



# SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase)

Project: \_\_\_\_\_ Substitution Request Number: \_\_\_\_\_  
 \_\_\_\_\_  
 From: \_\_\_\_\_  
 To: \_\_\_\_\_ Date: \_\_\_\_\_  
 \_\_\_\_\_  
 A/E Project Number: \_\_\_\_\_  
 Re: \_\_\_\_\_ Contract For: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_  
 Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_  
 Manufacturer: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_  
 Installer: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_

History:  New product  1-4 years old  5-10 years old  More than 10 years old

Differences between proposed substitution and specified product: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: \_\_\_\_\_  
 \_\_\_\_\_

### Similar Installation:

Project: \_\_\_\_\_ Architect: \_\_\_\_\_  
 Address: \_\_\_\_\_ Owner: \_\_\_\_\_  
 \_\_\_\_\_ Date Installed: \_\_\_\_\_

Proposed substitution affects other parts of Work:  No  Yes; explain \_\_\_\_\_

Savings to Owner for accepting substitution: \_\_\_\_\_ (\$ \_\_\_\_\_).

Proposed substitution changes Contract Time:  No  Yes [Add] [Deduct] \_\_\_\_\_ days.

Supporting Data Attached:  Drawings  Product Data  Samples  Tests  Reports  \_\_\_\_\_

# SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase — Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: \_\_\_\_\_

Signed by: Suzanne Phillips \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attachments:

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### A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: \_\_\_\_\_ Date: \_\_\_\_\_

Additional Comments:  Contractor  Subcontractor  Supplier  Manufacturer  A/E  
 Other:

# CST-Series (Traffic Grade)

## Description

The Traffic-Grade Compression Seal (CST) is composed of a high density, open micro-cell polyurethane foam impregnated with a hydrophobic polymer sealing compound. It has been developed to meet the high performance needs of state and federal DOT projects.

The CST seals have constant internal forces built into each cell. These cells continuously push against each other and the sidewalls of an opening to provide a permanent, watertight seal eliminating costly water damage, as well as allowing for a greater degree of joint movement. The seal incorporates a factory applied traffic-grade silicone coating on one side of the foam seal.

The CST system provides a waterproof, dustproof, airtight, UV stable, chemically resistant, soundproof and insulated urethane primary seal. Once the CST is installed in the joint, the material expands depending on temperature, adapting to the width of the joint and the irregularities of the substrate provided such profile changes are not sudden or extreme.

Recommended for use in applications in the horizontal position, where there needs to be resistance to typical roadway traffic or chemicals found on roadways, bridges, garages, plaza decks and other areas that may be a concern.



## Physical Properties

Properties	Result
Thermal Conductivity	0.05 W/m. °C
Thermal Resistance	ASTM C 518, 3.3, hr-°F-ft <sup>2</sup> /Btu
Temperature Stability Range	-40° F to 185° F
Tensile Strength	ASTM 3574, meets 21 psi min.
Ultimate Elongation	ASTM 3574, 125% +/- 20%
Resistance to Compression Set	ASTM 3574, Max. 2.5%
Shear Strength	Min. 8N/cm <sup>2</sup>
Mildew Resistant	Excellent
UV Resistant	Excellent

## Features and Benefits

- Can accommodate rapid rates of joint movement
- Supplied in pre-compressed state for ease of installation
- Excellent compression recovery
- Permanently conforms to varying joint contours
- Allows for up to 100% (±50%) movement from mean joint size
- Consistent depth of product
- Not based on asphaltic or bitumastic impregnation
- Resilient and flexible to -40°F (long term)
- Standard Color: Gray
- Sizes available in 1/4" increments
- **LEED Credits** - Up to two (2) LEED credits depending on the location of the project.

PRODUCT	DEPTH OF SEAL IN (MM)	MIN. WIDTH IN (MM)	MID-RANGE IN (MM)	MAX. WIDTH IN (MM)	TOTAL MOVEMENT IN (MM)
CST-050	1.50" (38.1)	0.25" (6.4)	0.50" (12.7)	0.75" (19.1)	0.50" (12.7)
CST-100	2.00" (50.8)	0.50" (12.7)	1.00" (25.4)	1.50" (38.1)	1.00" (25.4)
CST-150	2.00" (50.8)	0.75" (19.1)	1.50" (38.1)	2.25" (57.2)	1.50" (38.1)
CST-200	3.00" (76.2)	1.00" (25.4)	2.00" (50.8)	3.00" (76.2)	2.00" (50.8)
CST-250	3.00" (76.2)	1.25" (31.8)	2.50" (63.5)	3.75" (95.3)	2.50" (63.5)
CST-300	3.00" (76.2)	1.50" (38.1)	3.00" (76.2)	4.50" (114.3)	3.00" (76.2)
CST-350	3.00" (76.2)	1.75" (44.5)	3.50" (88.9)	5.25" (133.4)	3.50" (88.9)
CST-400	3.00" (76.2)	2.00" (50.8)	4.00" (101.6)	6.00" (152.4)	4.00" (101.6)
CST-500	4.00" (101.6)	2.50" (63.5)	5.00" (127.0)	7.50" (190.5)	5.00" (127.0)
CST-600	4.00" (101.6)	3.00" (76.2)	6.00" (152.4)	9.00" (228.6)	6.00" (152.4)



# CST & CST(DS)-Series

## INSTALLATION INSTRUCTIONS

### Material Application

For use in **horizontal joints**. Double sided silicone coating available upon request.

### Recommended Tools

- Tape Measure
- Sharp Knife
- Miter Saw
- Duct Tape
- Clean Cloth
- Isopropyl Alcohol
- Caulking Tool
- Jiffy Mixer
- Margin Trowel
- Mineral Spirits
- 2 Empty, Clean Containers

### Material Sizing

1. Joints must be sized every 5-7 feet (1.524-2.137 meters) to ensure gap opening is uniform and depth is sufficient for the supplied material.



**NOTE:** Allow sufficient depth for the material to be recessed 1/8"–1/4" in the joint.

### Material Preparation

1. Store material at a minimum of 68°F (20°C) for a minimum of 24 hours prior to installation, regardless of temperature at location of installation.

**TIP:** Material will expand faster when hot and slower when cold. In cold temperatures, store material in a heated area 24 hours prior to installation. In hot temperatures, store material out of direct sunlight and not in an enclosed storage container where temperatures may exceed 100°F.

2. Store materials in a dry, enclosed area. Make sure materials are off the ground and out of direct sunlight.
3. Use a miter saw to make any cuts to the seal before removing the clear shrink packing. All starting and ending pieces must be square to the termination point.

**WARNING:** Install the material directly after removing the shrink packaging to ensure the material does not expand past the joint opening.

4. Use a sharp knife to make any cuts after the clear shrink packaging and wooden boards have been removed.



**TIP:** Apply mineral spirits to the knife for a smoother cut.

## Joint Preparation

1. Verify that the joint is clean, sound, and will provide an appropriate surface for installation of the joint sealant.
  - a. Use compressed air to clean any loose debris from the joint.
  - b. Apply water or alcohol to a clean cloth and wipe the joint walls to the depth of the sealant materials plus 1”.
2. Verify that the joint is uniform and repair any spalls prior to installation.
3. Apply duct tape to both edges of the substrate face to prevent the epoxy from contacting the deck surface.
4. Check the material for appropriate length, width, and depth.
  - a. Supplied material should be pre-compressed to a size smaller than the intended joint opening.
  - b. Joint depth must allow for the material to be recessed ¼” from the substrate surface.

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## Epoxy Preparation

1. Mix Part A and Part B separately.
2. Transfer the entire contents of Part A (resin) and then Part B (hardener) into a clean, empty container. Mix the material thoroughly with a low speed (approx. 300 rpm) drill or jiffy mixer.

**WARNING:** Part B must always be added Part A, and mixed in a 1:1 ratio.

3. Mix until the black and white is evenly blended leaving no streaks of either color.
4. Transfer the mixture to another clean container to avoid any leftover residue from streaking the final mixture.

**TIP:** Mix only the required amount of epoxy that will be used within a 30 minute timeframe to prevent the epoxy from curing prematurely.

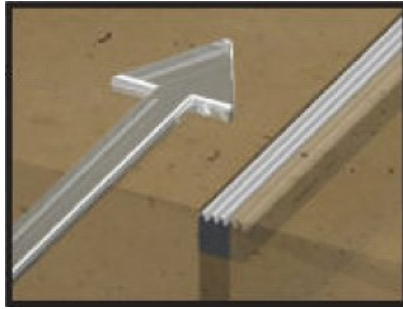
### EPOXY TIPS:

1. The epoxy will not cure when the temperature is below 40°F.
2. For every +17°F the epoxy cures twice as fast.
3. For every -17°F the epoxy cures twice as slow.
4. Greater volume = less time to cure.
5. Smaller volume = more time to cure.
6. A technique to increase the pot life of the epoxy is to split up the mixed material into smaller units.



## Sealant Installation

1. Begin installation at one end of the joint and work to the opposite end using butt seams.

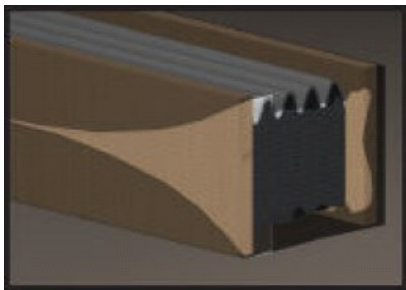


2. When fully prepared to install, apply a 1/16" – 1/8" coating of the epoxy mixture to both joint walls using a 1" margin trowel to a depth of the sealant material plus 1/2".
  - a. The epoxy must still be wet upon installation of the seal. The working time for the epoxy is approximately 30 minutes depending on the temperature.
  - b. If the epoxy hardens on the surface of the substrate before installation, another coat of epoxy can be applied within 8 hours. After 8 hours, the substrate surface must be abraded to eliminate the amine blush that occurs during final cure.



**WARNING:** Pay attention to the direction of insertion marked on the packaging.

3. Cut the shrink packaging along the edge of the masonite strapping.



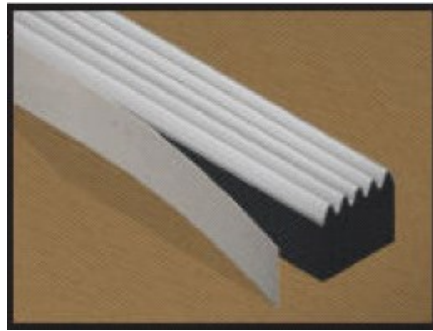
**NOTE:** If stick sizes larger than the standard 5' LF is ordered (XL marking after product name), do NOT cut shrink packaging completely off. Cut open 5' LF sections at a time and install material working your way down. This will prevent the foam from expanding past the joint opening size.

**WARNING:** Be prepared to install the material immediately once the packaging is removed to prevent the material from expanding past the joint width.

4. Verify that the material is cut square at both ends for proper seams. All pieces must be square to the termination point.

