Knowledge for Creating and Sustaining the Built Environment

SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase)

Project: _____ Substitution Request Number: (For Architect to fill in)

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: CS-Series Foam Seal

Manufacturer: Erie Metal Specialties, Inc. Phone: 716-542-3991

Address: 13311 Main Road, Akron, NY 14001

Trade Name: CS Model No.: CS

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:
None.

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

Reason for not providing specified item: _____

Similar Installation:

Project: See attached 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 ☐ _____

Form Version: June 2004
CSI Form 13.1A

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: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: ☑

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:

Form Version: June 2004
CSI Form 13.1A

CS-Series

Foam Seal Systems

Description

Compression Seal (CS) is a compressible sealer, which can be used in a variety of waterproofing applications. It is made of a closed cell, stabilized polymer material coated with a colorized, elastomeric layer of silicone. The material has been developed to perform under extreme conditions such as those found in vertical and horizontal applications including seismic and parking structure joints.

An impermeable closed cell foam backer and silicone face act as a dual sealant which provides a watertight seal and an aesthetic, colorized finish superior to silicone or urethane strip seals. The system provides a dustproof, airtight, UV stable, watertight, chemically resistant, soundproof and insulated urethane primary seal.

The foam seal system works under its own constant internal pressure to provide a permanent watertight seal eliminating costly water damage, as well as allowing for a greater degree of joint movement.

Physical Properties

Table 1 – Physical properties of Compression Seal

Properties	*Result*
Density	2-3 lb./cu. ft.
Thermal Conductivity	ASTM C177, R-4
Tensile Strength	ASTM D3575, 120psi
Ultimate Elongation	ASTM D3575, 250%
Tear Resistance	ASTM D624, 21.5 lbs/in
Water Absorption	ASTM D3575, <.02 lbs/ft^2
Weather Resistance	ASTM D1499, No Cracking
Durometer Hardness	ASTM D2240, Shore A 15 pts.
Weatherometer	Xenon Arc Weatherometer, 2000 hrs. No Visible Deterioration

Features and Benefits

- Can accommodate rapid rates of joint movement
- Made from a monolithic piece of foam that will not delaminate like multi-layer products
- Does not rely on the silicone coating or the adhesion of a field applied bead of sealant to provide a watertight seal
- Not subject to adhesive or cohesive failure
- Consistent depth of product
- Used for joints up to 12” wide
- The system has a +/-25% movement range, providing 50% total movement capability.
- Available in **Dow Corning ® 790** and **Pecora 890** Colors: Actual Colors may vary. See **Dow Corning ® 790** and **Pecora 890** Color Chart for exact color match.
- Sizes available in 1/4” increments
- **LEED Credits** - Up to two (2) LEED credits depending on the location of the project.

CONTACT EMS FOR PROPER SIZING

PRODUCT	MIN. WIDTH IN (MM)	MID-RANGE IN (MM)	MAX. WIDTH IN (MM)	TOTAL MOVEMENT IN (MM)
CS-050	0.38” (9.7)	0.50" (12.7)	0.63” (16.0)	0.25" (6.4)
CS-100	0.75” (19.1)	1.00" (25.4)	1.25" (31.8)	0.50" (12.7)
CS-200	1.50" (38.1)	2.00" (50.8)	2.50" (63.5)	1.00" (25.4)
CS-300	2.25” (57.2)	3.00" (76.2)	3.75” (95.3)	1.50" (38.1)
CS-400	3.00" (76.2)	4.00" (101.6)	5.00” (127.0)	2.00" (50.8)
CS-500	3.75” (95.3)	5.00” (127.0)	6.25” (158.8)	2.50” (63.5)
CS-600	4.50" (114.3)	6.00” (152.4)	7.50” (190.5)	3.00” (76.2)
CS-700	5.25” (133.4)	7.00” (177.8)	8.75” (222.3)	3.50” (88.9)
CS-800	6.00" (152.4)	8.00” (203.2)	10.00” (254.0)	4.00” (101.6)
CS-900	6.75” (171.5)	9.00” (228.6)	11.25” (285.75)	4.50” (114.3)
CS-1000	7.50” (190.5)	10.00” (254.0)	12.50” (317.5)	5.00” (127.0)
CS-1100	8.25” (209.6)	11.00” (279.4)	13.75” (349.25)	5.50” (139.7)
CS-1200	9.00” (228.6)	12.00” (304.8)	15.00” (381.0)	6.00” (152.4)

