

**The Philadelphia Parking Authority
701 Market Street, Suite 5400
Philadelphia, PA 19106**

Bid No. 21-10

**Structural Repairs and Maintenance at the Autopark at The Fashion District
Addendum One**

To: See Email Distribution List
From: Mary Wheeler
Manager of Contract Administration
Date: April 5, 2021
No Pages: 2 plus Exhibit A

This addendum is issued on April 5, 2021 prior to the bid due date to add, delete, modify, clarify and/or to respond to questions submitted by prospective bidders regarding the work included in the above referenced solicitation.

MATERIAL SUBSTITUTION REQUESTS

1. Submittal package for an equal to the basis of design product called out in section 07 95 13; Expansion Joint Cover Assemblies is attached as Exhibit A.
Response: Substitution approved.

QUESTIONS

1. **Question:** Do we have to mail the bid if we're not one of the top three low bidders?
Response: Yes, all bidders must mail an original bid.
2. **Question:** Regarding subcontractors, do we have to list every subcontractor in every trade?
Response: All subcontractors that the prime plans to use must be listed in the bid.
3. **Question:** Regarding the apprenticeship certification, is that for every trade as well, or is that just for the general contractor?
Response: The requirement is for the prime bidder. However, the bidder can participate either directly or through its subcontractor.
4. **Question:** To submit our expansion joint material as an equal in an addendum, do I just send that to you during the question period?
Response: Yes.
5. **Question:** Can we get a copy of the slideshow?

Response: Yes, a copy of the slideshow has been added to the Dropbox where you downloaded the bid documents.

6. **Question:** The T-beam linkage removal on your section detail, VB, it shows two carbon fiber biscuits. Is it two per one or even if there's a couple in a row, will it always be two per one location?

Response: Two carbon fiber biscuits will be required for each individual linkage removal regardless of the adjacent linkage replacements.

END OF ADDENDUM ONE



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 _____

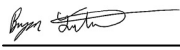
SUBSTITUTION REQUEST

(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:  _____

Firm: _____

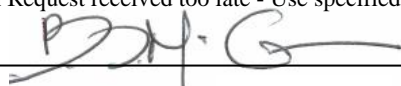
Address: _____

Telephone: _____

Attachments:

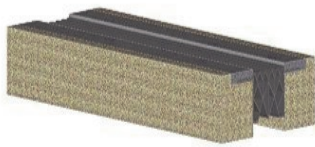
A/E's REVIEW AND ACTION

- 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: 4/5/21

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

CR-Series



Description

The Polycrete CR-Series Membrane System is designed for parking decks and open-air structures. It

features a preformed, elastomeric membrane, which is fusion-bonded to the concrete deck with Polycrete Elastomeric Concrete. Once installed, this system provides a watertight seal while flexing in response to fluctuations in joint width.

There are several sizes in the CR-Series group to accommodate different joint opening and movement capabilities.

The membrane incorporates a center section with a heavy-duty web structure and integral edge flaps with factory punched holes. The Polycrete penetrates the holes to secure the membrane to the base of the concrete block out. The center web configuration is precisely located to exert a continuous and uniform horizontal force against the joint walls.

The CR-Series shapes are specifically designed for applications where maintaining a smooth walking surface is important. A series of grooves across the top surface of the cross-section allows the seals to provide a virtually constant level surface during cyclic action.

Physical Properties

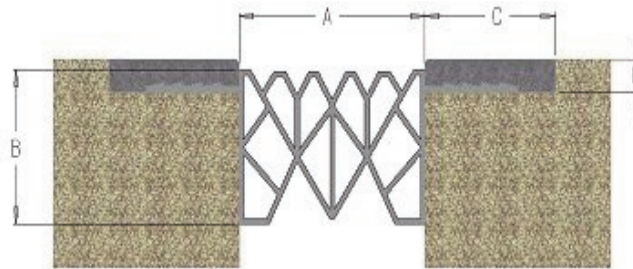
The system consists of two items: an elastomeric membrane and a field-cured header material.

The membrane is available in several sizes. It is an extruded shape made from an EPDM-based, thermo-rubber material (Santoprene®). The material's physical properties are as shown in Table 1.