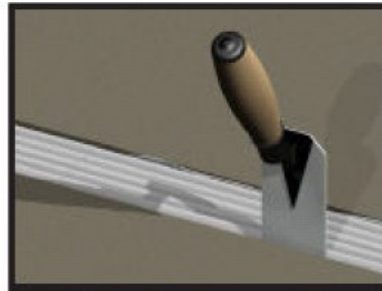
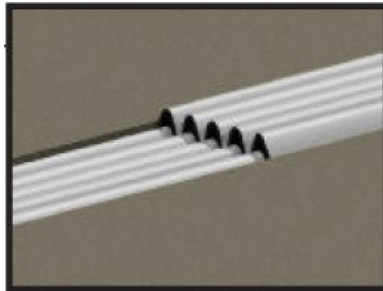
## Sealant Installation

5. Remove the white release liner on both sides of the seal.



**WARNING:** Make sure not to pull, twist, or stretch the material in the process of installation to avoid tearing the white release liner.

6. Initially, position seal 1/8" above the deck surface. Once the material is partially expanded in the joint, it can then be installed to 1/4" below the surface of the joint using a putty knife or margin trowel.
  - a. Wedges can be used to aid installation. Remove the wedges once the material begins to expand and before the epoxy cures.



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## Seams

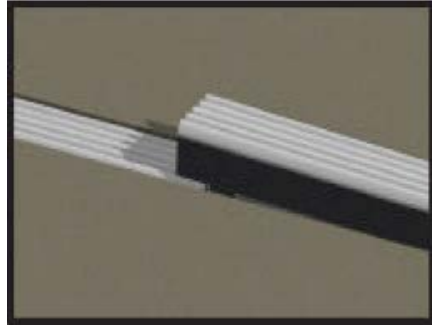
1. Verify that the new piece of material is cut square and not at an angle to the previous installed piece.
2. Apply flexible sealant to the butt end of the new piece of material.

**WARNING:** Do not apply flexible seal to the faces of the seal that are in contact with epoxy.

**TIP:** If crew size permits and two lengths of material can be prepared, the ends to be seamed can be held above the deck surface and the mitered pieces can be pushed down into the joint together.

## Seams

3. Overlap extra material (approx. 1/2" -1") at seams and splices to ensure that the seam is in compression after installation.



4. Butt seam all 'T' and '+' intersections.

**NOTE:** After installation, if there are any mitered joints with a hole or void, use the supplied flexible seal to fill and seal the joint.

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## Finish

1. Remove any excess flexible seal or epoxy left on the surface of the material substrate.

**WARNING:** Do not allow the flexible seal or epoxy to cure before removal.

2. Remove the duct tape from the joint surface.
3. Tool the Dow 888 over all seams and transitions using a small caulking tool.
4. Evenly spread the Dow 888 on exposed seams to allow for a clean, aesthetic finish.
5. Use supplied Dow 888 caulking to apply side beads along both sides of the joint.

**PART 1 – GENERAL**

**1.01 Summary**

- A. The work shall consist of furnishing and installing expansion joints in accordance with the details shown on the plans and the requirements of the specifications. The joints are proprietary designs utilizing polyurethane foam impregnated with a waterproof polymer.
- B. Related Work
  - Precast concrete
  - Cast-in-place concrete
  - Sealants and caulking

**1.02 Submittals**

- A. Template Drawings - Submit typical expansion joint cross-section(s) indicating pertinent dimensioning of opening, profile recess and adjacent construction.

**1.03 Product Delivery, Storage and Handling**

- A. Deliver products in each manufacturer's original, intact, labeled containers and store under cover in a dry location until installed. Store off the ground, protect from weather and construction activities.

**1.04 Acceptable Manufacturer**

- A. All joints shall be as designed and manufactured by EMS, Inc., 13311 Main Road, Akron, New York 14001.
- B. Alternate manufacturers and their products will be considered, provided they meet the design concept and are produced of materials that are equal to or superior to those called for in the base product specification.
- C. Any proposed alternate systems must be submitted and receive approval 21 days prior to the bid. All post bid submittals will not be considered. This submission shall be in accordance with MATERIALS AND SUBSTITUTIONS.

Any manufacturer wishing to submit for prior approval must provide the following:

1. A working 6" sample of the proposed system with a letter describing how system is considered superior to the specified system.

2. A project proposal drawing that illustrates the recommended alternate system installed in the horizontal construction that is specific to the project. Typical catalog cut sections will not be considered.
3. Any substitution products not adhering to all specification requirements within will not be considered.

## 1.05 Quality Assurance

- A. Manufacturer: Shall have a minimum of ten (10) years of experience specializing in the design and manufacture of expansion joint systems.

## PART 2 - PRODUCT

### 2.01 General

- A. Provide flexible profile manufactured from open-cell polyurethane foam impregnated with a hydrophobic polymer sealing compound. The system also includes a factory applied traffic grade silicone coating on the seal designed to provide protection against moisture and water intrusion on horizontal surfaces. Profile shall be capable of providing a minimum of plus or minus 50% building movement and accommodate moderate variations in width of opening, complex directional change transitions, and resist ultraviolet degradation. The profile shall be installed with our two-part epoxy adhesive.

Provide Foam Seal, Model CST as manufactured by EMS, Inc. and as indicated on drawings for horizontal expansion joint locations.

### 2.02 Materials

- A. Seal - Profile shall be pre-formed and manufactured from polyurethane impregnated with a waterproof polymer sealing compound. The profile shall meet the requirements of the properties listed in the table below.

<b>Physical Properties</b>	<b>Test Method</b>	<b>Results</b>
Density		10 lb/ft <sup>3</sup>
Thermal Conductivity		0.05 W/m.°C
Temperature Stability Range		-40°F to 212°F
Tensile Strength	ASTM 3574	Meets 21 psi min.
Ultimate Elongation	ASTM 3574	125% ±20%
Resistance to Compression Set	ASTM 3574	Max 2.5%
Shear Strength		Min. 8N/cm <sup>2</sup>
Mildew Resistance		Excellent
Thermal Resistance	ASTM C518	3.3 hr- <sup>0</sup> F-ft <sup>2</sup> /Btu
UV Resistance		Excellent

### **2.03 Fabrication**

- A. Seal profile shall be shipped in nominal five-foot standard lengths in manufacturer's standard shipping carton. Seals shall be cut to length on jobsite where required for straight lengths or directional change transitions utilizing appropriate tools, saws and miter boxes. All cuts shall be accurately measured and completed in a neat and workmanlike manner to ensure quality work.

### **2.04 Finishes**

- A. Seals - Standard color offering: Gray

## **PART 3 - EXECUTION**

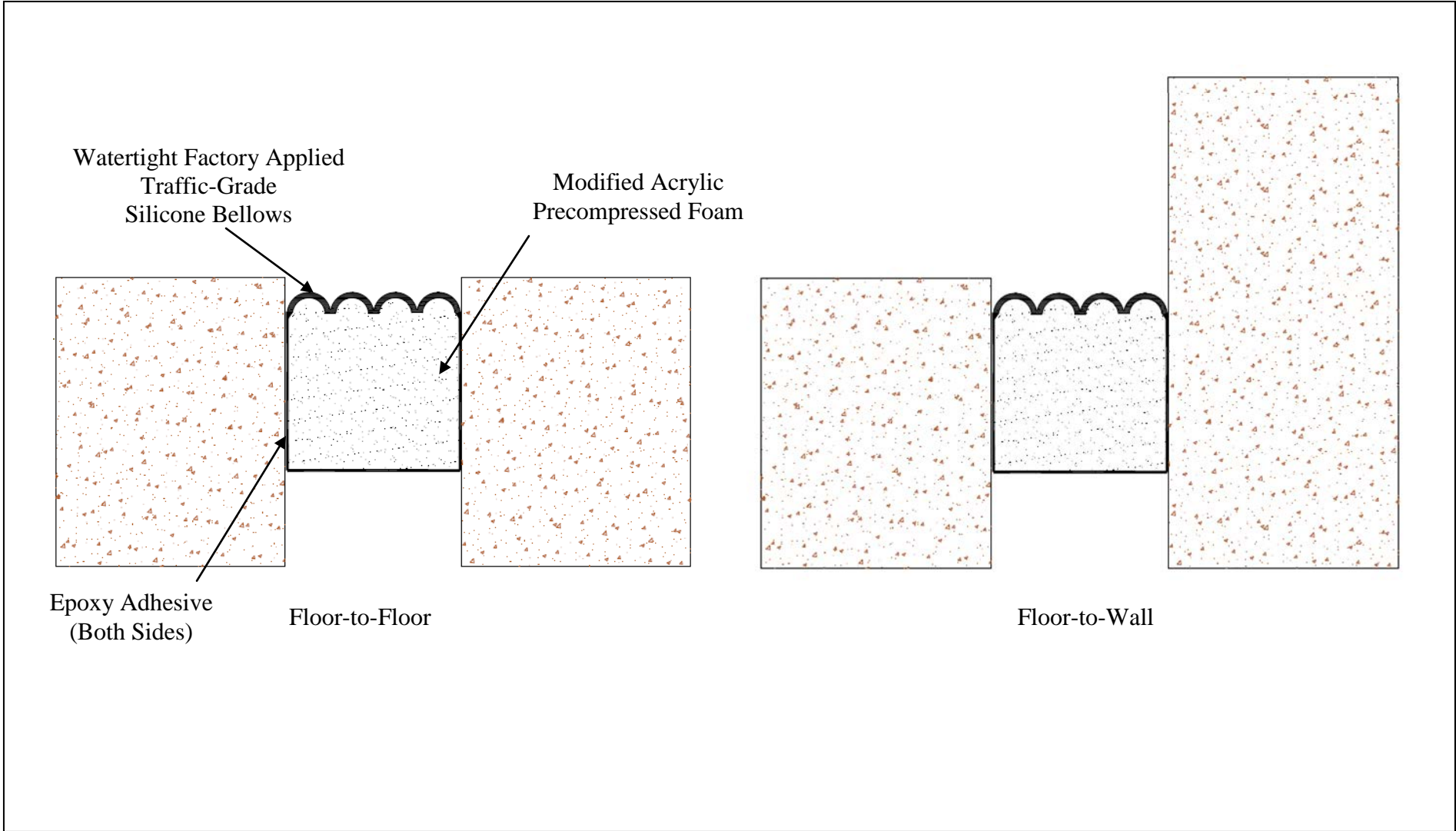
### **3.01 Installation**

- A. Where indicated and noted on the contract drawings, install seal profiles in a neat workmanlike manner. All surfaces to receive seals shall be free from dirt, water, frost, and any loose foreign debris that may be detrimental to effective joint sealing.
- B. Installation contractor shall verify that seal profile is to be installed in the proper width opening for the appropriate temperature at time of installation. Variations in width or incorrect opening that may affect proper installation and product performance shall be brought to the attention of the architect and product manufacturer prior to installation.
- C. Install seal profiles in strict accordance with the manufacturer's typical details and installation procedure in conjunction with the advice of their qualified representative.