Dow Corning® 790 Silicone Building Sealant

Sealant Color Selection Guide

790

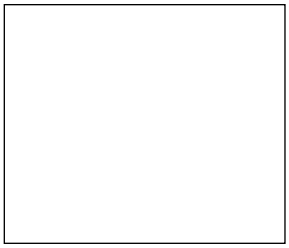
STANDARD COLORS

- Please check the availability of the different colors.
- Custom colors are available on request.
- Please refer to product literature for application and technical information.

The colors shown are a close approximation of the actual sealant colors. However, for best results, submit color samples or swatches to our lab for color testing and matching.


Precast White


Limestone


White


Natural Stone


Gray


Black


Bronze


Sandstone


Adobe Tan


Dusty Rose


Rustic Brick


Blue Spruce


Charcoal

DOW CORNING

High Performance Building Solutions

Form No. 62-1734-01 AGP13026

PECORA CORPORATION®
Architectural Weatherproofing Products
U.S.A. • since 1862

STANDARD SILICONE COLORS

Custom colors available upon request

Non-standard colors
Minimum order quantity per color:
30 gallons for cartridges and pails
30 gallons for sausages

This guide offers a representation of color; when matching is critical, a cured or applied color sample is highly recommended.

Pecora Corporation
165 Wambold Rd
Harleysville, PA 19438
Phone: (215) 723-6051
(800) 523-6688
Fax: (215) 721-0286
www.pecora.com
An ISO-9001:2000 certified company.

ARCHITECTURAL SILICONE SEALANTS

864NST NON-STAINING TECHNOLOGY™

Tru-White	345
Precast	113
Beige	595
Limestone	039
Aluminum Stone	515
Classic Bronze	046
Black	012
Hartford Green	196

890NST NON-STAINING TECHNOLOGY™

Tru-White	345
Precast	113
Beige	595
Limestone	039
Anodized Aluminum	804
Aluminum Stone	515
Natural Stone	565
Sandstone	951
Charcoal Gray	950
Classic Bronze	046
Black	012
Hartford Green	196
Red Rock	955

895NST NON-STAINING TECHNOLOGY™

Translucent	610
Tru-White	345
Anodized Aluminum	804
Aluminum Stone	515
Classic Bronze	046
Black	012

PECORA CORPORATION
Architectural Weatherproofing Products
U.S.A. • since 1862

ARCHITECTURAL SILICONE SEALANTS

STANDARD SILICONE COLORS

Custom colors available upon request

Non-standard colors
Minimum order quantity per color:
30 gallons for cartridges and pails

310 SL

Limestone	039

311 NS

Limestone	039

860

Translucent	610
Tru-White	345
Metallic Aluminum	027
Black	012

898NST
NON-STAINING TECHNOLOGY™

Translucent	610
Tru-White	345
Almond	792
Black	012

COVERAGE CHART (231 cu. in./gal.)

Joint Depth (in.) x Width (in.)	Linear feet per Gal.	Joint Depth (in.) x Width (in.)	Linear feet per Gal.
1/8 x 1/8	1232.0	3/8 x 7/8	58.7
1/8 x 1/4	616.0	3/8 x 1	51.3
1/8 x 3/8	410.7		
1/8 x 1/2	308.0	1/2 x 1/2	77.0
1/8 x 5/8	246.4	1/2 x 5/8	61.6
1/8 x 3/4	205.3	1/2 x 3/4	51.3
1/8 x 7/8	176.0	1/2 x 7/8	44.0
1/8 x 1	154.0	1/2 x 1	38.5
1/4 x 1/4	308.0	5/8 x 5/8	49.3
1/4 x 3/8	205.0	5/8 x 3/4	41.1
1/4 x 1/2	154.0	5/8 x 7/8	35.2
1/4 x 5/8	123.2	5/8 x 1	30.8
1/4 x 3/4	102.7		
1/4 x 7/8	88.0	3/4 x 3/4	34.2
1/4 x 1	77.0	3/4 x 7/8	29.3
		3/4 x 1	25.7
3/8 x 3/8	136.9		
3/8 x 1/2	102.7	7/8 x 7/8	25.1
3/8 x 5/8	82.1	7/8 x 1	22.0
3/8 x 3/4	68.4	1 x 1	19.3

Joint Depth (in.) x Width (in.) x Length (in.) x 0.053 = gallons required

This guide offers a representation of color; when matching is critical, a cured or applied color sample is highly recommended.