The Polycrete consists of a combination of a resin mixture and a gradation of sands and aggregate sizes, blended per recommendations of the manufacturer. (See the Polycrete data sheet for further information and technical properties.)

TABLE 1 – Physical Properties of the EPDM-Based Thermo-Rubber Seal Element

Property	ASTM Test Method	Requirement
Tensile strength, min.	D412	1000 psi
Elongation at break, min.	D412	410%
Hardness, Type A durometer	D2240 (modified)	67 +/- 3
Compression set	D395 (Method B)	
168h @ 77°F		24%
168h @ 212°F		36%
Tear strength	D624	140 lb/in
Tension set	D412	10%
100% modulus	D412	420 psi
Specific gravity	D792	0.97
Brittle point	D746	< -81°F



PRODUCT	MIN. WIDTH IN (MM)	MID RANGE IN (MM)	MAX. WIDTH IN (MM)	TOTAL MOVEMENT IN (MM)	DIM. A: IN (MM)	DIM. B: IN (MM)	DIM. C: IN (MM)	DIM. D: IN (MM)
CR-200	0.75" (19)	1.38" (35)	2.00" (51)	1.25" (32)	2.00" (51)	1.75" (44)	3.50" (89)	0.75" (19)
CR-250	0.75" (19)	1.63" (41)	2.50" (64)	1.75" (44)	2.50" (64)	2.25" (57)	3.50" (89)	0.75" (19)
CR-300	1.00" (32)	2.00" (57)	3.00" (83)	2.00" (51)	3.25" (83)	2.75" (70)	3.50" (89)	0.75" (19)
CR-400	1.50" (38)	2.75" (70)	4.00" (102)	2.50" (64)	4.00" (102)	3.00" (76)	3.50" (89)	0.75" (19)
CR-500	1.75" (44)	3.38" (86)	5.00" (127)	3.25" (83)	5.00" (127)	3.50" (89)	3.50" (89)	0.75" (19)
CR-600	2.12" (54)	4.06" (103)	6.00" (152)	3.88" (99)	6.00" (152)	4.25" (108)	3.50" (89)	0.75" (19)

CR-Series

INSTALLATION INSTRUCTIONS

Material Preparation

1. Size block-out recess to $\frac{3}{4}$ " deep by 3-1/2" wide receiver on each side of the joint opening.
 2. Block-out receiver should be flat and level
 3. Deviations, spalls and irregularities should be addressed and repairs made in compliance with the manufacturer's specification.
 4. Weather conditions should be dry, no moisture (rain or water in block-out), temperature conditions 45° F to 90° F
-

Material Installation

1. Sandblast entire block-out recess surface.
2. The use of duct tape and protective paper adjacent to the block-out recess is highly recommended. This serves to protect the deck surface from accidental spillage and the tracking of liquid materials onto the deck surface. Install the CR-membrane into joint opening. Assure that the seal is completely seated in the joint opening.
3. Be sure that the wings of the seal are laying flat on the concrete recess surface. If the wings are bent up, lightly apply heat, causing them to lay flat. The use of a common weed burner and a propane tank should be used to accomplish this task.



Material Installation

- To mix the Polycrete 2020 bedding mix, pour part “B” into part “A”, mixing thoroughly. You may load the material into a bulk caulk gun. Place a 1” bead of Polycrete 2020 bedding mix to the area *under the corner of the wing and the seal body*. Then push the wing of the seal into the bedding, allowing material to “ooze” up through the holes in the seal. Spread out the remainder of the Polycrete 2020 to cover the entire recess surface including the vertical wall leg of the recess.

Wet to wet. Immediately after the bedding material is placed and you’re assured that the wings of the seal are flat and firmly bedded down. Mix and place the Polycrete 1600 header material over the top of the 2020 bedding while it is still wet.



- Pour the measured proportions of Polycrete 1600 (Parts A & B) into the 5 or 6 gallon mixing pail. Thoroughly mix the two components, approximately 1 minute. Begin to add sand (Part C) into the resins while the mixer is turning. It should take a minute to gradually add the sand to the mix. Make sure that all the sand particles are covered; there should be no sand pockets in the mix.
- Move the pail to the expansion joint and pour the material over the wings of the seal while the Polycrete 2020 is still wet. Take care not to overfill the joint recess. Overfilling of the recess wastes time and causes the excess poured material to be re-handled. This extra motion will take up precious placement time. At the termination ends of each pour, taper or ramp the Polycrete 1600 to receive the next batch.
- Use the tip end of the trowel to push the header mater into the side of the body of the seal. Work the material by compacting it into the joint recess and along the edge of the seal. Finish troweling the top of the material to suit your desired texture.