### **3.02 Clean and Protect**

- A. Protect seal profile during construction. After work has been completed in adjacent areas, clean exposed surfaces with a mild cleaner that will not harm or attack the silicone coating.

**END OF SECTION**



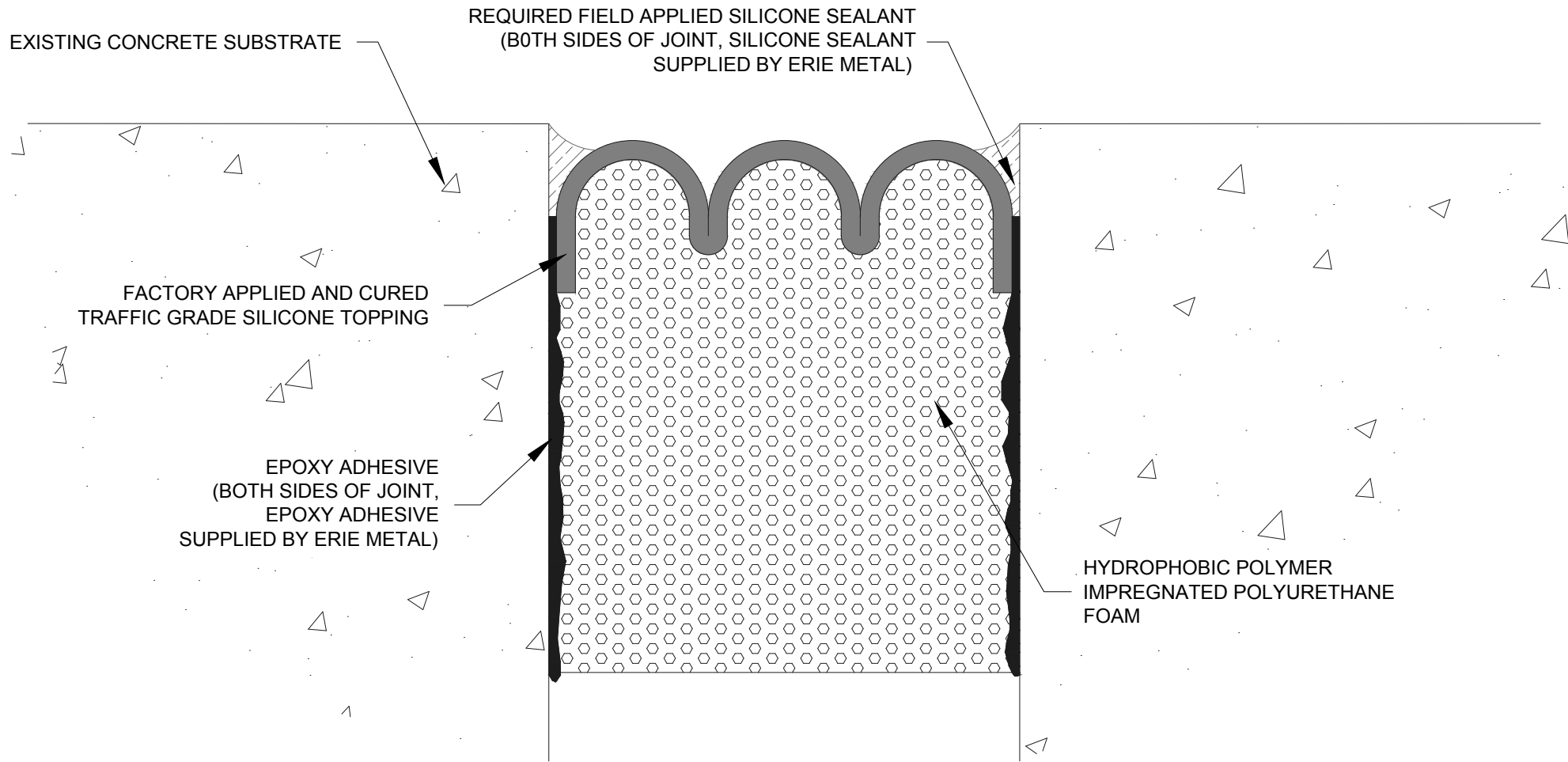
NO.	Description	Date	By
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13311 Main Road • Akron • New York • 14001  
 Phone: (716) 542-3991 • Fax: (716) 542-3996 • E-mail: sales@eriemetal.com

<b>PROJECT:</b> CST Series
<b>TITLE:</b> CST Series Foam Seal Systems

Detailed by: AWG	Date: 10/9/00
Checked By: LJB	Date: 10/21/00
Scale: NTS	EMS Job #:
Sheet No.: 1 of 1	Drawing No.:



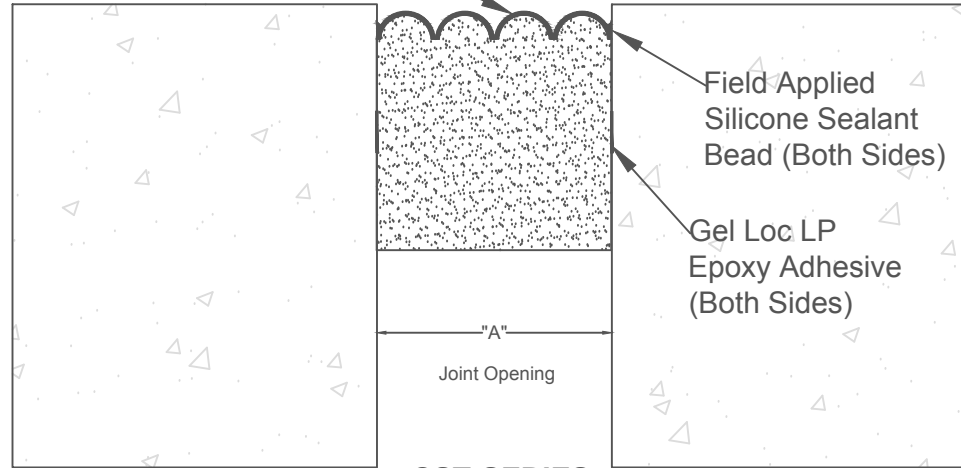
DATE	<b>06/17/2015</b>
DRAWN BY	<b>D.J.I.</b>
SCALE	<b>N.T.S.</b>
PRODUCT NUMBER	<b>VARIES</b>

**CST- HORIZONTAL JOINT APPLICATION**

DRAWING TITLE



Factory Applied U.V. Resistant Traffic Grade Silicone



**CST-SERIES**  
Horizontal Condition

\* Sizes available in 0.25" increments and up to 6".  
Contact EMS for additional information.

PRODUCT	"A" Min. Width IN (MM)	"A" Mid Range IN (MM)	"A" Max. Width IN (MM)	Total Movement IN (MM)	Seal Depth IN (MM)
CST-050	0.25" (6.4)	0.50" (12.7)	0.75" (19.1)	0.50" (12.7)	1.50" (38.1)
CST-100	0.50" (12.7)	1.00" (25.4)	1.50" (38.1)	1.00" (25.4)	2.00" (50.8)
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CST-300	1.50" (38.1)	3.00" (76.2)	4.50" (114.3)	3.00" (76.2)	3.00" (76.2)

NO.	Description	Date	By
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Phone: (716) 542-3991 \* Fax: (716) 542-3996 \* E-mail: sales@eriemetal.com

PROJECT: N/A

TITLE: CST-Series Horizontal Condition

Detailed by:	Date:
BAF	07/20/16
Checked by:	Date:
SLP	07/22/16
Scale:	EMS Job #:
NTS	N/A
Sheet No.:	Drawing No.:
1 of 1	CST-1

**\*MATERIAL SAFETY DATA SHEET\*****SECTION I – MATERIAL IDENTIFICATION**

MATERIAL NAME: CST Custodian Compression Seal, Premolded joint filler, Polyurethane

MANUFACTURER: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001

SUPPLIER: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001

EMERGENCY PHONE:  
CHEM-TREC: (800) 424-9300

(716) 542-3991

**SECTION II – HAZARDOUS INGREDIENTS**

HAZARDOUS INGREDIENTS: MINERAL SPIRITS LESS THAN 1%.  
Other Ingredients: Trade Secret

**SECTION III – PHYSICAL & CHEMICAL PROPERTIES**

Boiling Point: SOLID, N/AP Specific Gravity (H<sub>2</sub>O ; 1): 0.910  
Vapor Pressure, mm Hg: N/AP Melting Point: 300° F  
Vapor Density (Air = 1): N/AP  
Evaporation Rate - (Butyl Acetate = 1): N/AP  
Solubility in Water: NOT SOLUBLE  
Appearance and Odor: BLACK OPEN CELL FOAM, ODOR NOT OBJECTIONABLE

**SECTION IV – Health Hazard Data**

Routes Of Entry - Inhalation?: NO Skin?: NO Ingestion?: NO  
Health Hazards (Acute & Chronic): NO ADVERSE HEALTH EFFECTS  
Carcinogenicity - NTP? NO IARC Monograph? NO OSHA Regulation? NO  
Signs & Symptoms of Exposure: NONE  
Medical Conditions Generally Aggravated by Exposure: NONE  
Emergency & First Aid Procedures: Ingestion, Skin Contact, Eye Contact & Inhalation - No need anticipated - If irritation occurs wash with warm water. No inhalation direct or side effects.

**SECTION V - FIRE & EXPLOSION HAZARD DATA**

Flash Point: 735° F Flammable Limits - LEL: N/AP LFEL: N/AP  
Extinguishing Media: CO<sub>2</sub> DRY POWDER OR WATER  
Special Fire Fighting Procedures: NIOSH APPROVED SELF-CONTAINED RESPIRATORS RECOMMENDED FOR TOXIC SMOKE  
Unusual Hazards: WHEN FORCED TO BURN, THE COMBUSTION GASES WILL LIBERATE HYDROGEN CHLORIDE GAS FUMES.  
FLAMMABILITY RATINGS MEET THE FOLLOWING SPECS: UL94HBF MIL-P-15280D

**\*MATERIAL SAFETY DATA SHEET\*****SECTION VI – REACTIVITY DATA:**

Stability: STABLE  
Conditions to Avoid: EXCESSIVE HEAT  
Incompatibility (Materials to Avoid): NONE  
Hazardous Decomposition/Products: NONE  
Hazardous Polymerization: WILL NOT OCCUR

**SECTION VII - SPILL OR LEAK PROCEDURES**

Steps to Be Taken If Material is Released or Spilled: NONE  
Waste Disposal Method: INCINERATION OR APPROVED LANDFILL  
Precautions to Be Taken in Handling and Storage: STORE MATERIAL AWAY FROM DIRECT HEAT  
Other Precautions: AN EFFECTIVE SOLVENT IS MINERAL SPIRITS

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

Respiratory Protection: NONE REQUIRED  
Ventilation: NONE REQUIRED  
Protective Gloves: NONE REQUIRED BUT RECOMMENDED DUE TO  
Eye Protection: NO UNUSUAL PRECAUTIONS  
Other Protective Clothing or Equipment: NONE  
Work & Hygienic Practices: NO UNUSUAL PRECAUTIONS - OBSERVE GOOD WORK PRACTICES

**SECTION IX - SPECIAL PRECAUTIONS**

NONE REQUIRED

**SECTION X - TRANSPORTATION**

DOT Proper Shipping Name: Not Regulated  
DOT Primary Hazard Classification: NA  
UN/NA Hazard No: NE  
EPA/DOT Reportable quantity: NA  
DOT labels Required: None required.