Pecora Corporation
165 Wambold Rd
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Fax: (215) 721-0286
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An ISO-9001:2000 certified company.

PEC184 10/14

Spectrem® 1
Standard Colors

Colors shown are approximate and may not reflect the shade precisely. Different lighting conditions can influence color appearance, for truer color please view in daylight. Colors are not stocked in all available package types. Minimum order quantities will apply for custom colors and alternative packaging. For more information, please contact Tremco Customer Service.

CS-Series

INSTALLATION INSTRUCTIONS

Foam Seal Systems

Material Application

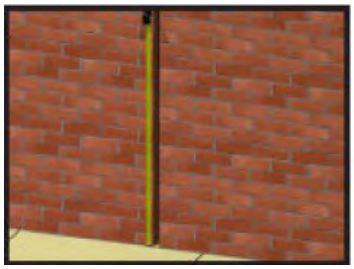
For use in **vertical joints.**

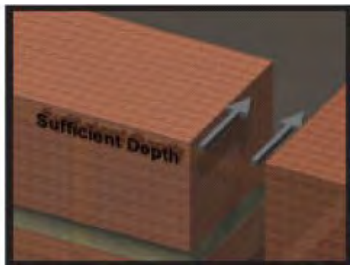
Recommended Tools

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

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"–¼" in the joint.

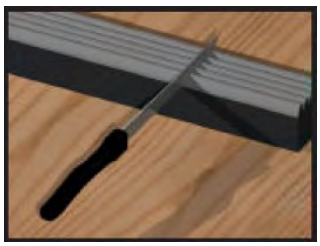
Material Preparation

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 sharp knife to cut the material square. All starting and ending pieces must be square to the termination point.



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

EMS, Inc * 13311 Main Road, Akron, NY 14001 * 716-542-3991 * sales@eriemetal.com * www.eriemetal.com

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 approximately 25% larger but never less than 12% larger than the intended joint opening.
    b. Joint depth must allow for the material to be recessed ¼" from the substrate surface.

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.

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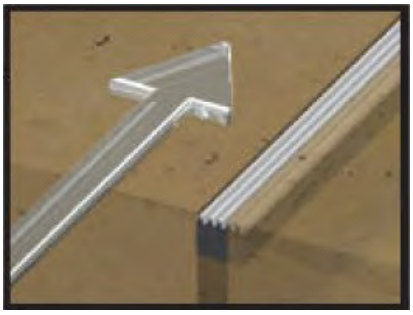
Sealant Installation

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 ½".
    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.

3. Use a blunt puddy knife or a margin trowel to compress the opposite side of the material and slide it into the joint.

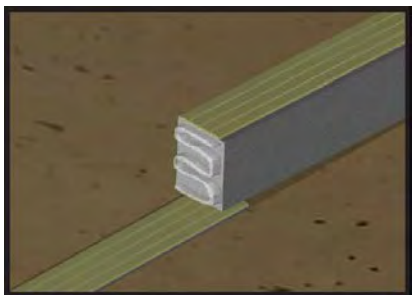
    WARNING: Use of sharp tools could cause damage to the joint sealant material. Be careful not to tear the material in the process of compressing it into the joint.

4. Continue to compress and work the material into the joint until the sides are approximately ¼" back from the substrate surface.

Seams

1. Verify that the new piece of material is cut square and not at an angle to the previous installed piece.

2. Overlap extra material (approximately ½" – 1") at seams and splices to ensure that the seam is in compression after installation.



