Conductive Epoxy Adhesive
Application Instructions & Safety Data Sheets

![8403 Conductive Epoxy Adhesive](image)

**Figure 1. 8403 Conductive Epoxy Adhesive**

**Description**
Statguard Flooring’s 8403 adhesive is a conductive, high-solids, 2-part epoxy adhesive that is recommended for installation of 8400 Series Static Control Vinyl Floor Tile, both conductive and static-dissipative tiles. It provides an efficient electrical groundplane underneath the entire floor to drain electrostatic charges to ground. The black adhesive is supplied in “gallon units”, each consisting of two gallon-sized cans, Part A and Part B, that are pre-measured to provide the proper mix ratio when the contents of the two cans are combined. The coverage rate for each gallon unit is typically 135 square feet.

**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>Part A</th>
<th>Part B</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
<td>Epoxy</td>
<td>Curative --</td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Translucent Black</td>
<td>Black</td>
<td>Black</td>
</tr>
<tr>
<td><strong>Weight/Gallon</strong></td>
<td>9.2 lb/gal</td>
<td>8.3 lb/gal</td>
<td>8.9 lb/gal</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.1</td>
<td>0.99</td>
<td>1.05</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>93°F</td>
<td>54°F</td>
<td>93°F</td>
</tr>
<tr>
<td><strong>Weight/Gallon</strong></td>
<td>93%</td>
<td>86%</td>
<td>89%</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>79 g/l</td>
<td>150 g/l</td>
<td>115 g/l</td>
</tr>
<tr>
<td><strong>Electrical Resistance After Curing</strong></td>
<td>--</td>
<td>--</td>
<td>&lt; 3.0 x 10^6</td>
</tr>
<tr>
<td><strong>Shelf Life</strong></td>
<td>1 year</td>
<td>1 year</td>
<td>--</td>
</tr>
</tbody>
</table>

**Subfloor Condition and Preparation**
The adhesive is designed for tile installations above-, on- or below-grade, and where moisture is not a factor. The subfloor must be level, clean, dry, and free of contaminants like powdery residue, concrete curing compound, or old adhesive. For optimum adhesion, the surface of the subfloor should be abraded to a texture similar to that of 80- to 100-grit sandpaper. Protrusions should be removed; cracks and depressions should be filled with good grade cementitious underlayment, and uneven areas should be leveled.

**Temperature and Preconditioning**
Both the floor tile and the conductive adhesive should be preconditioned to the job site environment for 48 hours prior to installation. Recommended storage, conditioning, and installation temperature range is 65°F to 85°F.

**Mixing**
The mixing ratio, Part A to Part B, is unequal parts by volume. All of the conductive pigment is contained in Part B. Each part should be thoroughly mixed individually in its own can before the two parts are combined. (Two wooden mixing paddles are provided in each carton; use a separate paddle to stir each part.) Pour the entire premixed contents of the Part A into the can holding the premixed Part B and mix the two parts together for 3 to 5 minutes. **NOTE: Thorough mixing is extremely important to attain the specified electrical properties and complete chemical cure. A variable-speed electric drill (3/8”) with a mixing paddle should be used to mix Parts A and B together in the Part B can. Mixing speed should not exceed 200 rpm; higher speeds will create excessive heat, speeding up the curing action of the epoxy in the can, making it thicker and more difficult to spread.**

**Spreading**
Immediately after mixing, pour the entire contents of the can onto the floor. If the mixed compound is left in the can, it will generate excessive heat and start to cure prematurely, making it unusable. Spread the adhesive as soon as possible using a 1/16” square-notched trowel (2 mm x 2 mm) with 1/16” (2 mm) flats, held at a 45° angle to the floor surface.
Spread Rate
Typical spread rate for 8403 conductive adhesive, using the recommended trowel, is approximately 135 square feet per unit. Actual spread rate varies with subfloor porosity and applicator technique, and the installer should adjust according to conditions. Snapping chalk lines on the floor to outline sections 135 square feet in area will make the spread rate control easier.