**SECTION XI - HAZARD CODES**

NFPA 704  
Health Hazard 0  
Fire Hazard 1  
Reactivity 0  
Special NONE

**\*MATERIAL SAFETY DATA SHEET\***

**LEGEND**

<u>HEALTH HAZARD</u>	<u>REACTIVITY</u>
0 - Normal Material	0 - Stable
1 - Slightly Hazardous	1 - Unstable If Heated
2 - Hazardous	2 - Violent Chemical Change
3 - Extreme Danger	3 - Shock & Heat May Detonate
4 - Deadly	4 - May Detonate
<u>FIRE HAZARD Flash Points:</u>	<u>SPECIAL HAZARD</u>
0 - Will Not Burn	Oxidizer OXY
1 - Above 200° F	Acid ACID
2 - Below 200° F	Alkali ALK
3 - Below 100° F	Corrosive COR
4 - Below 73° F	Use No Water N/W
UK	Unknown
AP Approximately	Y
N/AP	Not Applicable
N/DA	No Data Available

**SECTION XIII – U.S. REGULATORY INFORMATION:**

This MSDS complies with 20 CRF 1910.1200 (THE HAZARD COMMUNICATION STANDARD). Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Erie Metal Specialties, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Erie Metal Specialties, Inc. be responsible for damages of any nature whatsoever resulting from the use of, misuse or reliance upon information. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure its activities comply with Federal, State or Provincial, and local laws and regulations.

ISSUE DATE:.....04/01/11

PREPARED BY: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001



# MATERIAL SAFETY DATA SHEET

Print date: 06/13/2016

Version: 0

Revision date:

## 1. COMPANY AND PRODUCT IDENTIFICATION

**Product name:** FLEXIBLE SEAL ANY COLOR

**Product code:** AC-FSC60

**Supplier:** Erie Metal Specialties  
13311 Main Road  
Akron, NY 14001  
Phone: 716-542-3991  
Fax: 716-542-3996  
sales@eriemetal.com  
www.eriemetal.com

**Emergency telephone number:**  
\* 24 HOUR TRANSPORTATION:  
\*\*CHEMTREC: 1-800-424-9300  
703-527-3887 (Call collect outside of US)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### HAZARDOUS COMPONENTS

Components	CAS No.	Weight %	OSHA Ceiling Limits	OSHA TWA (final):	ACGIH Ceiling Limits	ACGIH Exposure Limits:	Vendor Exposure Limits:
Toluene	108-88-3	40 - 50%	300 ppm	200 ppm		20 ppm	

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

Irritating to eyes  
May cause skin irritation and/or dermatitis.  
Harmful by inhalation and if swallowed.

**Signal word:** WARNING

**Principle routes of exposure:** Eyes, skin and inhalation.

**Eye contact:** Avoid contact with eyes. Irritating to eyes.

**Skin contact:** Prolonged skin contact may defat the skin and produce dermatitis.

**Inhalation:** Avoid breathing vapors or mists. May cause irritation of respiratory tract. May cause central nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion and unconsciousness.

**Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause nervous system depression (e.g. headache, drowsiness, dizziness, loss of coordination, and fatigue) Risk of product entering the lungs on vomiting after ingestion.

**Physico-chemical properties:** No hazards resulting from material as supplied.

#### 4. FIRST AID MEASURES

**General advice:** Call a physician immediately.  
Show this safety data sheet to the doctor in attendance.

**Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician

**Skin contact:** Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Consult a physician if necessary.

**Ingestion:** If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

**Inhalation:** Move to fresh air in case of accidental inhalation of vapors. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

**Note to physician:** Treat symptomatically.

**Medical condition aggravated by exposure:** Dermatitis.

#### 5. FIRE-FIGHTING MEASURES

**Flash Point (°C):** NA (Classified as a solid)      **Flash point (°F):** NA (Classified as a solid)      **Flash Point Method:** Not applicable

**Flammable limits in air - lower (%):** Not determined      **Flammable limits in air - upper (%):** Not determined

**Suitable extinguishing media:** Use dry chemical, CO<sub>2</sub>, water spray or `alcohol` foam.

**Unusual hazards:** None known

**Special protective equipment for fire-fighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Specific methods:** Water mist may be used to cool closed containers.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Ensure adequate ventilation. Use personal protective equipment. Avoid contact with the skin and the eyes Do not breathe vapour/dust.

**Environmental precautions:** Do not flush into surface water or sanitary sewer system.

**Methods for cleaning up:** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

## 7. HANDLING AND STORAGE

### Handling

**Technical measures/precautions:** Provide sufficient air exchange and/or exhaust in work rooms.

**Safe handling advice:** In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe vapors or spray mist. Wear personal protective equipment. Avoid contact with skin and eyes. Keep container tightly closed. Wash thoroughly after handling.

### Storage

**Technical measures/storage conditions:** Keep containers tightly closed in a dry, cool and well-ventilated place.. Keep product and empty container away from heat and sources of ignition.

**Incompatible products:** strong oxidizing agents

**Safe storage temperature:** 40-100 ° F

**Shelf life:** 2 years

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components	ACGIH Ceiling Limits	ACGIH Exposure Limits:	OSHA Ceiling Limits	OSHA TWA (final):	NIOSH - Pocket Guide - TWAs:	Vendor Exposure Limits:
Toluene		20 ppm	300 ppm	200 ppm	100 ppm 375 mg/m <sup>3</sup> 150 ppm STEL 560 mg/m <sup>3</sup> STEL	None

**Engineering measures:** Ensure adequate ventilation.

### Personal Protective Equipment

**General:** Eye Wash and Safety Shower

**Respiratory protection:** If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, a NIOSH/MSHA certified respirator with organic vapor/P100 filter should be worn.

**Hand protection:** Neoprene gloves

**Skin and body protection:** Long sleeved clothing

**Eye protection:** Goggles.

**Hygiene measures:** Avoid contact with skin, eyes and clothing.



## 9. PHYSICAL AND CHEMICAL PROPERTIES:

<b>Physical state:</b>	Paste
<b>Color:</b>	various
<b>Odour:</b>	Solvent, Characteristic
<b>Boiling point/range (°C):</b>	110.6
<b>Boiling point/range (°F):</b>	231
<b>Vapour density:</b>	Heavier than air
<b>Vapour pressure:</b>	Not determined
<b>VOC Content Product (g/L)</b>	388 g/L
<b>VOC Content Product (lb/gal)</b>	3.24
<b>VOC less water and exempt (lb/gal)</b>	3.24
<b>VOC less water and exempt (g/L)</b>	388
<b>HAP Content Product (g/L):</b>	388 g/L
<b>Solubility:</b>	Insoluble
<b>Evaporation rate:</b>	Slower than ether
<b>pH:</b>	NA
<b>Flash Point (°C):</b>	NA (Classified as a solid)
<b>Flash point (°F):</b>	NA (Classified as a solid)
<b>Decomposition temperature:</b>	Not determined
<b>Auto-ignition temperature (°C):</b>	Not determined
<b>Density @ 15.5 ° C (g/cc) :</b>	1.0
<b>Bulk density @ 60 ° F (lb/gal):</b>	8.35
<b>Solids (% by weight):</b>	58 - 62%
<b>Volatiles (% by volume) :</b>	42 - 46%
<b>Partition coefficient (n-octanol/water, log Pow):</b>	Not determined
<b>Explosive properties:</b>	
- upper limit:	No data available
- lower limit:	No data available

## 10. STABILITY AND REACTIVITY

### Stability:

Stable under recommended storage conditions.

### Conditions to avoid:

Heat, flames and sparks.

### Materials to avoid:

Strong oxidizing agents

### Hazardous decomposition products:

Carbon oxides, Smoke

### Polymerisation

Not applicable

## 11. TOXICOLOGICAL INFORMATION

## 11. TOXICOLOGICAL INFORMATION

Over exposure to toluene has been associated with permanent brain damage characterized by disturbances in gait, personality changes and loss of memory. Toluene has been found to cause cardiac sensitivity, effects on hearing, central nervous system damage, respiratory tract damage and mild reversible liver effects in laboratory animals. Toluene may be harmful to the human fetus based on positive test results with laboratory animals.

No toxicological information is available on the product. Data obtained on components are summarized below.

Components	NTP:	IARC:	OSHA - Select Carcinogens	NIOSH - Selected LD50s and LC50s
Toluene	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	12.5mg/LInhalation LC50Rat 12124mg/kgDermal LD50Rat 636mg/kgOral LD50Rat 8390mg/kgDermal LD50Rabbit 26700ppmInhalation LC50Rat

## 12. ECOLOGICAL INFORMATION

**Persistence and degradability:** No information available

**Mobility:** No data available

**Bioaccumulation:** No data available

**Ecotoxicity effects:** No data available

**Aquatic toxicity:** Not Determined

### Component Information

#### *Toluene*

**Ecotoxicity - Fish Species Data:**

LC50 (Pimephales promelas - 96h) = 15.22-19.05 mg/L  
 LC50 (Pimephales promelas - 96h) = 12.6 mg/L  
 LC50 (Oncorhynchus mykiss - 96h) = 5.89-7.81 mg/L  
 LC50 (Oncorhynchus mykiss - 96h) = 14.1-17.16 mg/L  
 LC50 (Oncorhynchus mykiss - 96h) = 5.8 mg/L  
 LC50 (Lepomis macrochirus - 96h) = 11.0-15.0 mg/L  
 LC50 (Oryzias latipes - 96h) = 54 mg/L  
 LC50 (Poecilia reticulata - 96h) = 28.2 mg/L  
 LC50 (Poecilia reticulata - 96h) = 50.87-70.34 mg/L  
 LC50 (Pimephales promelas - 96h) = 15.22-19.05 mg/L

**Ecotoxicity - Freshwater Algae Data:**

EC50 (Selenastrum capricornutum - 96h) = >433 mg/L

## 13. DISPOSAL CONSIDERATIONS

**Waste from residues/unused products:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

**Contaminated packaging:** Do not re-use empty containers

**Methods for cleaning up:** Take up mechanically and collect in suitable container for disposal.

**Components**

*Toluene*

*108-88-3*

US EPA Waste Number

D001

**14. TRANSPORT INFORMATION**

**U. S. DEPARTMENT OF TRANSPORTATION:**

Proper shipping name:

Not Regulated

**TDG (CANADA):**

Proper shipping name:

Not Regulated

**IMDG/IMO:**

Proper shipping name:

Not Regulated

**IATA/ICAO:**

Proper shipping name:

Not Regulated

**15. REGULATORY INFORMATION**

**CANADIAN REGULATIONS:**

**Canada - WHMIS Classification Information:**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**Canadian Product Classification:** Class D2B

**Product Classification Graphic(s):**



**Component Classification Data:**

*Toluene - 108-88-3*

**WHMIS hazard class:**

B2, D2A, D2B

**Canada - National Pollution Release Inventory:**

Part 1, Group 1 Substance

Part 5 Substance

Part 1, Group 1 Substance

**U.S. FEDERAL REGULATIONS:**

**OSHA Hazard Communication Standard:**

This product is considered to be hazardous under the OSHA Hazard Communication Standard.