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Seams

3. Apply silicone to the butt end of the new piece of material as well as a ¼" bead on both joint walls, inset ½"- ¾".

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

5. Tool the silicone over all seams and transitions using a small caulking tool.

   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.

Finish

1. Use the supplied silicone to run a bead along each edge of the joint to fill any irregularities in the substrate.

   WARNING: Do not allow the silicone or epoxy to cure before removal.

2. Evenly spread the silicone on exposed seams to allow for a clean, aesthetic finish. Verify that the silicone adhesive matches the color on the face of the joint sealant material.

   NOTE: The seal does not rely on the fillet bead to be watertight.

3. Remove any excess silicone left on the surface of the material or substrate.

4. Remove the duct tape from the joint surface.

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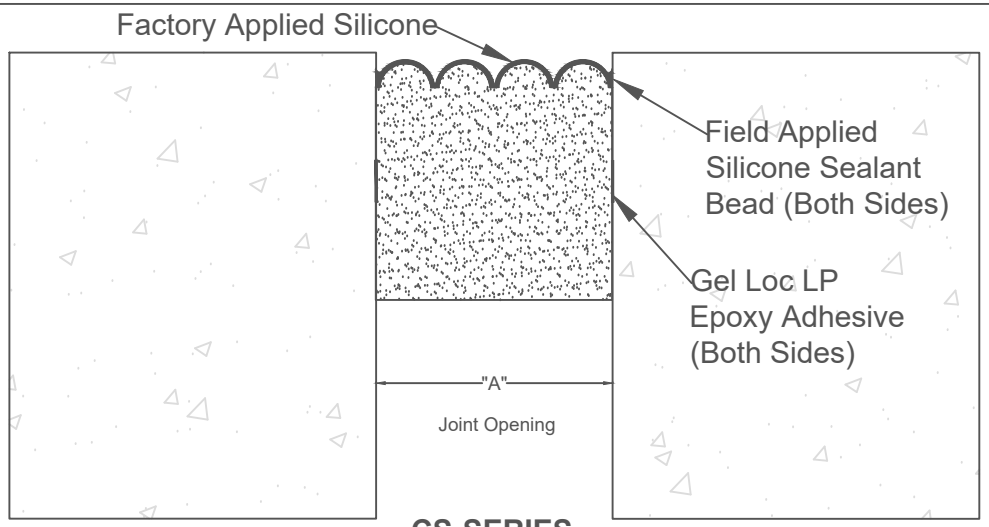


CS-SERIES

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

SEAL COLOR:
DOW 790:_____
PECORA 890:_____
SPECTRUM 1:_____

WALL-WALL/CORNER APPLICATION
MOVEMENT: +/- 25% NOMINAL JOINT WIDTH
STOCK LENGTHS: 5'-0"

PRODUCT	"A" Min. Width IN (MM)	"A" Mid Range IN (MM)	"A" Max. Width IN (MM)	Total Movement IN (MM)	Seal Depth IN (MM)
CS-050	0.25" (6.4)	0.50" (12.7)	0.75" (19.1)	0.50" (12.7)	1.50" (38.1)
CS-100	0.50" (12.7)	1.00" (25.4)	1.50" (38.1)	1.00" (25.4)	2.00" (50.8)
CS-150	0.75" (19.1)	1.50" (38.1)	2.25" (57.2)	1.50" (38.1)	2.00" (50.8)
CS-200	1.00" (25.4)	2.00" (50.8)	3.00" (76.2)	2.00" (50.8)	3.00" (76.2)
CS-250	1.25" (31.8)	2.50" (63.5)	3.75" (95.3)	2.50" (63.5)	3.00" (76.2)
CS-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

ERIE METAL SPECIALTIES
13311 Main Road * Akron * New York * 14001
Phone: (716) 542-3991 * Fax: (716) 542-3996 * E-mail: sales@eriemetal.com

PROJECT: N/A

TITLE: CS-Series Vertical 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	CS-1

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, CO2, 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^3 150 ppm STEL 560 mg/m^3 STEL	None

Engineering measures: Ensure adequate ventilation.

Personal Protective Equipment

General: Eye Wash and Safety Shower

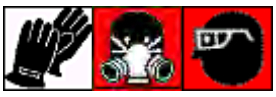
Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, a NIOSH/MSHA certified respirator with organic vapor/P100 filter should be worn.

