

01424-1020

DCI Industries, Ltd.
 PO Box 358717
 Gainesville FL 32635
 Phone: 800 222 0477
 Fax: 888 860 0613
 Product ID No.: **GS-100**
 Emergency #: Chemtel 800-255-3924

Material Safety Data Sheet

This Material Safety Data Sheet (MSDS) contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community Right To Know emergency response reporting requirements under SARA TITLE III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS.

This MSDS complies with 29 CFR 1910.1200 (The Hazard Communication Standard)

NANO-SILICONE POLMER EMULSION

Date of print: 2/14/2006 Date of last alteration: 01/26/2005

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

INGREDIENTS:	% by Weight	Exposure Limits OSHA PEL	ACGIH TLV	CAS No.
Aliphatic Solvent	70 – 95%	Essentially Non-Toxic		109-66-0
Dibutyltin Diacetate	0.004-0.10%	LD50 = 175 mg./Kg.		1067-33-0
a,w-dihydro poly-dimethyl siloxane	10 – 30%	Unknown		63148-62-9
Propellant	10 – 25%	800		75-28-5

THIS PRODUCT MAY CONTAIN ONE OR MORE INGREDIENTS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACTS OF 1986 AND OF 40 CFR 372.

NA*

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 115.5°C / 240°F (Concentrate Only)	SPECIFIC GRAVITY: 0.980 (Concentrate Only)
VAPOR PRESSURE (psi): 30 – 40 psi	MELTING POINT: NA*
VAPOR DENSITY (AIR = 1): >1	EVAPORATION RATE (Ethyl Ether = 1): <1
SOLUBILITY IN WATER: Insoluble	VISCOSITY @ 25°C: < 60 cSts.
APPEARANCE AND ODOR: Clear, water-white liquid with slight hydrocarbon odor.	
V.O.C.: 85 grams/ Liter	

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Highly Flammable aerosol per ASTM D-3065-77 Flame Extension Test for aerosols. This is a warehouse storage Level 3 Aerosol.

FLASH POINT:

Concentrate only: Approx. 7.2°C / 45°F

Propellant only: -104.4°C / -156°F

FLAMMABLE LIMITS:

LEL: 1.6

UEL: Not Est.

EXTINGUISHING MEDIA: Carbon dioxide, Foam, or Dry Chemicals, if needed.

SPECIAL FIRE FIGHTING PROCEDURES: Keep containers cooled with a water mist to prevent bursting.

Wear NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers are under pressure. Exposure to temperatures exceeding 60°C /140°F may cause bursting of the container(s). Ruptured containers may "rocket" out of local area causing potential injury or the spread of fire.

SECTION V – REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks, open flames and exposure to direct sunlight, especially with dark colored containers.

INCOMPATIBILITY (Materials to avoid): Do not mix with alkali metals such as sodium or potassium and/or strong oxidizing agents. Ingredients are moisture sensitive that can cause curing of the material.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide and silicon dioxide.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI – HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION: YES SKIN: YES INGESTION: No

Effects of Overexposure:

EYES: Slight to more severe irritation, redness. Adhesive properties of product may "Glue" eyelids shut if sprayed into eyes.

SKIN: Low Order of toxicity to skin. Some redness may occur. Frequent or prolonged contact may irritate and cause dermatitis.

INHALATION: High vapor/Aerosol combinations (> 1,000 ppm) are irritating to the eyes and respiratory tract. Prolonged exposure to very high concentrations for extended periods may cause headaches, dizziness and drowsiness leading to unconsciousness and even a serious medical condition requiring prompt medical attention in extreme cases.

INGESTION: Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may result in inflammation and possible fluid accumulation in the lungs. Aspiration into the lungs can cause chemical pneumonitis that can be fatal.

Carcinogenicity: NTP: No IARC: No OSHA: No

Medical Conditions Generally Aggravated by Exposure:

Health studies have shown that many petroleum hydrocarbons pose human health risks that may vary from person to person. As a precaution, exposure to chemical liquids, vapors or mists of fumes should be minimized and prevented. Always use in a well-ventilated area or use outdoors.

Emergency and First Aid Procedures:

EYE CONTACT: Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT: Flush with large amounts of water and use soap if available to thoroughly wash contaminated area of skin. Remove all contaminated clothing, including shoes and launder prior to re-use.

INHALATION: Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest with feet elevated. Call for medical attention.