*Toluene - 108-88-3*

**CERCLA/SARA - Hazardous Substances and their Reportable Quantities:** 1000 lb

**SARA (311, 312) hazard class:** This product possesses the following SARA Hazard Categories:  
**Immediate Health (Acute):** Yes  
**Delayed Health (Chronic):** Yes  
**Flammability:** Yes  
**Pressure:** No  
**Reactivity:** No

***Toluene - 108-88-3***

**CERCLA/SARA 313 Emission reporting:** Listed  
**CAA - 1990 Hazardous Air Pollutants:** Listed  
**Clean Water Act - Hazardous Substances:** Listed  
**Clean Water Act - Priority Pollutants:** Listed

**RCRA Status:** Listed in Section 13

**U.S. STATE REGULATIONS**  
**(RTK):**

Listed component present: toluene

***Toluene - 108-88-3***

**California Prop 65:** Present  
**MARTK:** Present  
**Michigan critical materials register list:** 100 lb Annual usage threshold  
**NJRTK:** 1866  
**PARTK:** Environmental hazard  
Present

**INVENTORY STATUS:**

**United States TSCA - Sect. 8(b) Inventory:** This product complies with TSCA

**Canada DSL Inventory List -** This product complies with DSL

**EC EINECS/ELINCS/NLP list:** Compliance has not been determined

**Inventory - Japan - Existing and New Chemical Substances (ENCS):** Compliance has not been determined.

**16. OTHER INFORMATION**

**Sources of key data used to compile the data sheet:** Material safety data sheets of the ingredients.

**Prepared by:** Quaker Chemical Corporation -Safety, Health and Environmental Affairs Group - US

**Reason for revision:** This data sheet contains changes from the previous version in section(s) 15 and 16

**HMIS classification:****Health:**  
2**Flammability:**  
1**Reactivity:**  
0**Personal Protection:**  
H**HMIS Use Dilution****Health**  
--**Flammability**  
--**Reactivity**  
--**Personal Protection**  
--**NFPA rating:****Health:**  
2**Flammability:**  
1**Reactivity:**  
0**Special:**  
NA

\* Indicates possible chronic health effect

Personal protection recommendations should be reviewed by purchasers. Workplace conditions are important factors in specifying adequate protection.

**Disclaimer**

This product's safety information is provided to assist our customers in assessing compliance with safety/health/environmental regulations. The information contained herein is based on data available to us and is believed to be accurate. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of the product. Since the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of the product. Such conditions should comply with all regulations concerning the product. Quaker Chemical Corporation ("Quaker") assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of Quaker.

**End of Safety Data Sheet**

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

Date of issue: 02/09/2015

Version: 1.0

SMS-0041 Rev.B

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Article

**Product Name:** Gel Loc LP, Part A

#### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Adhesive. For professional use only.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Erie Metal Specialties

13311 Main Road

Akron, NY 14001

Ph: 716-542-3991

sales@eriemetal.com

#### 1.4. Emergency Telephone Number

**Emergency Number** : 800-848-1120

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Irritant & Environmentally Damaging

#### 2.2. Label Elements

##### GHS-US Labeling



##### Irritant

Skin irritation, category 2

Eye irritation, category 2A

Skin sensitization, category 1



##### Irritant

Acute hazards to the aquatic environment, category 2

Chronic hazards to the aquatic environment, category 2

Skin Irrit. 2   Eye Irrit. 2A   Skin Sens. 1   Aq ACTox. 2   Aq ChrTox. 2

#### 2.3. Signal Word

Warning

#### 2.4. Hazard Statements

Causes skin irritation

May cause an allergic reaction

Causes serious eye irritation

Toxic to aquatic life with long lasting effects

Very toxic to aquatic life

#### 2.5. Precautionary Statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children

Read label before use

Wear protective gloves/protective clothing/eye protection/face protection

Wash skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Contaminated work clothing should not be allowed out of the workplace

Avoid release to the environment

Do not eat, drink or smoke when using this product

IF ON SKIN: Wash with soap and water

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

Continue rinsing

If skin irritation occurs: Get medical advice/attention

If eye irritation persists: Get medical advice/attention

Take off contamination clothing and wash before reuse

Specific treatment (see supplemental first aid instruction on this label)

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

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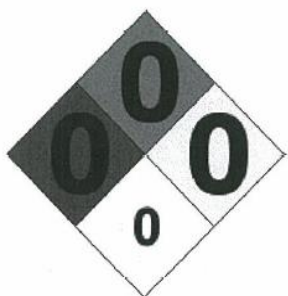
Collect spillage

Store locked up

Dispose of contents and container as instructed in Section 13

### 2.6. Other Non-GHS Classification

## WHMIS NFPA/HMIS



NFPA SCALE (0-4)

Health	0
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Name	Product Identifier	%
Bisphenol-A-(epichlorhydrin) and epoxy resin	CAS 25068-38-6	60-70%
[[[(2-Ethylhexyl)oxy]methyl]oxirane	CAS 2461-15-16	6-8%
Titanium dioxide	CAS 13463-67-7	1-2%
Silica, amorphous, fumed, cryst.-free	CAS 112945-52-5	1-2%
Calcium Carbonate	CAS 471-34-1	20-30%

Percentages are by weight

### 3.2. Mixture

Not applicable

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**After inhalation:** Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Seek medical assistance if cough or other symptoms appear.

**After skin contact:** Seek medical advice if discomfort or irritation persists. Wash hands and exposed skin with soap and plenty of water. Rinse/flush exposed skin gently using soap and water for 15-20 minutes.

**After eye contact:** Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

**After swallowing:** Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if irritation, discomfort, or vomiting persists. Rinse mouth thoroughly.

### 4.2. Most important symptoms and effects, both acute and delayed

Irritation. Shortness of breath. Headache. Nausea. Dizziness.; 2461-15-6: Inhalation – May cause respiratory irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

# Gel Loc LP, Part A

Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

Date of issue: 02/09/2015

Version: 1.0

SMS-0041 Rev.B

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Agents:** Use water, dry chemical, chemical foam, carbon dioxide, or alcohol resistant foam. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

**Unsuitable Extinguishing Media:** N/A

### 5.2. Special Hazards Arising From the Substance or Mixture

Thermal decomposition can lead to release of irritating gases and vapors. Combustion products may include carbon oxides or other toxic vapors.

### 5.3. Advice for Firefighters

**Protection equipment:** Wear protective eyewear, gloves, and clothing. Refer to section 8. Use NIOSH approved respiratory

**Additional information (precautions):** Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Avoid dust formation. decomposition.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Ensure that air-handling systems are operational. Wear protective equipment

### 6.2. Environmental Precautions

Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13

### 6.3. Methods and material for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Always obey local regulation. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect solids in powder from using vacuum with (HEPA filter). Evacuate personnel to safe areas.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Avoid contact with skin, eyes, and clothing. Do not eat, drink, smoke, or use personal products

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store in cool, dry conditions in well sealed containers. Store with like hazards.



## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

471-34-1, NIOSH REL: TWA 10 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)

13463-67-7, Titanium dioxide, ACGIH TLV: 10, OSHA PEL: 10

112945-52-5, Silica, amorphous, fumed, cryst.-free, ACGIH TLV

TWA: 10 mg/m<sup>3</sup> (inhalable particles)

112945-52-5, Silica, amorphous, fumed, cryst.-free, OSHA PEL TWA: 15 mg/m<sup>3</sup> (total dust)

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

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SMS-0041 Rev.B

<b>Appropriate Engineering Controls</b>	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use under a fume hood. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
<b>Respiratory protection</b>	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
<b>Skin protection</b>	Select glove material impermeable and resistant to the substance. Wear protective clothing. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Select glove material based on rates of diffusion and degradation. Wear protective clothing. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Chemically resistant gloves are recommended, but not required.
<b>Eye Protection</b>	Faceshield (8-inch minimum) with tightly fitting safety goggles are appropriate eyewear. Safety glasses or goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
<b>General hygienic measures:</b>	Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before reworking wash contaminated clothing. Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before reworking wash contaminated clothing. Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Before wearing wash contaminated clothing. Avoid contact with skin, eyes, and clothing. Before reworking wash contaminated clothing. Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing. Perform routine housekeeping.

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

Date of issue: 02/09/2015

Version: 1.0

SMS-0041 Rev.B

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

**Appearance:** Paste

**Color:** White

**Physical State:** Mobile liquid

**Odor:** Almost odorless

**Odor Threshold:** No data available

**pH-value:** No data available

**Melting Point/ Freezing Point:** no data available

**Boiling Point/Boiling Range:** no data available

**Flash Point (closed cup):** > 212 °F (> 100 °C)

**Evaporation rate:** no data available

**Flammability (solid, gaseous):** no data available

**Density:** no data available

**Explosion limit lower:** no data available

**Explosion limit upper:** no data available

**Vapor pressure:** no data available

**Vapor density:** no data available

**Relative density:** no data available

**Solubilities:**

**in water:** insoluble (<.01%)

**Partition coefficient (in octanol/water):** no data available

**Auto/Self-ignition temperature:** no data available

**Decomposition temperature:** no data available

**Viscosity:** no data available

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:** Non-reactive under normal conditions.

**10.2. Chemical Stability:** Stable under normal conditions.

**10.3. Possibility Hazardous Reactions:** None under normal processing.

**10.4. Conditions to Avoid:** Incompatible materials.

**10.5. Incompatible Materials:** Strong oxidizing agents, acids, Amines, Bases.

**10.6. Hazardous Decomposition Products:** Carbon oxides. Titanium oxides

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

<b>Acute Toxicity:</b>		
<b>Oral:</b>	25068-38-6	LD50 Oral - rat - 13,600 mg/kg
<b>Oral:</b>	2461-15-6	LD50 Oral - Rat - 7,800 mg/kg
<b>Oral:</b>	13463-67-7	LD50 Oral - rat - female - > 5,000 mg/kg
<b>Inhalation:</b>	13463-67-7	LC50 Inhalation - rat - male - 4 h - > 6.82 mg/l
<b>Chronic Toxicity:</b> No additional information.		
<b>Corrosion Irritation:</b> No additional information.		
<b>Sensitization:</b>	Will not occur	
<b>Single Target Organ (STOT):</b>	2461-15-6: Inhalation - May cause respiratory irritation. Specific target organ toxicity - single exposure (Category 3), Respiratory system,	
<b>Numerical Measures:</b>	No additional information.	
<b>Carcinogenicity:</b>	IARC: Group 3 (Not Classifiable) Monograph 68 [1997] (listed under Amorphous silica)	
<b>Mutagenicity:</b>	Hamster Lungs DNA inhibition. Hamster ovary Sister chromatid exchange	
<b>Reproductive Toxicity:</b>	No additional information.	