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:

Physical state:	Paste
Color:	various
Odour:	Solvent, Characteristic
Boiling point/range (°C):	110.6
Boiling point/range (°F):	231
Vapour density:	Heavier than air
Vapour pressure:	Not determined
VOC Content Product (g/L)	388 g/L
VOC Content Product (lb/gal)	3.24
VOC less water and exempt (lb/gal)	3.24
VOC less water and exempt (g/L)	388
HAP Content Product (g/L):	388 g/L
Solubility:	Insoluble
Evaporation rate:	Slower than ether
pH:	NA
Flash Point (°C):	NA (Classified as a solid)
Flash point (°F):	NA (Classified as a solid)
Decomposition temperature:	Not determined
Auto-ignition temperature (°C):	Not determined
Density @ 15.5 ° C (g/cc) :	1.0
Bulk density @ 60 ° F (lb/gal):	8.35
Solids (% by weight):	58 - 62%
Volatiles (% by volume) :	42 - 46%
Partition coefficient (n-octanol/water, log Pow):	Not determined

Explosive properties:

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

* Indicates possible chronic heath 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

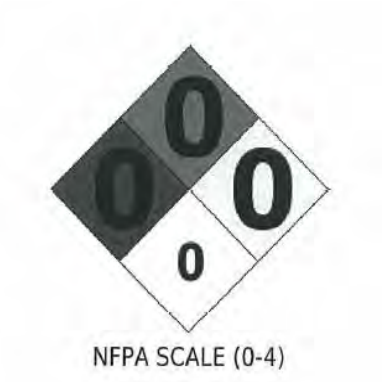
2.5. Precautionary Statements

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)

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)

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.

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 Section13

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/m3 (total) TWA 5 mg/m3 (resp)
13463-67-7, Titanium dioxide, ACGIH TLV: 10, OSHA PEL: 10
112945-52-5, Silica, amorphous, fumed, cryst.-free, ACGIH TLV
TWA:10mg/m3 (inhalable particles)
112945-52-5, Silica, amorphous, fumed, cryst.-free, OSHA PEL TWA: 15 mg/m3 (total dust)

Appropriate Engineering Controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. 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.
Respiratory protection	Not required under normal conditions of use. Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type NIOO (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 NIOO (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 NIOO (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 NIOO (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 NIOO (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
Skin protection	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. 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.
Eye Protection	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).
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing. Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing 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 rewearing 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.

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 (inoctanol/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

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

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

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 SOS 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

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) **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%
Attapulgite 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 oxiders 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.

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 (CaC03), or sodium bicarbonate (NaHC03). If dissolved, in region of 10 ppm 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/m3 (50 mppcf*)
ACGIH TLV TWA (inhalable particles) 10mg/m3
471-34-1, NIOSH REL: TWA 10mg/m3 (total) TWA 5 mg/m3 (resp)

Appropriate Engineering Controls	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
Respiratory protection	When necessary use NIOSH approved breathing equipment. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type NIOO (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. P2 filter respirator for harmful particles
Skin protection	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.
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.
General hygienic measures:	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 (inoctanol/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/cm3 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)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity:		
Oral:	IUCLID	LOSO Rat 6450 mg/kg
Dermal:	84852-15-3	Dermal LD50 Rabbit 2031 mg/kg
Oral:	84852-15-3	Oral LD50 Rat 580 mg/kg
Oral:	2,097 mg/kg	LD50 rat
Dermal:	866 mg/kg	LD50 rabbit
Chronic Toxicity:		
Inhalation:	Experimental carcinogenity 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.
Corrosion Irritation:		
Dermal: 12174-11-7		**Dermal:** May cause chemical mechanical irritation of the skin.
Ocular: 12174-11-7		May cause mechanical irritation of the eyes.
Sensitization:		12174-11-7: Can cause irritation to the respiratory tract.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		Acute Toxity Estimate (ATE) – oral: 2000 mg/kg
Carcinogenicity:		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.
Mutagenicity:		No additional information
Reproductive Toxicity:		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

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

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 SOS 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.