INGESTION: If swallowed, DO NOT induce vomiting. Keep at rest and obtain prompt medical attention.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: First eliminate all sources of ignition. Ventilate area well. Wear NIOSH approved self-contained breathing apparatus if TLV is exceeded. Soak up material with oil absorbent material and place in a disposable container.

WASTE DISPOSAL METHOD: May be incinerated under conditions complying with Federal, State, and Local environmental control regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not puncture or incinerate cans. DO NOT STORE above 60° C / 140°F. Keep material away from heat, sparks or open flames.

*NA throughout this document represents "Not Applicable."

SECTION VIII – CONTROL MEASURES

RESPIRATORY PROTECTION: A NIOSH approved air supplied respirator if TLV is exceeded.

VENTILATION: LOCAL EXHAUST: Sufficient to maintain below TLV limits.

MECHANICAL: Sufficient to maintain below TLV limits.

PROTECTIVE GLOVES: Recommended

EYE PROTECTION: Chemical Safety Goggles with Side Shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Warehouse or storage area needs to be equipped with safety stations as required by local codes that are easily accessible. Also, wear suitable clothing to protect bare skin. **WORK and/or HYGIENIC PRACTICES:** Always wash hands after handling chemicals and before eating or smoking. Do not smoke when working with or handling chemicals.

SECTION IX – SUPPLEMENTARY INFORMATION

V. O. C. (Volatile Organic Compounds) CONTENT: 100 grams/liter.

SARA Title II: Rating Scale:

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS Classification:

Health	Flammability	Reactivity
1	3	0

NFPA Classification:

Health: 1 Reactivity: 0 Fire: 3 Special: UN# 1950 Hazard Class: 2.1

PREPARED BY: Craig Amen, Sr. Chemist

APPROVED BY: Ross Sklar, CTO

DATE PREPARED: 2/12/2006 **SUPERSEDES:** 01/26/2005

DISCLAIMER

The information contained herein has been compiled from sources considered to be dependable and is accurate to the best of DCI Industries, Ltd. The information relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Customers are encouraged to conduct their own tests. Before using the product, read its label. DCI Industries, Ltd assumes no responsibility for injury to recipient or third party persons or for any damage to any property as a result of use or misuse of the controlled product and recipient assumes all such risks. This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of the DCI Industries, Ltd. The data on this sheet relates only to the specific material designated herein. DCI Industries, Ltd. assumes no legal responsibility for use or reliance upon this data.



Graffiti Shield GS-100

COMPOSITION & MATERIALS

The Graffiti Shield is a nanotechnological, permanent and non-stick coating. The Graffiti Shield incorporates a unique nanopolymer with an extremely highly slip coefficient that both penetrates the structure and builds a durable non-stick film. It is single component, water-clear, UV stable, heat stable and has extreme chemical resistance. This product forms both a mechanical and chemical bond to inorganic and organic substrates making it universal in its application. The Graffiti Shield does not allow paint, graffiti, permanent marker, stickers and other markings to bond to the dry film. This product has been tested in a wide variety of climates and shows no deterioration from ultraviolet rays, ozone, salt spray or acid rain. The Graffiti Shield allows for expansion and contraction, building movement, temperature extremes and thermal cycling. This product is non-toxic, environmentally friendly, non-reactive, VOC, AQMD and CARB compliant. The GS-100 exceeded the performance requirements for ASTM D6578 Graffiti Resistance Test. This product is packaged in 20 oz. aerosol cans with a net wt. of 12 oz.

PRODUCT DESCRIPTION

- Non-sacrificial, non-yellowing and clear
- Non-stick characteristics
- Single component
- Allows expansion and contraction
- Can be applied to horizontal, vertical and wear surfaces
- ASTM D6578

APPLICATION GUIDELINES

Surface Preparation:

The surface is to be clean and free of any foreign matter. Apply the Graffiti Shield to any surface or substrate. Some porous substrates may require more than one coat. The product may be applied at 40°F and above and as long as there is no frozen moisture in the substrate. Product must be applied to a dry surface. Always apply to a test area before proceeding with entire application. Graffiti Shield will darken porous surfaces. Test in an inconspicuous area before application. Coated surfaces may be washed with water or mild detergent.

Application:

1. Shake the product well before application.
2. Apply your first application as a flood coat and apply liberally.
3. Allow the first coat of the Graffiti Shield to cure approximately 4 hours in ambient conditions.
4. A single coat may be sufficient but a second or third coat can be applied depending on your application, substrate or requirements.