Tile Installation
After the adhesive has been spread, allow it to “flash off” for a short time (typically 15 to 20 minutes) before starting to install tile. The working life of the spread adhesive is about one hour. These times will vary with temperature, and the installer should adjust according to conditions. “Drop” each tile into place and press firmly into the adhesive; do not “slide” the tile into position. NOTE: Throughout the installation, the installer should periodically lift a tile to ensure that there is adequate adhesive transfer. The back of each tile should be at least 90% covered with adhesive. Work from the “dry” side to avoid contact with the freshly laid tiles; if working on top of the tiles is necessary, use a kneeling board to avoid accidentally shifting any tiles. Shortly after each section has been laid, it must be rolled twice with a 150-lb (70 kilogram) sectioned roller, first in one direction and then in a perpendicular direction. Roll the entire floor once again at completion. Use a hand roller in areas that cannot be reached with a large roller.

Clean Up
Clean excess adhesive on the tile and tools promptly using a soapy solution or denatured ethyl alcohol or isopropyl alcohol (friction alcohol).

Cure Time
Typically, newly installed tile can withstand foot traffic 24 hours after installation. Allow a full 48 hours for curing before moving any equipment onto the new floor.

Grounding
Statguard Flooring recommends installing one copper grounding strip per 1,000 square feet throughout the installation. A thin coating of adhesive should be applied on top of grounding strip to ensure good contact with tile backing.
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name/Identity: Statguard Flooring 8403 Conductive Epoxy Adhesive, Part A
Chemical Name: Epoxy Resin
Manufacturer: Milamar Coatings, Inc.
Address: 311 NW 122nd Street, Suite 100
Oklahoma City, OK 73114
Telephone: 405-755-8448
Emergency Number: 800-255-3924 or 813-248-0585 (International)

SECTION 2 — HAZARDS IDENTIFICATION

Classification:

<table>
<thead>
<tr>
<th>Flammable liquid</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Category 2A-2B</td>
</tr>
</tbody>
</table>

Labelling:

- Symbol: Flame, Exclamation mark.
- Signal word: Warning.
- Hazard statement: Flammable liquid and Eye irritation.

Precautionary statements:

IF SWALLOWED: Immediately call your doctor or physician. Do NOT induce vomiting.
Do not eat, drink or use with open flame.
Wash hands thoroughly after handling.
Keep container tightly closed.
Keep away from heat/sparks/open flame.
Store in cool ventilated place.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction products of epichlorohydrin and bisphenol A</td>
<td>25085-99-8</td>
<td>70-80%</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>28064-14-4</td>
<td>10-15%</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>112945-54-5</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

SECTION 4 — FIRST AID MEASURES

Description of necessary first-aid measures:

Eye Contact: Remove contact lenses at once. Immediately flush eyes with large amounts of water or normal saline for at least 30 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a Physician if irritation persists. Wash clothing before reuse. Contaminated Leather Articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.
Inhalation: Remove victim to fresh air if effects occur. If not breathing, give artificial respiration. Get immediate medical attention.

Ingestion: Do not induce vomiting. If patient is conscious and can swallow, give two glasses of water (16oz.). Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

**Most Important symptoms/effects, acute and delayed:**

**Signs and Symptoms:** Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives.

**Aggravated medical conditions:** Pre-existing skin and eye disorders may be aggravated by exposure to this product. Preexisting skin and lung allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

**Other Health Effects:** Based on animal studies, repeated exposure to components of this product may cause damage to liver, kidney, and respiratory systems. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

**Indication of immediate medical attention and special treatment needed, if necessary:** Contact a poison control center for additional treatment information. As a precaution, exposure to liquids, vapors, mists, or fumes should be minimized.

