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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: 10011142

Product Name: MG Blue Solution

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd.

Ann Arbor, MI 48108

Web site address: www.caymanchem.com

Information: Cayman Chemical Company +1 (734)971-3335

1.4 Emergency telephone number:

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

Acute Toxicity: Oral, Category 3

Serious Eye Damage/Eye Irritation, Category 2

Toxic To Reproduction, Category 2 Aquatic Toxicity (Acute), Category 3

Aquatic Toxicity (Chronic), Category 3

2.2 Label Elements:

2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:





GHS Signal Word: Danger

GHS Hazard Phrases:

H301: Toxic if swallowed.

H319: Causes serious eye irritation.

H361: Suspected of damaging fertility or the unborn child.

H402: Harmful to aquatic life.

H412: Harmful to aquatic life with long lasting effects.

GHS Precaution Phrases:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash {hands} thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy





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to do. Continue rinsing.

P308+313: IF exposed or concerned: Get medical attention/advice.

P330: Rinse mouth.

P337+313: If eye irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Causes serious eye irritation.

Effects and Symptoms: Harmful to aquatic life with long lasting effects.

Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation or skin absorption.

May cause skin or respiratory system irritation.

Suspected of damaging fertility or the unborn child.

Toxic if swallowed.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
123333-61-9 NA	Malachite Green Carbinol Hydrochloride	0.0 -1.0 %	NA NA	Acute Tox.(O) 3: H301 Eye Damage 1: H318 Toxic Repro. 2: H361 Aquatic (A) 1: H400 Aquatic (C) 1: H410
9002-89-5 TR8100000	Polyvinyl alcohol mixture of polymers	0.0 -5.0 %	NA NA	No data available.
7732-18-5 ZC0110000	Water	94.0 -100.0 %	231-791-2 NA	No data available.

Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel.

Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated

clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined

and tested by medical personnel.

In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an

unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by

medical personnel.



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Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or

equivalent), and full protective gear to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Take steps to avoid release into the environment, if safe to do so.

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Other Precautions: Light sensitive.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS#	Partial Chemical Name	Britain EH40	France VL	Europe
123333-61-9	Malachite Green Carbinol Hydrochloride	No data.	No data.	No data.
9002-89-5	Polyvinyl alcohol mixture of polymers	No data.	No data.	No data.
7732-18-5	Water	No data.	No data.	No data.
CAS#	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
123333-61-9	Malachite Green Carbinol	No data.	No data.	No data.
	Hydrochloride			
9002-89-5	Hydrochloride Polyvinyl alcohol mixture of polymers	No data.	No data.	No data.



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3.2 Exposure Controls:

8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety

shower.

Wash thoroughly after handling.

No data available.

	Section 9. Physical and Chemical Properties				
9.1	1 Information on Basic Physical and Chemical Properties				
	Physical States:	[] Gas [X] Liquid [] Solid			
	Appearance and Odor:	Solution			
	Melting Point:	No data.			
	Boiling Point:	No data.			
	Flash Pt:	No data.			
	Evaporation Rate:	No data.			
	Flammability (solid, gas):	No data available.			
	Explosive Limits:	LEL: No data. UEL: No data.			
	Vapor Pressure (vs. Air or mm	No data.			
	Hg):				
	Vapor Density (vs. Air = 1):	No data.			
	Specific Gravity (Water = 1):	No data.			
	Solubility in Water:	No data.			
	Autoignition Pt:	No data.			
9.2	Other Information				
	Percent Volatile:	No data.			
	Section 10. Stability and Reactivity				

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Polymerization: Will occur [] Will not occur [X]

10.4 Conditions To Avoid: No data available.

10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 Hazardous No data available.

Decomposition or

Byproducts:



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Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects: Polyvinyl Alcohol - Toxicity Data: Oral LD50 (mouse): 5000 mg/kg;

Chronic Toxicological Polyvinyl Alcohol - Investigated as a tumorigen.

Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Polyvinyl Alcohol RTECS Number: TR8100000

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
123333-61-9	Malachite Green Carbinol Hydrochloride	n.a.	n.a.	n.a.	n.a.
9002-89-5	Polyvinyl alcohol mixture of polymers	n.a.	3	n.a.	n.a.
7732-18-5	Water	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Transport in accordance with local, state, and federal regulations.

Information:





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Section 15. Regulatory Information

EPA SARA (Sup	erfund Amendments a	nd Reauthorization	Act of 1986) Lists
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CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
123333-61-9	Malachite Green Carbinol Hydrochloride	No	No	No
9002-89-5	Polyvinyl alcohol mixture of polymers	No	No	No
7732-18-5	Water	No	No	No

CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists		
123333-61-9	Malachite Green Carbinol Hydrochloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No		
9002-89-5	Polyvinyl alcohol mixture of polymers	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No		
7732-18-5	Water	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No		

Regulatory Information

This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement:

No.1272/2008.

Section 16. Other Information

Revision Date:

05/09/2015

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer:

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for

their particular purposes.