Material Installation



8. Repeat the process until the expansion joint is completely filled on both sides. After the expansion joint is completed, carefully remove the protective duct tape and protective paper. Do not leave this material in place during the cure, as it will not be easily removed if allowed to set overnight. Allow the material to develop full cure overnight or until header material is hard to the touch.

The finished effect is a flat smooth joint surface that will allow for the passage of vehicular and pedestrian traffic while providing a waterproof barrier to the area below.



SPECIFICATION

Division 079500
CR(NC)-Series Polycrete 1600/2020 [Ambient Cure] System

PART 1 - GENERAL

1.01 Summary

- A. Section includes: Furnishing of all materials, labor, and equipment necessary for the surface preparation and the installation of the sealed expansion joints in accordance with the details shown on the plans and these specifications. The designs for the deck condition utilize an extruded compression seal type CR(NC)-Series membrane shape fusion bonded to the concrete deck with Polycrete elastomeric concrete system. The design is arranged to flex in response to joint movement and to seal against the intrusion of water.
- B. Related Sections:
 - 1. Section 03300 - Cast-in-place concrete
 - 2. Section 07900 - Joint sealant

1.02 References

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM D412
 - 2. ASTM D2240
 - 3. ASTM D395
 - 4. ASTM D624
 - 5. ASTM D792
 - 6. ASTM D746

1.03 Quality Assurance

- A. Application qualifications: The manufacturer of the expansion joint will provide a technically qualified representative who will train the installer on the proper techniques for installing the expansion joint. Each installation will be registered and approved by the manufacturer.
- B. For the purpose of designating type and quality for work of this section, drawings and specifications are based on products manufactured or furnished by the manufacturer listed in Part 2 of this section. No other products will be considered for use.
- C. Execute work of this section by skilled, trained applicators conforming to installation methods and procedures in accordance with the manufacturer's printed instructions. The applicator must be approved by the manufacturer.
- D. Do not proceed with the work until surfaces to receive the expansion joints have been inspected by the engineer and approved by the manufacturer. Correct any deficiencies in the surfaces to receive the expansion joints, as recommended by the manufacturer and engineer.

- E. Do not proceed with the work when temperatures are below 40°F, expected to fall below 40°F, or above 90°F, unless approved in writing by the manufacturer.
- F. Manufacturer will have a minimum of five (5) years' experience specializing with elastomeric concrete.

1.04 Submittals

- A. Submit in accordance with this specification, unless otherwise indicated.
- B. Product Data: Manufacturer's specifications and technical data including the following:
 - 1. Manufacturer's installation instructions
 - 2. Certified test reports indicating compliance with performance requirements specified herein
- C. Shop Drawings: Indicate dimensioning, membrane size, model number, general construction, specific modifications, component connections, anchorage methods, and installation procedures, plus the following specific requirements:
 - 1. Temperature/Adjustment Table, indicating joint width at various temperatures
 - 2. Dimensions based on anticipated movement for the joint location, as supplied by the engineer
- D. Quality Control Submittals:
 - 1. Statement of Qualifications
 - 2. Design Data
 - 3. Test Reports
 - 4. Manufacturer's Field Reports
- E. Contract Close-out Submittals: In accordance with these Specifications, submit:
 - 1. Operating and Maintenance Manuals
 - 2. Warranty Documentation

1.05 Delivery, Storage and Handling

- A. Packing and Shipping: Deliver products in original, unopened packaging with labels and seals unbroken.
- B. Storage and Protection: Store materials in accordance with manufacturer's recommendations in area protected from weather, moisture, open flame, and sparks. Adhesive must be stored at temperatures between 40° F and 90° F.