**SECTION 5 — FIREFIGHTING MEASURES**

**Suitable extinguishing media:** Use alcohol type foam, dry chemical, or CO2.

**Specific hazards arising from the chemical:** Flash Point is 93°F TCC. None Known.

**Special protective actions for fire-fighters:** Use water spray to cool fire Exposed surfaces and to protect personnel. If a leak or spill has not ignited, use ER spray to disperse the vapors. Contain the runoff stream. Try to cover liquid pills with foam. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves, and rubber boots), including a positive pressure IOSH approved self contained breathing apparatus.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Ventilate the area. Avoid breathing vapor. Use self-contained breathing apparatus or supplied air for large spills or confined areas.

**Methods and materials for containment and clean up:** Contain spill if possible. Wipe up or absorb on suitable material and pick up with shovels. Do not use sawdust, wood chips, or other cellulosic materials to absorb the spill. Prevent entry into sewers and waterways. Dispose of in accordance with federal, state, and local regulations.

**SECTION 7 — HANDLING AND STORAGE**

**Precautions for safe handling:** Ground all transfer equipment. Take precautionary measures against static discharge. Handle as an industrial chemical.

**Conditions for safe storage, including any incompatibilities:** Ground all transfer equipment. Take precautionary measures against static discharge. Handle as an industrial chemical. Keep container tightly closed when not in use. Practice good caution and personal cleanliness to avoid skin and eye contact. Hold bulk storage under nitrogen blanket. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.
SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Exposure Limits</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction products of epichlorohydin and bisphenol A</td>
<td>25085-99-8</td>
<td>70-80%</td>
<td>None established</td>
<td></td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>28064-14-4</td>
<td>10-15%</td>
<td>None established</td>
<td></td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>112945-54-5</td>
<td>&lt;5%</td>
<td>5 mg/m3 TWA, Respirable</td>
<td>OSHA</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
<td>1000 ppm TWA</td>
<td>OSHA</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: N/A

Individual protection measures, such as personal protective equipment:

Respiratory Protection: Provide adequate ventilation. Avoid breathing of vapors or mists. Airborne concentrations should be kept to lowest levels possible. When exposures are not adequately controlled, use an approved respirator. Selection of air-purifying or positive-pressure supplied air will depend on the specific operation and the potential airborne concentration of material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Protective Clothing: Protective clothing such as uniforms, coveralls, or lab coats must be worn. Launder or dryclean when soiled. Gloves and goggles resistant to chemicals and petroleum distillates required. When handling large quantities, impervious suits, gloves, and rubber boots must be worn.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Clear/White Paste
Odor: Little to No Odor
Odor threshold: N/A
pH: N/A
Melting point/freezing point: N/A
Initial boiling point and boiling range: Not Determined
Flash Point: 93°F TCC
Evaporation rate: Not Determined
Flammability (solid, gas): N/A
Upper/lower flammability or explosive limits:
Vapor pressure: Not Determined
Vapor Density: Not Determined
Relative density (specific gravity): 1.148
Solubility(ies): Not Soluble (Water)
Partition coefficient; n-octanol/water: N/A
Auto-ignition temperature: N/A
Decomposition temperature: N/A
Viscosity: N/A

SECTION 10 — STABILITY AND REACTIVITY

Reactivity: N/A
Chemical stability: Excess heating over long periods of time degrades the resin.
Possibility of hazardous reactions: Will not occur by itself, but masses of more than 1 pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
Conditions to avoid: Avoid exposure to heat, light, flame, or other sources of ignition. Can react vigorously with strong oxidizing agents, strong lewis or mineral acids, and strong mineral and organic base especially primary and secondary amines. Reaction with some curing agent may produce considerable heat.
Incompatible materials: N/A
Hazardous decomposition products: Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, as well as organic compounds of unknown structure.