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

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### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Ecotoxicity

**2461-15-6:** LC50 – Carassius auratus (goldfish) – 14 mg/l – 24 h

**13463-67-7:** LC50 – other fish - > 1,000 mg/l – 24 h

**13463-67-7:** EC50 – Daphnia magna (Water flea) - > 1,000 mg/l – 48 h

#### 12.2. Persistence and Degradability

##### Persistence and Degradability

**25068-38-6:** Result: - According to the results of tests of biodegradability this product is not readily biodegradable

**12.3. Bioaccumulative Potential** N/A

**12.4. Mobility in Soil** No additional information available

**12.5. Other Adverse Effects** No additional information available

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Contact a licensed professional waste disposal service to dispose of this material. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Dispose of empty containers as unused product. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).

### SECTION 14: TRANSPORTATION INFORMATION

**14.1. UN-Number:** N/A

**14.2. UN proper shipping name** N/A

**14.3. Transport Hazard class(es)**

**Packing group:**

**Environmental hazard:** Not regulated for transport

**Transport in bulk:**

**Special precautions for user:**

### SECTION 15: REGULATORY INFORMATION

#### United States (USA)

##### SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

##### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

##### RCRA (hazardous waste code):

None of the ingredients is listed

##### TSCA (Toxic Substances Control Act):

112945-52-5 Silica, amorphous, fumed, cryst.-free

##### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

# Gel Loc LP, Part A

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

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Version: 1.0

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### Chemicals known to cause developmental toxicity:

None of the ingredients is listed

## Canada

### Canadian Domestic Substances List (DSL):

All ingredients are listed.

### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

### **SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**Revision Date** : 08/03/2015

**Other Information** : This document has been prepared in accordance with the SDS requirements according to 29CFR1910/1200 and GHS.

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*



# Gel Loc LP, Part B

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

Revision Date: 08/03/2015

Date of issue: 02/08/2015

Version: 1.0

SMS-0041 Rev.B

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Article

**Product Name:** Gel Loc LP, Part B

#### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Adhesive. For professional use only.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Erie Metal Specialties

13311 Main Road

Akron, NY 14001

Ph: 716-542-3991

sales@eriemetal.com

#### 1.4. Emergency Telephone Number

**Emergency Number** : 800-848-1120

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Irritant & Environmentally Damaging

#### 2.2. Label Elements

##### GHS-US Labeling



##### Health hazard

Carcinogenicity, category 2

Reproductive toxicity, category 2



##### Irritant

Acute toxicity (oral, dermal, inhalation), category 4

Skin sensitization, category 1



##### Corrosive

Skin corrosion, category 1B

Serious eye damage, category 1

Skin corrosion, category 1B

Carcinogenicity - Category 2

Eye Damage 1

Skin sensitizer 1

Acute toxicity - Oral - Acute Tox. 4

Skin corrosion/irritation - Skin Corr. 1B

Reproductive Toxicity - Repr. 2

#### 2.3. Signal Word

Danger

#### 2.4. Hazard Statements

May cause an allergic skin reaction

Suspected of causing cancer

Harmful if swallowed

Causes severe skin burns and eye damage

Causes serious eye damage

#### 2.5. Precautionary Statements

If medical advice is needed, have product container or label on hand

Keep out of reach of children

Read label before use

Wash skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fumes/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

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

Use personal protective equipment as required

Specific treatment (see supplemental first aid instructions on this label)

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Immediately call a POISON CENTER or doctor or physician

Take off contaminated clothing and wash before reuse

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF ON SKIN: Wash with soap and water

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

Store in a well ventilated place. Keep container tightly closed

Store locked up

Dispose of contents and containers as instructed in Section 13

**2.6. Combustible Dust Hazard:** May form combustible dust concentrations in air (during processing).

**2.7. Other Non-GHS Classification:** May form combustible dust concentrations in air (during processing).

## WHMIS



NFPA/HMIS



**NFPA SCALE (0-4)**

Health	3
Flammability	2
Physical Hazard	0
Personal Protection	X

**HMIS RATINGS (0-4)**

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Name	Product Identifier	%
Polyamido Amine	CAS 68953-36-6	14-18%
Nonyphenol	CAS 84852-15-3	14-18%
Attapulgitte Clay	CAS 12174-11-7	4-8%
2-piperazin-1-ylethylamine	CAS 140-31-8	4-7%

Percentages are by weight

### 3.2. Mixture

Not applicable

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**After inhalation:** Get medical assistance if cough or other symptoms appear. Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.

**After skin contact:** Wash away any material which may have contacted the body with copious amounts of water or soap and water. Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Rinse or flush skin/hair gently with water for an additional 10 minutes. Seek immediate medical attention

**After eye contact:** Protect unexposed eye. Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids. Remove contact lens (es) if able to do so during rinsing. Seek immediate medical attention (ophthalmologist)

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Have exposed individuals drink sips of water.

### 4.2. Most important symptoms and effects, both acute and delayed

Headache. Nausea. Shortness of breath. Coughing. Irritation of the throat. Gastrointestinal tract irritation with nausea or diarrhea. Irritation/burns, all routes of exposure. May cause burns, deep penetrating ulcerations of the skin, delayed tissue destruction, redness, pain. May cause severe burns, blindness and/or permanent damage; May cause cancer. Lungs may be affected by repeated or prolonged exposure to fibers, resulting in fibrosis. 12174-11-7: Acute pneumoconiosis or silicosis from overwhelming exposure to crystalline silica dust has occurred. 12174-11-7: Inhalation may increase the progression of tuberculosis; susceptibility is apparently not increased. 12174-11-7: Persons with impaired respiratory function may be more susceptible to the effects of this substance. Smoking can increase the risk of lung injury.

### 4.3. Indication of any immediate medical attention and special treatment needed

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Agents:** Use water spray to knock-down vapors. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Substance is non-flammable. Alcohol foam, dry chemical, or carbon dioxide. If large quantities of combustibles are involved, use water in flooding quantities as spray and fog.

**For safety reasons unsuitable extinguishing agents:** Do not use water on material itself; water or foam may cause frothing. Do not use water jet.

### 5.2. Special Hazards Arising From the Substance or Mixture

Combustion products may include carbon oxides or other toxic vapors. Carbon oxides, nitrogen oxides (NOx). Combustible dusts formation is a risk. Powerful oxidizers may cause fire. Powerful oxidizers may cause explosions.

### 5.3. Advice for Firefighters

**Protection equipment:** Use NIOSH-approved respiratory protection/breathing apparatus. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Avoid breathing vapors; keep upwind.

**Additional information (precautions):** Move product containers away from fire or keep cool water spray as a protective measure, where feasible. If material not on fire and not involved in fire; Keep sparks flames, and other sources of ignition away. Keep material out of water sources and sewers. Build dikes to contain flow as a necessary. Avoid contact with skin, eyes, and clothing. Heat flame, and ignition sources should not be handled near chemical. Use spark-proof tools and explosion-proof equipment.

# Gel Loc LP, Part B

## Safety Data Sheet

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective equipment. Ensure that air-handling systems are operational. Ensure adequate ventilation. Land spill: Dig a pit, pond, lagoon, holding area (should be sealed with an impermeable flexible membrane liner) to contain liquid or solid material. Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash or cement powder. Neutralize as noted for water spill. Water spill: Neutralize with agricultural lime (CaO). Crushed limestone (CaCO<sub>3</sub>), or sodium bicarbonate (NaHCO<sub>3</sub>). If dissolved, in region of 10ppm or greater concentration, apply activated carbon at ten times the spilled amount. Use mechanical methods to collect and containerize for disposal (see Section 13). Use spark-proof tools and explosion-proof equipment.

### 6.2 Environmental Precautions

Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13. Should not be released into environment

### 6.3 Methods and material for containment and cleaning up:

Keep in suitable closed containers for disposal. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. If contact with the material anticipated, wear appropriate chemical protective clothing. Avoid bodily contact with the material. ... Do not handle broken packages unless wearing appropriate personal protective equipment. Wash away any material which may have contacted the body with copious amounts of water or soap and water. Do not handle broken packages unless wearing appropriate personal protective equipment. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Personal protection: P2 filter respirator for harmful particles. Contain spillage. Collect with an electrically protected vacuum cleaner or by wet-brushing. Place in container for disposal according to local regulations. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect solids in powder form using vacuum with (HEPA filter)

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Minimize dust generation and accumulation. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Avoid contact with skin, eyes, and clothing. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do NOT take working clothes home. Prevent dispersion of dust; if this occurs, avoid all contact! Combustible dusts formation is a risk

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

Store away from incompatible materials. Protect from freezing and physical damage. Keep away from food and beverages. Provide ventilation for containers. Store away from incompatible materials. Store locked up. Avoid storage near extreme heat, ignition sources or open flame. Store in cool, dry conditions in well sealed containers. Store with like hazards

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION



### 8.1. Control Parameters

OSHA PEL TWA (Total Dust) 15 mg/m<sup>3</sup> (50 mppcf\*)

ACGIH TLV TWA (inhalable particles) 10 mg/m<sup>3</sup>

471-34-1, NIOSH REL: TWA 10 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)

# Gel Loc LP, Part B

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According to 29CFR1910/1200 and GHS Rev. 3

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<b>Appropriate Engineering Controls</b>	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use under a fume hood
<b>Respiratory protection</b>	When necessary use NIOSH approved breathing equipment. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. P2 filter respirator for harmful particles
<b>Skin protection</b>	Select glove material impermeable and resistant to the substance. Wear protective clothing. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Eye Protection</b>	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection.
<b>General hygienic measures:</b>	Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

**Appearance (physical state, color):** paste

**Odor:** amine-like

**Odor Threshold:** no data available

**pH-value:** no data available

**Melting Point/ Freezing Point:** no data available

**Boiling Point/Boiling Range:** no data available

**Flash Point (closed cup):** no data available

**Evaporation rate:** no data available

**Flammability (solid, gaseous):** no data available

**Explosion limit lower:** no data available

**Explosion limit upper:** no data available

**Vapor pressure:** no data available

**Vapor density:** no data available

**Relative density:** no data available

**Solubilities:** no data available

**Partition coefficient (in octanol/water):** no data available

**Auto/Self-ignition temperature:** no data available

**Decomposition temperature:** no data available

**Viscosity:**

**a. Kinematic:** no data available

**b. Dynamic:** no data available

**Density:** 2.1 g/cm<sup>3</sup> at 68 °F (20 °C)

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:** Non-reactive under normal conditions.

