

GARDENA, CA  
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	 See Section 15.
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							

## Section 1. Chemical Product and Company Identification

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Common Name/ Trade Name	Malachite green	Catalog Number(s).	MA143
		CAS#	569-64-2
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	RTECS	BQ1180000
		TSCA	TSCA 8(b) inventory: Malachite green
Commercial Name(s)	C.I. Basic Green 4; Acryl Brilliant Green B; Aizen Malachite Green; Aniline green; Astra Malachite Green; Basic Green 4; Benzal Green; Benzaldehyde green; C.I. 42000; Calcozine Green V; China Green; Diamond Green B; Green Malaquite; Green MX; Grenoble Green; Hidaco Malachite Green Base; Malachite Green 4; Malachite green chloride; Malachite Lake Green A	CI#	Not available.
Synonym	N-[4-[[4-(Dimethylamino)phenyl]phenylmethylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride	<b>IN CASE OF EMERGENCY</b> <b>CHEMTREC (24hr) 800-424-9300</b>  CALL (310) 516-8000	
Chemical Name	Methanaminium, N-[4-[[4-dimethylamino)phenyl]phenylmethylene-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (1:1)		
Chemical Family	Not available.		
Chemical Formula	C <sub>23</sub> H <sub>25</sub> ClN <sub>2</sub>		
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

## Section 2. Composition and Information on Ingredients

		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Malachite green	569-64-2				100

Toxicological Data  
on Ingredients**Malachite green:**  
ORAL (LD50): Acute: 80 mg/kg [Mouse].

**Section 3. Hazards Identification**

Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

**Section 4. First Aid Measures**

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. <b>WARNING:</b> It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Serious Ingestion	Not available.

**Section 5. Fire and Explosion Data**

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ...), halogenated compounds.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Material in powder form, capable of creating a dust explosion. As with most organic solids, fire is possible at elevated temperatures.
Special Remarks on Explosion Hazards	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: <b>Neutralize the residue with a dilute solution of sodium carbonate.</b>
Large Spill	Corrosive solid. Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. <b>Neutralize the residue with a dilute solution of sodium carbonate.</b>

**Section 7. Handling and Storage**

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

**Section 9. Physical and Chemical Properties**

Physical state and appearance	Solid. (Powdered solid. Crystals solid.)	Odor	Not available.
Molecular Weight	364.9 g/mole	Taste	Not available.
pH (1% soln/water)	1.4 [Acidic.]	Color	Green.
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Version Properties	See solubility in water, methanol.		



Solubility	Easily soluble in cold water. Soluble in methanol. Soluble in alcohol, Amyl alcohol. Solubility in Water: 7 g/l
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**Section 10. Stability and Reactivity Data**

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, dust generation.
Incompatibility with various substances	Reactive with oxidizing agents, reducing agents.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

**Section 11. Toxicological Information**

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 80 mg/kg [Mouse].
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Extremely hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive). Hazardous in case of skin contact (irritant), of ingestion, .
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects Inhalation : Inhalation of dust is irritating to the mucous membranes and upper respiratory tract. Ingestion: Harmful if swallowed. It can cause diarrhea, and abdominal pain. Skin and Eye Contact: Causes skin and eye irritation. Eye contact may cause corneal opacification and destructive keratitis.

**Section 12. Ecological Information**

Ecotoxicity	Ecotoxicity in water (LC50): 0.1 ppm 96 hours [Fish (Blue gill)]. 0.3 ppm 96 hours [Fish (Salmon)]. 0.1 ppm 96 hours [Fish (Trout)]. 0.14 ppm 24 hours [Fish (Catfish)]. 0.2 ppm any hours [Frog]. 0.25 ppm 96 hours [EEL].
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are as toxic as the product itself.
Special Remarks on the Products of Biodegradation	Not available.

**Section 13. Disposal Considerations****Waste Disposal**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information****DOT Classification**

CLASS 6.1: Poisonous material.

**Identification**

UNNA: 3143 : Dye, solid, Toxic, n.o.s.(Malachite Green) PG: III

**Special Provisions for Transport**

Not available.

**DOT (Pictograms)****Section 15. Other Regulatory Information and Pictograms****Federal and State Regulations**

Pennsylvania RTK: Malachite green  
Massachusetts RTK: Malachite green  
Massachusetts spill list: Malachite green  
New Jersey: Malachite green  
New Jersey spill list: Malachite green  
TSCA 8(b) inventory: Malachite green  
SARA 313 toxic chemical notification and release reporting: Malachite green

**California Proposition 65 Warnings**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 209-322-8).  
Canada: Listed on Canadian Domestic Substance List (DSL).  
China: Listed on National Inventory.  
Japan: Listed on National Inventory (ENCS).  
Korea: Listed on National Inventory (KECI).  
Philippines: Listed on National Inventory (PICCS).  
Australia: Listed on AICS.

**Other Classifications****WHMIS (Canada)**

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).  
CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC)**

R25- Toxic if swallowed.  
R41- Risk of serious damage to eyes.  
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.  
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S60- This material and its container must be disposed of as hazardous waste.  
S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

**MSDS (U.S.A.)**

Health Hazard	2
Fire Hazard	1
Reactivity	0

**National Fire Protection Association (U.S.A.)**

Health



Flammability

Reactivity

Personal Protection

Specific hazard

WHMIS (Canada)  
(Pictograms)DSCL (Europe)  
(Pictograms)TDG (Canada)  
(Pictograms)ADR (Europe)  
(Pictograms)

Protective Equipment



Gloves



Synthetic apron.



Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

## Section 16. Other Information

MSDS Code M3230

References Not available.

Other Special Considerations Major Uses: for directly dyeing silk, wool, jute, and other leather; for dyeing cotton after mordanting; biological stain; clinical reagent; agricultural fungicide; for effective control of protozoa

Validated by Sonia Owen on 2/13/2009.

Verified by Sonia Owen.

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CALL (310) 516-8000

**Notice to Reader.**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*