SECTION 11 — TOXICOLOGICAL INFORMATION

Likely routes of exposure: N/A
Symptoms related to the physical, chemical and toxicological characteristics:
Eye Contact: Irritating and will injure eye tissue if not removed promptly.
Skin Contact: May cause irritation. Has been known to cause allergic skin reaction in humans. Prolonged contact may cause blisters.
Inhalation: High vapor concentrations are irritating to the eyes and respiratory tract, may cause headaches and dizziness.
Ingestion:
Delayed and immediate effects and also chronic effects from short and long term exposure:
Numerical measures of toxicity:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Acute Oral LD50</th>
<th>Acute Oral LD50</th>
<th>Acute Inhalation LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction products of epichlorohydrin and bisphenol A</td>
<td>25085-99-8</td>
<td>70-80%</td>
<td>&gt;5.0 g/kg (rat)</td>
<td>&gt;6.0 g/kg (rat)</td>
<td>Not available</td>
</tr>
<tr>
<td>Epoxy resin</td>
<td>28064-14-4</td>
<td>10-15%</td>
<td>&gt;5.0 g/kg (rat)</td>
<td>&gt;3.0 g/kg (rat)</td>
<td>&gt;1.7 mg/L (rat)</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>112945-54-5</td>
<td>&lt;5%</td>
<td>&gt;5000 mg/kg (rat)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity: N/A
Persistence and degradability: N/A
Bioaccumulative potential: N/A
Mobility in soil: N/A
Other adverse effects: N/A

SECTION 13 — DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with federal, state, and local regulations.

SECTION 14 — TRANSPORT INFORMATION

UN number: UN 1866
UN proper shipping name: UN 1866, Resin Solution, Flammable, 3, PG III
Transport hazard class(es): 3
Packing group, if applicable: III
Environmental hazards: N/A
Transport in bulk: N/A
Special precautions for user: N/A
SECTION 15 — REGULATORY INFORMATION

DSL/NDSL: These items are specified in the public Portion of the Domestic Substances List: CAS Number 28064-14-4 with Maximum Weight 15%. CAS Number 64-17-5 with Maximum Weight 10%.

TSCA: These items are listed on the U.S. Toxic Substance Control Act: CAS Number 64-17-5 with Maximum Weight 10%.

DSL/NDSL: These items are specified in the public Portion of the Domestic Substances List: CAS Number 25085-99-8 with Maximum Weight 80%. CAS Number 28064-14-4 with Maximum Weight 15%. CAS Number 64-17-5 with Maximum Weight 10%.

REACH SVHC: No items in this product are on REACH’s list of Substances of Very High Concern.

EINECS: All components are included in the EINECS inventories.

SARA Title III: This product is not subject to the reporting requirements of SARA Title III Section 313.

SECTION 16 — OTHER INFORMATION

HMIS RATING: Health 2, Flammability 3, Physical Hazard 0, Personal Protection B

NFPA RATING: Special Hazard: N/A, Health: 2, Flammability: 3, Instability: 0

SDS Updated: 2016-03-29

Disclaimer

OTHER INFORMATION: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to the best of the company’s knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user’s responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name/Identity: Statguard Flooring 8403 Conductive Epoxy Adhesive, Part B
Chemical Name: Polyamine Hardener
Manufacturer: Milamar Coatings, Inc.
Address: 311 NW 122nd Street, Suite 100
Oklahoma City, OK 73114
Telephone: 405-755-8448
Emergency Number: 800-255-3924 or 813-248-0585 (International)

SECTION 2 — HAZARDS IDENTIFICATION

Classification:

<table>
<thead>
<tr>
<th>Flammable liquid</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Category 2A-2B</td>
</tr>
</tbody>
</table>

Labelling:

- Symbol: Flame, Exclamation mark.
- Signal word: Warning.
- Hazard statement: Flammable liquid and Eye irritation.