***PURGE NOZZLE AFTER USE: HOLD CAN UPSIDE DOWN AND SPRAY TO FLUSH NOZZLE AND PREVENT CLOGGING.**



Graffiti Shield
GS-100

Graffiti Removal:

1. Remove graffiti as soon as possible after surface has been vandalized.
2. Success has been achieved by using:
 - A dry paper towel or dry soft light abrasive material.
 - Water and detergent at no more than 10%
 - Pressure washing under 1000psi - Pressure over 1000psi may threaten the integrity of the coating.
 - Any light alkaline, citrus, acetone cleaner. Make sure to flush the coating with water after chemical cleaning to ensure the integrity of the coating. Always test chemical cleaners before moving into a full application.

COVERAGE

One can of Graffiti Shield will cover approximately 30 square feet depending on the substrate.

LIMITATIONS

Product application must not be initiated during inclement weather or when precipitation appears to be imminent. Product must not be applied to wet, frozen or dirty surfaces. Product must be checked and reapplied as needed in the specific area that has undergone sandblasting or soda blasting. Always apply test area before proceeding with entire application.

- If the coating has been damaged or removed simply make sure the surface is clean and dry and reapply.

DCI Industries, Ltd.
PO Box 358717
Gainesville, Florida 32635

CALCOAST ANALYTICAL

Materials Chemistry

Certified by
September 5, 2006 *City of Los Angeles, Dept. of Building & Safety*

Re: LABORATORY TESTING

1. SAMPLES:

Sixty one red brick veneer samples coated with an anti-graffiti coating.
Sixty one plywood samples coated with an anti-graffiti coating
Sixty six steel panels coated with an anti-graffiti coating

2. TESTING PERFORMED:

- A. Cleanability per ASTM D6578 "Standard Practice for Determination of Graffiti Resistance"
- B. Re-cleanability per ASTM D6578
- C. Chemical Resistance: Five minutes and one hour exposures to the cleaning agents listed in the ASTM D6578 standard.

*COATINGS • BUILDING MATERIALS • HAZARDOUS WASTE
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TELEPHONE (510) 652-2979
FAX (510) 652-3085

P.O. BOX 8702 • EMERYVILLE, CA 94662
4072 WATTS STREET • EMERYVILLE, CA 94608

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3. RESULTS:**A. Cleanability**

MARKING MATERIAL	REPELLENT	WOOD	METAL	BRICK
Blue Permanent Marker	Yes	Level 1	Level 1	Level 1
Red Spray Paint	No	Level 2	Level 2	Level 2
Blue Wax Crayon	No	Level 1	Level 1	Level 1
Black Water Based Ink Marker	Yes	Level 1	Level 1	Level 1

Cleanability levels are defined as follows:

- Level 1: Graffiti completely removed with dry cotton cloth
- Level 2: Graffiti completely removed with 1% detergent solution
- Level 3: Graffiti completely removed with citrus-based cleaner
- Level 4: Graffiti completely removed with isopropanol
- Level 5: Graffiti completely removed with methyl ethyl ketone

Not Cleanable: Graffiti still remains


B. Re-cleanability:

MARKING MATERIAL	WOOD	METAL	BRICK
Blue Permanent Marker	Level 1, 3 cycles	Level 1, 3 cycles	Level 1, 3 cycles
Red Spray Paint	Level 2, 3 cycles	Level 2, 3 cycles	Level 2, 3 cycles
Blue Wax Crayon	Level 1, 5+ cycles	Level 1, 5+ cycles	Level 1, 5+ cycles
Black Water Based Ink Marker	Level 1, 5+ cycles	Level 1, 5+ cycles	Level 1, 5+ cycles

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C. Chemical Resistance:

EXPOSURE	WOOD	METAL	BRICK
5 minutes 1% Detergent solution	No Change Pass	No Change Pass	No Change Pass
1 hour 1% Detergent Solution	No Change Pass	No Change Pass	No Change Pass
5 minutes Citrus-based Cleaner	No Change Pass	No Change Pass	No Change Pass
1 hour Citrus-based Cleaner	No Change Pass	No Change Pass	No Change Pass
5 minutes Isopropyl Alcohol	No Change Pass	No Change Pass	No Change Pass
1 hour Isopropyl Alcohol	No Change Pass	No Change Pass	No Change Pass
5 minutes Methyl Ethyl Ketone	No Change Pass	No Change Pass	No Change Pass
1 hour Methyl Ethyl Ketone	No Change Pass	No Change Pass	No Change Pass


 Fintan Shanley
 Coatings Chemist

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