of chemical safety.

Section 16: Other Information

Legislation related to safety data sheets:

This safety data sheet is GHS aligned

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

Relevant P-, H- and EUH-phrases (number and full text)

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P330 – Rinse mouth.

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Notice to reader

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