**10.2. Chemical Stability:** Stable under normal conditions. Chemically inert; properties are not affected by change in pH

**10.3. Possibility Hazardous Reactions:** None under normal processing.

**10.4. Conditions to Avoid:** Incompatible materials. Heat Sensitive. Heat, flame, spark

**10.5. Incompatible Materials:** Strong acids. Strong oxidizing agents. Strong bases. Oxidizing agents, Oxidizing agents. Hydrogen Fluoride. Acetylene and ammonia. Hydrofluoric Acid. Strong acids. Strong bases.

**10.6. Hazardous Decomposition Products:** Carbon oxides. Nitrogen oxides. Ammonia. When heated to decomposition it emits acrid smoke and irritation fumes. Corrosive gas silicon Tetrafluoride. Carbon oxides, nitrogen oxides (NOx)

# Gel Loc LP, Part B

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

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## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

<b>Acute Toxicity:</b>		
<b>Oral:</b>	IUCLID	LOSO Rat 6450 mg/kg
<b>Dermal:</b>	84852-15-3	Dermal LD50 Rabbit 2031 mg/kg
<b>Oral:</b>	84852-15-3	Oral LD50 Rat 580 mg/kg
<b>Oral:</b>	2,097 mg/kg	LD50 rat
<b>Dermal:</b>	866 mg/kg	LD50 rabbit
<b>Chronic Toxicity:</b>		
<b>Inhalation:</b>	Experimental carcinogenicity is associated with respirable fibres greater than 5 micrometers in length.	Depending on the degree of exposure, periodic medical examination is suggested. Fibre length varies with the source of the mineral.
<b>Corrosion Irritation:</b>		
<b>Dermal:</b> 12174-11-7		<b>Dermal:</b> May cause chemical mechanical irritation of the skin.
<b>Ocular:</b> 12174-11-7		May cause mechanical irritation of the eyes.
<b>Sensitization:</b>		12174-11-7: Can cause irritation to the respiratory tract.
<b>Single Target Organ (STOT):</b>		No additional information.
<b>Numerical Measures:</b>		Acute Toxity Estimate (ATE) – oral: 2000 mg/kg
<b>Carcinogenicity:</b>		IARC; Group 2B (Possibly Carcinogenic to Humans) Monograph 68 [1997] (long fibres >5 µm); Supplement 7 [1987] 12174-11-7: May cause lung damage if exposure if repeated or prolonged.
<b>Mutagenicity:</b>		No additional information
<b>Reproductive Toxicity:</b>		84852-15-3: Suspected human reproductive toxicant

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity

**Fish (acute 84852-15-3):** 96 Hr LC50 Pimephales promelas: 0.135 mg/L [flow-through]; 96 Hr LC50

Lepomis macrochirus: 0.1351mg/L [flow-through]

**Crustacea (acute 84852-15-3):** 48 Hr EC50 Daphnia magna: 0.14 mg/L

**Algae (acute 84852-15-3):** 96 Hr EC50 Pseudokirchneriella subcapitata: 0.36 - 0.48 mg/L [static]; 72 Hr EC50

Pseudokirchneriella subcapitata: 0.16 - 0.72 mg/L [static]; 72 Hr EC50 Desmodesmus subspicatus: 1.3 mg/L

**LC50 Pimephales promelas (fathead minnow):** 2,190 mg/l - 96 h

**EC50 Daphnia magna (Water flea):** 58 mg/l - 48 h

**EC50 Pseudokirchneriella subcapitata (Selenastrum capricornutum):** 495 mg/l - 72 h

### 12.2. Persistence and Degradability

12174-11-7: long term degradation products may arise. aerobic – Exposure time 28 d Result: 0% - Not readily biodegradable. (OECD Test Guideline 301F)

**12.3. Bioaccumulative Potential BCF (84852-15-3):** 271 species: fish

# Gel Loc LP, Part B

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According to 29CFR1910/1200 and GHS Rev. 3

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**12.4. Mobility in Soil** No additional information available

**12.5. Other Adverse Effects** No additional information available

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

### SECTION 14: TRANSPORTATION INFORMATION

**14.1. UN-Number:** N/A

**14.2. UN proper shipping name** N/A

**14.3. Transport Hazard class(es)**

**Packing group:**

**Environmental hazard:** DOT regulated marine pollutant

**Transport in bulk:** (84852-15-3)

**Special precautions for user:**

### SECTION 15: REGULATORY INFORMATION

#### United States (USA)

##### SARA Section 311/312 (Specific toxic chemical listings):

Relative, Acute, Chronic

##### SARA Section 313 (Specific toxic chemical listings):

84852-15-3-1.0% de minimis concentration (listed under Chemical Category Nonylephenol)

##### RCRA (hazardous waste code):

None of the ingredients is listed

##### TSCA (Toxic Substances Control Act):

All ingredients is listed

##### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

12174-11-7 Attapulgate clay >5 µm in length)

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

##### Chemicals known to cause developmental toxicity:

None of the ingredients is listed

#### Canada

##### Canadian Domestic Substances List (DSL):

All ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

##### Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

# Gel Loc LP, Part B

## Safety Data Sheet

According to 29CFR1910/1200 and GHS Rev. 3

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### **SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**Revision Date** : 08/03/2015

**Other Information** : This document has been prepared in accordance with the SDS requirements according to 29CFR1910/1200 and GHS.

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

**\*MATERIAL SAFETY DATA SHEET\*****SECTION I – MATERIAL IDENTIFICATION**

MATERIAL NAME: DOW CORNING 888 SILICONE JOINT SEALANT MSDS #01560697

MANUFACTURER: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001SUPPLIER: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001EMERGENCY PHONE:  
CHEM-TREC: (800) 424-9300

(716) 542-3991

**SECTION II – HAZARDOUS INGREDIENTS**Acute Effects

Eye: Direct contact may cause moderate irritation.

Skin: May cause mild irritation.

Inhalation: Irritates respiratory passages very slightly.

Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: Repeated or prolonged exposure may irritate seriously.

Inhalation: Overexposure by inhalation may injure the following organ(s): Testes. Liver. Pancreas.  
Spleen.

Oral: Overexposure by ingestion may injure the following organ(s): Pancreas. Liver. Spleen. Testes.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information

**SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS**

CAS Number	Wt %	Component Name
50791-87-2	1.0 - 5.0	Methylvinyl bis(n-methylacetamido) silane
68952-53-4	1.0 - 5.0	Dimethyl, methylethyl-N-hydroxyethamine siloxane

The above components are hazardous as defined in 29 CFR 1910.1200

**SECTION IV – FIRST AID MEASURES**

Eye: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 - 20 minutes while holding the eyelid(s) open. If contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately obtain medical attention.

**\*MATERIAL SAFETY DATA SHEET\***

- Skin:** As quickly as possible remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm gently flowing water for 15 minutes. Completely decontaminate clothing, shoes and leather goods before reuse or discard. Obtain medical attention.
- Inhalation:** Remove from the source of contamination or move to fresh air. If irritation persists, obtain medical advice.
- Oral:** If irritation or discomfort occur, obtain medical advice.

Notes to Physician: Treat according to person's condition and specifics of exposure.

**SECTION V - FIRE & EXPLOSION HAZARD DATA**

Flash Point: Not applicable.

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO<sub>2</sub>), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: None.

**SECTION VI – ACCIDENTAL RELEASE MEASURES:**

Containment/Clean up: Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills. Call (716) 542-3991, if additional information is required.

**SECTION VII – HANDLING AND STORAGE**

Use with adequate ventilation. Product evolves N-methyl acetamide when exposed to water or humid air. Provide ventilation during use to control N-methyl acetamide within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally.

Keep container closed and store away from water or moisture.

**\*MATERIAL SAFETY DATA SHEET\***

**SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION**

Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
50791-87-2	Methylvinyl bis(n-methylacetamido) silane	See N-methyl acetamide comments.

N-methyl acetamide is formed on contact with water or humid air. Provide adequate ventilation to control exposures to within Dow Corning recommended exposure guidelines of 1 ppm (TWA) and 5 ppm (Excursion Limit).

Engineering Controls

Local Ventilation: Recommended.  
General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes:	Use proper protection - safety glasses as a minimum.
Skin:	Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.
Suitable Gloves:	Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.
Inhalation:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.
Suitable Respirator:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes:	Use full face respirator.
Skin:	Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally. Use reasonable care.
Comments:	Product evolves N-methyl acetamide when exposed to water or humid air. Provide ventilation during use to control N-methyl acetamide within exposure guidelines or use respiratory protection.

**\*MATERIAL SAFETY DATA SHEET\***

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

**SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form:	Paste
Color:	Gray
Odor:	Amine-like odor
Specific Gravity @ 25°C:	1.48
Viscosity:	Not determined.
Freezing/Melting Point:	Not determined.
Boiling Point:	Not determined.
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Not determined.
pH:	Not determined.
Volatile Content:	Not determined.
Flash Point:	Not applicable.
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact EMS before writing specifications.

**SECTION X – STABILITY AND REACTIVITY**

Chemical Stability:	Stable.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to Avoid:	None.
Materials to Avoid:	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

**Hazardous Decomposition Products**

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Metal oxides. Formaldehyde. Silicon dioxide. Nitrogen oxides. Quartz

**SECTION XI – TOXICOLOGICAL INFORMATION**

Contains Bis(N-methyl acetamido)silane which liberates N-methylacetamide (NMA) during cure. NMA has been shown to cause birth defects in laboratory animals

**\*MATERIAL SAFETY DATA SHEET\***Special Hazard Information on Components

No known applicable information

**SECTION XII – ECOLOGICAL INFORMATION**Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Hazard Parameters (LC50 or EC50)	Ecotoxicity Classification Criteria		
	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

**SECTION XIII – DISPOSAL CONSIDERATIONS:**RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No  
State or local laws may impose additional regulatory requirements regarding disposal. Call (716) 542-3991, if additional information is required.

**SECTION XIV – TRANSPORT INFORMATION:**

DOT Road Shipment Information (49 CFR 172.101): Not subject to DOT.

The above information only applies to package sizes where the hazardous substance does not meet the reportable quantity.

Ocean Shipment (IMDG): Not subject to IMDG code

Air Shipment (IATA): Not subject to IATA regulations

Call (716) 542-3991, if additional information is required.

**\*MATERIAL SAFETY DATA SHEET\*****SECTION XV – REGULATORY INFORMATION:**

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances

**EPA SARA Title III Chemical Listings**

**Section 302 Extremely Hazardous Substances (40 CFR 355): None**

**Section 304 CERCLA Hazardous Substances (40 CFR 302):**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
68-12-2	0.8	Dimethylformamide
1330-20-7	0.19	Xylene

**Section 311/312 Hazard Class (40 CFR 370):**

Acute:	Yes
Chronic:	Yes
Fire:	No
Pressure:	No
Reactive:	No

**Section 313 Toxic Chemicals (40 CFR 372):**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
68-12-2	0.8	Dimethylformamide

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold

**SECTION XVI – Other Information:**

Prepared by: Erie Metal Specialties, Inc.