1.06 Warranty

- A. Warranty will state that the material and installation of the joint system complies with requirements of the contract documents and the manufacturer’s printed instructions for installing the expansion joints.
- B. Warranty will state the responsibility of the installer/manufacturer to stand behind the installed system for the warranty period indicated and for the conditions listed below:
 - 1. Leakage of the parking deck system, including points in transition
 - 2. Abrasion and wear of the materials resulting from normal traffic loading
 - 3. Cracking of the elastomeric concrete material and de-bonding between it and the concrete

PART 2 - PRODUCTS

2.01 Manufacturers

- A. The winged compression seal type membrane shape will be the following:
 - 1. CR(NC)-Series Membrane profile as supplied by EMS, Inc., 13311 Main Road, Akron, NY 14001 Phone: (716) 542-3991 Fax: (716) 542-3996 Website: www.eriemetal.com
- B. Elastomeric Concrete header material will be the following:
 - 1. Polycrete 1600 Elastomeric Concrete by EMS, Inc., 13311 Main Road, Akron, NY 14001 Phone: (716) 542-3991 Fax: (716) 542-3996 Website: www.eriemetal.com
- C. Elastomeric Concrete bedding material will be the following:
 - 1. Polycrete 2020 Bedding Material by EMS, Inc., 13311 Main Road, Akron, NY 14001 Phone: (716) 542-3991 Fax: (716) 542-3996 Website: www.eriemetal.com

2.02 Components and Materials

- A. Elastomeric Membrane: The extruded configuration will be an EPDM-based, Thermoplastic Rubber material meeting the specifications prescribed in the manufacturer’s product data sheet and ASTM D2000. The material meets the following physical requirements:

<u>PHYSICAL PROPERTIES</u>	<u>TEST METHOD</u>	<u>TYPICAL VALUES</u>
Hardness, shore A duro.	ASTM D-2240	Thermoplastic Rubber
Specific gravity	ASTM D-792	67A
Tensile strength, psi	ASTM D-412	1000 psi
Ultimate elongation, %	ASTM D-412	410%
100% Modulus, psi	ASTM D-412	420 psi
Compression set, 168 hrs.	ASTM D-395 method B	24% @ 77°F 36% @ 212°F
Tension set, %	ASTM D-412	10%
Tear strength, pli	ASTM D-624	140 pli @ 77°F 75 pli @ 212°F
Brittle point	ASTM D-746	<-81°F

IMPORTANT! The thermoplastic rubber material can be heat-spliced to form transitions at the end conditions, around columns, etc. Any heat splicing to be done in the field will follow approved methods, as recommended by the manufacturer.

- B. Elastomeric Concrete: Polycrete 1600 is a fast-setting, elastomeric, 100% solid, two-component urethane/epoxy system. The resins are mixed with a pre-measured sand and stone combination to form the mortar mix.

<u>PHYSICAL PROPERTIES</u>	<u>TEST METHOD</u>	<u>REQUIREMENT</u>
Tensile strength, min.	ASTM D-412	2000 psi
Elongation @ break, min.	ASTM D-412	50 %
Hardness, Type A duro.	ASTM D-2240	85A
Solids content		100%
Tear strength, die C, min.	ASTM D-624	225pli
Abrasion resistance, loss per 1,000 cycles		.00035 oz.
Tensile adhesion, samples cured 5 days at 90°F 50% RH	ASTM C-501 (CS17 wheel)	400 psi (concrete fails)
Mixing ratio		1:1 (part A & B)
Pot life		10 - 12 minutes
Set time		4 - 8 hours

PART 3 - EXECUTION

3.01 Inspection

- A. Prior to installation of the expansion joint profile, the installer will visit the site and notify the proper authority in writing of any conditions, (done under other sections) which might be detrimental to the installation or performance of the expansion joint. Coordinate the installation with related work.

3.02 Preparation of Surfaces of Block-Out Recess in Deck

- A. Construct the block-out recess and joint opening to the dimensions shown in the manufacturer's literature. The width of the joint opening should comply with the dimension shown in the temperature/adjustment table on the contract plans. The anticipated movement should be within the movement limits of the CR(NC)-Series membrane size selected for use.
- B. All surfaces to receive the elastomeric concrete will be dry, clean, and sound concrete, free of loose, delaminated and spalled sections. Repair any sections that do not meet these criteria. The surfaces to receive the CR(NC)-Series System will be sandblasted to exposed aggregate. Sandblasting increases surface area to increase bond capacity of the elastomeric concrete and removes all laitance and other bond-inhibiting contaminants. Tape off the edges of the concrete along the recess to protect the deck surface from spillage.