Precautionary statements:

IF SWALLOWED: Immediately call your doctor or physician. Do NOT induce vomiting.
Do not eat, drink or use with open flame.
Wash hands thoroughly after handling.
Keep container tightly closed.
Keep away from heat/sparks/open flame.
Store in cool ventilated place.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamine Adduct</td>
<td>Proprietary</td>
<td>60-70%</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>10%</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>10-15%</td>
</tr>
</tbody>
</table>

SECTION 4 — FIRST AID MEASURES

Description of necessary first-aid measures:

Eye Contact: Remove contact lenses at once. Immediately flush eyes with large amounts of water or normal saline for at least 30 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a Physician if irritation persists. Wash clothing before reuse. Contaminated Leather Articles, including shoes, cannot be econtaminated and should be destroyed to prevent reuse.
Inhalation: Remove victim to fresh air if effects occur. If not breathing, give artificial respiration. Get immediate medical attention.

Ingestion: Do not induce vomiting. If patient is conscious and can swallow, give two glasses of water (16oz.). Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

**Most Important symptoms/effects, acute and delayed:**

**Signs and Symptoms:** Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives.

**Aggravated medical conditions:** Pre-existing skin and eye disorders may be aggravated by exposure to this product. Pre-existing skin and lung allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

**Other Health Effects:** Based on animal studies, repeated exposure to components of this product may cause damage to liver, kidney, and respiratory systems. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

**Indication of immediate medical attention and special treatment needed, if necessary:**

Contact a poison control center for additional treatment information. As a precaution, exposure to liquids, vapors, mists, or fumes should be minimized.

---

**SECTION 5 — FIREFIGHTING MEASURES**

**Suitable extinguishing media:** Use alcohol type foam, dry chemical, or CO2.

**Specific hazards arising from the chemical:** Flash Point is 93°F TCC. None Known.

**Special protective actions for fire-fighters:** Use water spray to cool fire. Exposed surfaces and to protect personnel. If a leak or spill has not ignited, use ER spray to disperse the vapors. Contain the runoff stream. Try to cover liquid pills with foam. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves, and rubber boots), including a positive pressure IOSH approved self contained breathing apparatus.

---

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Ventilate the area. Avoid breathing vapor. Use self-contained breathing apparatus or supplied air for large spills or confined areas.

**Methods and materials for containment and clean up:** Contain spill if possible. Wipe up or absorb on suitable material and pick up with shovels. Do not use sawdust, wood chips, or other cellulosic materials to absorb the spill. Prevent entry into sewers and waterways. Dispose of in accordance with federal, state, and local regulations.

---

**SECTION 7 — HANDLING AND STORAGE**

**Precautions for safe handling:** Ground all transfer equipment. Take precautionary measures against static discharge. Handle as an industrial chemical.

**Conditions for safe storage, including any incompatibilities:** Ground all transfer equipment. Take precautionary measures against static discharge. Handle as an industrial chemical. Keep container tightly closed when not in use. Practice good caution and personal cleanliness to avoid skin and eye contact. Hold bulk storage under nitrogen blanket. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.
SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Exposure Limits</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamine Adduct</td>
<td>Proprietary</td>
<td>60-70%</td>
<td>None established</td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt;10%</td>
<td>200 ppm (TWA)</td>
<td>OSHA</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
<td>1000 ppm (TWA)</td>
<td>OSHA</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>10-15%</td>
<td>None established</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls: N/A

Individual protection measures, such as personal protective equipment:

Respiratory Protection: Provide adequate ventilation. Avoid breathing of vapors or mists. Airborne concentrations should be kept to lowest levels possible. When exposures are not adequately controlled, use an approved respirator. Selection of air-purifying or positive-pressure supplied air will depend on the specific operation and the potential airborne concentration of material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Protective Clothing: Protective clothing such as uniforms, coveralls, or lab coats must be worn. Launder or dryclean when soiled. Gloves and goggles resistant to chemicals and petroleum distillates required. When handling large quantities, impervious suits, gloves, and rubber boots must be worn.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Black Paste
Odor: Amine
Odor threshold: N/A
pH: N/A
Melting point/freezing point: N/A
Initial boiling point and boiling range: Not Determined
Flash Point: 54°F TCC
Evaporation rate: Not Determined
Flammability (solid, gas): N/A
Upper/lower flammability or explosive limits: N/A
Vapor pressure: Not Determined
Vapor Density: Not Determined
Relative density (specific gravity): 0.99
Solubility(ies): Not Soluble (Water)
Partition coefficient; n-octanol/water: N/A
Auto-ignition temperature: N/A
Decomposition temperature: N/A
Viscosity: N/A

SECTION 10 — STABILITY AND REACTIVITY

Reactivity: N/A
Chemical stability: Excess heating over long periods of time degrades the resin.
Possibility of hazardous reactions: Will not occur by itself.
Conditions to avoid: Avoid exposure to heat, light, flame, or other sources of ignition. Can react vigorously with strong oxidizing agents.
Incompatible materials: N/A
Hazardous decomposition products: Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, as well as organic compounds of unknown structure.
SECTION 11 — TOXICOLOGICAL INFORMATION

Likely routes of exposure: N/A

Symptoms related to the physical, chemical and toxicological characteristics:
Eye Contact: Irritating and will injure eye tissue if not removed promptly.
Skin Contact: May cause irritation. Has been known to cause allergic skin reaction in humans. Prolonged contact may cause blisters.
Inhalation: High vapor concentrations are irritating to the eyes and respiratory tract, may cause headaches and dizziness.
Ingestion: Oral toxicity is considered to be extremely low.

 Delayed and immediate effects and also chronic effects from short and long term exposure:
Numerical measures of toxicity:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Acute Oral LD50</th>
<th>Acute Oral LD50</th>
<th>Acute Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamine Adduct</td>
<td>Proprietary</td>
<td>60-70%</td>
<td>&lt;=2.0 g/kg (rat)</td>
<td>&lt;=2.0 g/kg</td>
<td>&lt;=5.0 mg/L</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt;10%</td>
<td>2000 mg/kg (rabbit)</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&lt;10%</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>10-15%</td>
<td>&gt;8.0 g/kg (rat)</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity: N/A
Persistence and degradability: N/A
Bioaccumulative potential: N/A
Mobility in soil: N/A
Other adverse effects: N/A

SECTION 13 — DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with federal, state, and local regulations.

SECTION 14 — TRANSPORT INFORMATION

UN number: UN2924
UN proper shipping name: UN 2924, Flammable Liquid, Corrosive, nos, 3(8), PG II, (methanol and polyamines)
Transport hazard class(es): 3(8)
Packing group, if applicable: II
Environmental hazards: N/A
Transport in bulk: N/A
Special precautions for user: N/A

SECTION 15 — REGULATORY INFORMATION

SARA Title III: These items are listed and subjected to the reporting requirements of the SARA Title III Section 313 Inventory of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR37: CAS Number 67-56-1 with Maximum Weight 10%

California proposition 65: These items are listed in the California Safe Drinking Water and Toxic Enforcement Act: CAS Number 67-56-1 with Maximum Weight 10%. CAS Number 1333-86-4 with Maximum Weight 15%.

TSCA: These items are listed on the U.S. Toxic Substance Control Act: CAS Number 67-56-1 with Maximum Weight 10%. CAS Number 64-17-5 with Maximum Weight 20%. CAS Number 1333-86-4 with Maximum Weight 15%.

DSL/NDSL: These items are specified in the public Portion of the Domestic
Substances List: CAS Number 67-56-1 with Maximum Weight 10%.
CAS Number 64-17-5 with Maximum Weight 10%. CAS Number 1333-86-4 with Maximum Weight 15%.

REACH SVHC: No items in this product are on REACH’s list of Substances of Very High Concern.

EINECS: All components are included in the EINECS inventories.

SECTION 16 — OTHER INFORMATION

HMIS RATING: Health 2, Flammability 3, Physical Hazard 0, Personal Protection B

NFPA RATING: Special Hazard: N/A, Health: 2, Flammability: 3, Instability: 0

SDS Updated: 2016-03-29

Disclaimer

OTHER INFORMATION: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to the best of the company’s knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user’s responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.