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

ISSUE DATE:.....04/01/11

PREPARED BY: Erie Metal Specialties, Inc.  
13311 Main Road  
Akron, NY 14001

**PROJECT REFERENCES - TABLE OF CONTENTS**  
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**Project:** Veterans Memorial Stadium  
Cedar Rapids, IA  
**Year:** 2011

**Description**

Veterans Memorial Stadium in Cedar Rapids, Iowa, required a variety of expansion joints to meet the various repair requirements in the structure. The CR-Series wing seal was used in various areas in the concourse to replace an existing wing seal, while the CST-Series foam seal was used in traffic-grade areas where blockouts did not exist to accommodate a wing seal. For the treads and risers in the stadium bowl, the CSS-Series pre-compressed foam seal was used because the splices for treads and risers can be completed at the factor or on-site. All of these materials were installed by Vector Construction, a certified applicator for EMS products.

**Product(s):** CR, CSS, CST

**Contractor:** Vector Construction  
**Contact:** Byron Greenwaldt  
**Address:** 250 41st Ave. Dr.  
Cedar Rapids, IA 52408  
**Phone:** 319-364-5355  
**Website:** www.vectorgroup.com



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**Project:** Irvington Parking Garage Repairs  
Irvington, VA  
**Year:** 2012

**Description**

Tally Restoration installed the CST-Series pre-compressed traffic-grade foam as part of the restoration project at the parking garage in Irvington, Virginia. Tally Restoration is an Approved Applicator for EMS products.

**Product(s):** CST

**Contractor:** Tally Restoration  
**Contact:** Taghi Medghalchi  
**Address:** 11325 Maryland Avenue E.  
Beltsville, MD 20705  
**Phone:** 301-931-2700  
**Website:** www.tallyrestoration.com

**Project:** Ericsson Complex Parking Garage  
Plano, TX  
**Year:** 2012

**Description**

For the parking garage repairs at the Ericsson complex in Plano, Texas, Southwest Construction Services installed the CST-Series pre-compressed traffic-grade foam seal and the CSS-Series pre-compressed vertical foam seal. Southwest Construction Services is an Approved Applicator for EMS products.

**Product(s):** CST, CSS

**Contractor:** Southwest Construction Services  
**Contact:** Jamie McCarroll  
**Address:** 11430 Newkirk Street  
Dallas, TX 75229  
**Phone:** 214-879-9948  
**Website:** [www.sw-construction.com](http://www.sw-construction.com)



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**Project:** Blood Center of Milwaukee  
Milwaukee, WI  
**Year:** 2012

**Description**

Concrete and Masonry Restoration (CMR) installed the CST-Series traffic grade pre-compressed foam seal as part of the overall repair project for the Blood Center of Milwaukee in Milwaukee, Wisconsin. CMR is a certified applicator for EMS products.

**Product(s):** CST

**Contractor:** Concrete and Masonry Restoration, Inc. (CMR)  
**Contact:** Vern Guyera  
**Address:** 7290 N. Teutonia Ave.  
Milwaukee, WI 53209  
**Phone:** 414-540-9600  
**Website:** [www.cmrcmr.com](http://www.cmrcmr.com)



**Project:** Pentagon City Garage  
Washington, DC  
**Year:** 2012

**Description**

Repairs to the Pentagon City Garage in Washington, DC were made using the CST(DS)-Series double sided traffic-grade foam seal and the CR-Series wing expansion joint system. The products were installed by Restoration East, Inc., an Approved Applicator for EMS products.

**Product(s):** CST, CR

**Contractor:** Restoration East  
**Contact:** Phil Heisel  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** [www.restorationeast.com](http://www.restorationeast.com)



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**Project:** Ourisman Toyota Fairfax, VA  
Fairfax, VA  
**Year:** 2013

**Description**

Repairs were made at Ourisman Toyota Parking Garage in Fairfax, VA by KGS Construction Services, an Approved Applicator for EMS products. Both the CST and the CSS-Series Foam Seals were installed.

**Product(s):** CST, CSS

**Contractor:** KGS Construction Services  
**Contact:** Keith Simpson  
**Address:** 10305 Piper Lane  
Manassas, VA 20110  
**Phone:** 703-392-7663  
**Website:** [www.kgsconstruction.com](http://www.kgsconstruction.com)



**Project:** Old Gallows Road Project  
Vienna, VA  
**Year:** 2013

**Description**

Eastern Waterproofing and Restoration, Inc. (EWR) installed the CR-Series wing expansion joint and the CST-Series foam seal in the parking garage of the Old Gallows Road Project in Vienna, VA. EWR is an approved applicator for EMS products.

**Product(s):** CR, CST

**Contractor:** Eastern Waterproofing and Restoration, Inc.  
**Contact:** Rob Null  
**Address:** 7175 Montevideo Road  
Jessup, MD 20794  
**Phone:** 410-799-0900  
**Website:** ewrcompanies.com



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**Project:** 8280 Greenboro Drive  
McLean, VA  
**Year:** 2013

**Description**

Restoration East made repairs to the 8280 Greenboro Drive Parking Garage in McLean using the CST-Series foam seal. Restoration East is an Approved Applicator for EMS products.

**Product(s):** CST

**Contractor:** Restoration East  
**Contact:** John Bert  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** www.restorationeast.com

**Project:** Kenwood Condominium  
Bethesda, MD  
**Year:** 2014

**Description**

The DW-Series (two-chambered) wing expansion joint system and the CST-Series foam seal were installed by Restoration East during two repair projects as part of the repair requirements for the Kenwood Condominium Parking Garage.

**Product(s):** DW, CST

**Contractor:** Restoration East  
**Contact:** Kristin Foreman  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** www.restorationeast.com



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**Project:** 4701 Willard Apartments  
Chevy Chase, MD  
**Year:** 2014

**Description**

Restoration East, an Approved Applicator for EMS products, installed the CST-Series foam seal in the parking garage at 4701 Willard, Chevy Chase, MD.

**Product(s):** CST

**Contractor:** Restoration East  
**Contact:** Jeremy James  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** www.restorationeast.com



**Project:** Three Bethesda Metro Center  
Bethesda, MD  
**Year:** 2014

**Description**

Restoration East made repairs to the Three Bethesda Metro Center in Bethesda, MD using the CST-Series foam seal.

**Product(s):** CST

**Contractor:** Restoration East  
**Contact:** Matt Arnold  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** [www.restorationeast.com](http://www.restorationeast.com)

**Project:** Munsey Building Garage  
Baltimore, MD  
**Year:** 2014

**Description**

C.A. Lindman of Maryland made repairs to the Muncey Building Garage in Baltimore, MD using the CST-Series foam seal.

**Product(s):** CST

**Contractor:** CA Lindman  
**Contact:** Zen Libowic  
**Address:** 10401 Guilford Road  
Jessup, MD 20794  
**Phone:** 301-470-4700  
**Website:** [www.calindman.com](http://www.calindman.com)



**Project:** Tivoli Square Parking Garage  
Washington, DC  
**Year:** 2014

**Description**

Restoration East, an Approved Applicator for EMS products, installed the CST-Series foam seal and DW-Series wing seal expansion joint systems in the Tivoli Square Parking Garage located in Washington, DC .

**Product(s):** CST, DW

**Contractor:** Restoration East  
**Contact:** John Bert  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** [www.restorationeast.com](http://www.restorationeast.com)



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**Project:** Springfield Mall  
Springfield, VA  
**Year:** 2014

**Description**

Repairs were made at the Springfield Mall Parking Garage in Springfield, VA by Consolidated Waterproofing, who installed the CST-Series foam seal as well as the Aluminum Cover Plate (ALCP).

**Product(s):** CST, ALCP

**Contractor:** Consolidated Waterproofing  
**Contact:** Kenny Robbins  
**Address:** 10732 Hanna St.  
Beltsville, MD 20705  
**Phone:** 301-595-2559  
**Website:** [www.conwater.com](http://www.conwater.com)



**Project:** Kings Plaza Parking Garage  
Brooklyn, NY  
**Year:** 2014

**Description**

The CST-Series foam seal was installed by PCI Industries as part of the Kings Plaza Parking Garage repair project in 2014.

**Product(s):** CST

**Contractor:** PCI Industries  
**Contact:** Anthony Mauriello  
**Address:** 550 Franklin Ave  
Mount Vernon, NY 10550  
**Phone:** 914-662-2700  
**Website:** www.persicocontr.com



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**Project:** 1750 Tysons Blvd. Garage  
McLean, VA  
**Year:** 2014

**Description**

Concrete Protection and Restoration made repairs to the parking garage at 1750 Tysons Blvd., McLean, VA. CPR installed the CR-Series wing seal, the CST-Series and CSS-Series foam seals, as well as the Aluminum Cover Plate (ALCP). The project was overseen by architectural and engineering firm SK&A.

**Product(s):** CR, CST, CSS, ALCP

**Contractor:** Concrete Protection & Restoration  
**Contact:** Phil Morabito  
**Address:** 2811 Lord Baltimore Drive  
Baltimore, MD 21244  
**Phone:** 410-298-2669  
**Website:** www.c-p-rinc.com

**A/E Firm:** SK&A  
**Address:** 12505 Park Potomac Ave., Suite 200  
Potomac, MD 20854  
**Phone:** 301-881-1441  
**Website:** www.skaengineers.com



**Project:** WVU Suncrest Parking Garage  
Morgantown, WV  
**Year:** 2014

**Description**

The CST-Series foam seal was installed by CPS Construction Group as part of the WVU Suncrest Parking Garage repair project in 2014.

**Product(s):** CST

**Contractor:** CPS Construction Group  
**Contact:** Sam Fratto  
**Address:** 927 Route 910, Suite 200  
Cheswick, PA 15024  
**Phone:** 412-824-2900  
**Website:** [www.cpsconstructiongroup.com](http://www.cpsconstructiongroup.com)

**A/E Firm:** THP  
**Address:** 100 E. Eighth Street  
Cincinnati, OH 45202  
**Phone:** 513-241-3222  
**Website:** [www.thpltd.com](http://www.thpltd.com)



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**Project:** Crystal City Marriott Garage  
Arlington, VA  
**Year:** 2015

**Description**

Repairs were made at the Crystal City Marriott Parking Garage in Arlington, VA using 1500 LF of the CST-Series foam seal. These repairs were made by Restoration East, an Approved Applicator of EMS products.

**Product(s):** CST

**Contractor:** Restoration East  
**Contact:** Matt Arnold  
**Address:** 4209 E. Chase Street  
Baltimore, MD 21205  
**Phone:** 410-563-4972  
**Website:** [www.restorationeast.com](http://www.restorationeast.com)



**Project:** NY Presbyterian Hospital Parking Garage

New York, NY

**Year:** 2015

**Description**

Repairs were made to the NY Hospital Parking Garage in NYC by Related Services, who installed the CR-Series wing seal and the CST-Series foam seal expansion joint systems. Related Services is an Approved Applicator for EMS products.

**Product(s):** CR, CST

**Contractor:** Related Services

**Contact:** John Goarin

**Address:** 34th Floor 51 Madison Ave.

New York, NY 10010

**Phone:** 212-251-9677

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