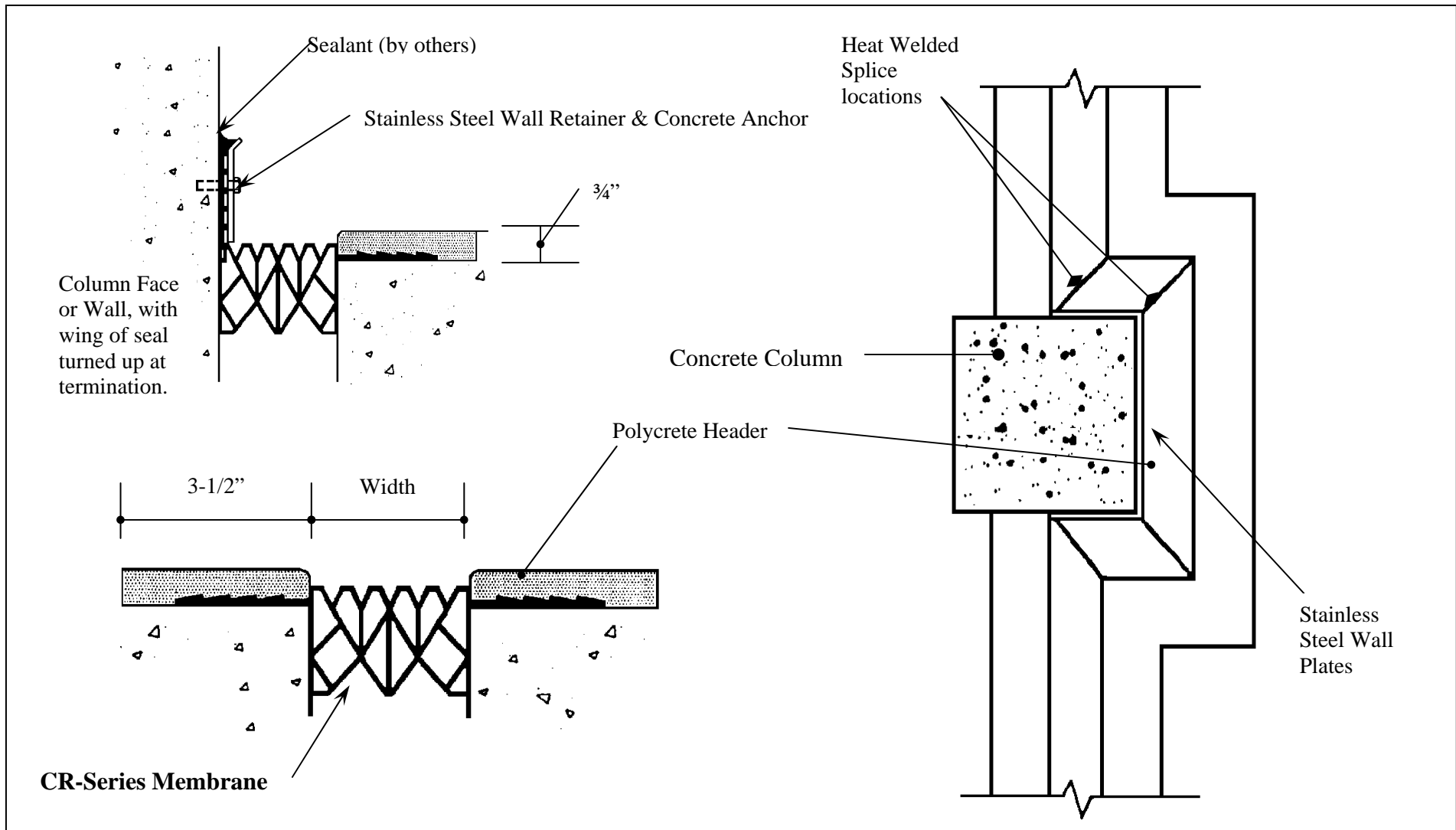
3.03 Installation

- A. