



Green-Lock® Structural Adhesive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 12/10/2024

Date of Issue: 02/11/2020

Version:6.1

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Paste

Product Name: Green-Lock® Structural Adhesive

Product Code: 2138

Intended Use of the Product

Adhesive

Name, Address, and Telephone of the Responsible Party

Manufacturer

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633
www.garlandco.com

Supplier

The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
T-800-762-8225
F-216-641-0633
www.garlandco.com

The Garland Company, Inc.
209 Carrier Drive
Toronto, Ontario M9W 5Y8
T-416-747-7995 ; 800-387-5991
F-416-747-1980

Emergency Telephone Number

Emergency Number: 1-800-262-8200 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Eye Damage 1	H318
Skin sens. 1A	H317
Skin irritation 2	H315

Disclaimer: ATTENTION! Some of the additives disclosed in Section 3 such as Carbon Black and or Titanium Dioxide are regulated by California Proposition 65 as carcinogens when they are in the form of "airborne, unbound particles of respirable size". Since the disclosed materials are bound in the polymer matrix, they will not be available as an airborne hazard (dust, mist, or spray) under normal conditions of use. Therefore, this product does not present a respiration hazard as outlined by the Prop 65 regulations.

Label Elements

GHS-US Labeling

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Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H318 – Causes serious eye damage
H317 – May cause an allergic skin reaction.
H315 – Causes skin irritation.

Precautionary Statements (GHS-US)

: Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves and eye/face protection.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

Dispose of contents/container in accordance with local regulation.

Other hazards: This product does not contain any substances classified as PBT or vPvB.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component

Name	Product Identifier	% (w/w)	Classification (GHS-US)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	1.0-5.0	Eye Damage 1 H318
			Skin sens. 1A H317
			Skin irritation 2 H315

Composition Comments: Exact concentrations and chemical identities of ingredients not listed above are either classified as non-hazardous or are withheld as a trade secret as covered by OSHA's Hazard Communication Standard, 29 CFR 1910.1200(i).

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing is irregular or stopped, administer artificial respiration.

Skin Contact: If on skin: Wash with plenty of water. Mild soap may be used if available. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. If irritation occurs or persists, seek medical attention.

Ingestion: If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

Most Important Symptoms and Effects Both Acute and Delayed

May cause an allergic skin reaction (e.g. swelling, rash and eczema). Causes eye irritation. Symptoms may include tearing, redness and discomfort.

Indication of Immediate Medical Attention and Special Treatment Needed

Notes for the doctor: Provide general supportive measures and treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

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Suitable Extinguishing Media: Dry chemical, carbon dioxide and foam.

Unsuitable Extinguishing Media: Do not use water jet as an extinguisher, as this will spread the fire.

Special Hazards Arising From the Substance or Mixture

Specific Hazards: May form flammable/explosive vapor-air mixture.

Hazardous Combustion Products: Thermal decomposition may product toxic fumes of Carbon Monoxide, Carbon Dioxide, Sulfur oxides and Hydrogen.

Advice for Firefighters

Fire Fighting Procedures: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special Protective Equipment for Firefighters: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run run-off from fire fighting to enter drains or water courses. Dike for water control. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter 's normal protective clothing (Bunker Gear) will not provide adequate protection. A full full-body encapsulating chemical protective suit with positive pressure selfself-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: All persons dealing with the clean clean-up should wear the appropriate chemically protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental Precautions

Avoid discharge into drains, water courses or onto the ground. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and Materials for Containment and Cleaning Up

For Containment: Contain spilled material if possible. Absorb with materials such as: Dirt. Vermiculite. Sand.

Methods for Cleaning Up: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools and equipment in the clean clean-up process. Contain and absorb spilled liquid with non non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Use methods that do not generate dusts. Contaminated absorbent material may pose the same hazards as the spilled product. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

Reference to Other Sections: For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

General Handling: Provide adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Avoid breathing dust/fume/gas/mist/ vapours/spray. Avoid contact with skin, eyes and clothing. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. Keep away from incompatibles. Wash thoroughly after handling. Keep container tightly closed when not in use. Empty containers retain residue and can be dangerous.

Advice on General Occupational Hygiene: Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for Safe Storage

General: Store in a cool, dry area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks.

Shelf Life: 6 Months at a storage temperature of 56 - 77°F (15 - 25°C).

Incompatible materials: None known or reported by the manufacturer.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits

N-(3-(trimethoxysilyl)propyl)ethylenediamine		
USA ACGIH	ACGIH LTEL (TWA 8 hr ppm)	N/A

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USA OSHA	OSHA LTEL (TWA 8 hr ppm)	N/A
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ASGIH = American Conference of Governmental Industrial Hygienists

OSHA = Occupational Safety and Health Administration

Appropriate Engineering Controls: Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Hand Protection: Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resistant degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Eye/Face Protection: Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Skin Protection: Wear protective gloves/clothing. Wear as appropriate: Neoprene; Nitrile rubber. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear apron or protective clothing in case of contact.

Hygiene Measures: Wash after use and before eating, smoking, and using the toilet. Do not eat, drink, or smoke when using this product.

Respiratory Protection: If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4 Z94.4-02. Advice should be sought from respiratory protection specialists.

Environmental Exposure Controls: Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Paste
Color	: Black
Odor	: Characteristic
Flammability Limits in Air	: Not available
Vapor Pressure	: < 1
Vapor Density (Air = 1)	: > 1
Solubility in Water (by wt)	: Insoluble
Density	: 12.5 lbs/gal.
Explosive Properties	: Not explosive
VOC (EPA METHOD 25)	: <50 g/L

SECTION 10: STABILITY AND REACTIVITY

Reactivity: This product polymerizes when in contact with moisture.

Chemical Stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of Hazardous Reactions: No potentially hazardous reactions known.

Conditions to Avoid: None known.

Incompatible Materials: None known.

Hazardous Decomposition Products: Thermal decomposition may release toxic gases or fumes

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects – Product

Acute Toxicity: Not classified.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: Causes skin irritation

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization: May cause skin sensitization or allergic reactions in sensitive individuals.

Germ Cell Mutagenicity: No data available.

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Teratogenicity: No data available.

Carcinogenicity: Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly carcinogenic to humans.

Specific Target Organ Toxicity (Repeated Exposure): Not classified.

Reproductive Toxicity: No relevant data found.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: May be fatal if swallowed and enters airways.

Information on Toxicological Effects – Ingredient(s)

LD50 and LC50 Data:

N-(3-(trimethoxysilyl)propyl)ethylenediamine	
LC50, Rat 4 hr inhalation	>1.49, <2.44 mg/L (aerosol)
LD50, Rat (Ingestion/Oral)	1897 mg/kg
LD50, Dermal Rabbit	16160 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Persistence and Degradability

No known applicable information.

Mobility in Soil

Mobility in Soil: In the aquatic and terrestrial environment, movement is expected to be limited.

Toxicity – Component

N-(3-(trimethoxysilyl)propyl)ethylenediamine	
LC50, Fish 96 hr	>100 mg/L (rainbow Trout)
EC50, Daphnia 48 hr(Ingestion/Oral)	90 mg/L (Daphnia magna) NOEC/21 day >1 mg/L
EC50, Algae 72 hr	8.8 mg/L/72 hr (Green Algae) NOEC 72 hr 3.1 mg/L
Partition coefficient n-octanol/water (log Know)	1.67

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Waste generation should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Unused and Contaminated Product: Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name :
Hazard Class :
Identification Number :
Packing Group :

14.2 In Accordance with IMDG

Proper Shipping Name :
Hazard Class :
Identification Number :
Packing Group :

14.3 In Accordance with IATA

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Proper Shipping Name :
Hazard Class :
Identification Number :
Packing Group :

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Ingredients	Cas #	TSCA Inventory	CERCLA Reportable Quantity (RQ)	SARA TITLE III Sec 302, EHS, 40 CFR 355	SARA Title III: Sec. 313 Specific Toxic Chemical	
					Toxic Chemical	De minimus concentration
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Yes	None	None	No	No

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

Health hazards (Skin sensitization; Eye damage/irritation)

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US Federal Regulations

The following chemicals are specifically listed by individual States:

Ingredient	CAS #	California Prop 65:		State "Right to Know" Lists					
		Listed	Type of toxicity	CA	MA	MN	NJ	PA	RI
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	No	N/A	No	No	No	No	No	No

Canadian Information

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI:

International Information

Components listed below are present on the following International Inventory list:

Ingredient	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	217-164-6	Present	Present	(2)-2083; (2)-2059	KE-34385	Present	HSR003831

SECTION 16: OTHER INFORMATION

Revision Date : 12/10/2024
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
Party Responsible for the Preparation of This Document : The Garland Company, Inc.
3800 East 91st Street
Cleveland, Ohio 44105-2197
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F-216-641-0633

This information is based on our knowledge as of the Revision Date and is intended to describe the product only for the purposes of health, safety and environmental requirements as of the Revision Date. It should not therefore be construed as guaranteeing any specific property of the product nor as providing any warranty, expressed or implied. The user assumes all responsibility, liability, risk of loss, damage, or expense arising out of, or in any way connected with, the handling, storage, use, or disposal of the product.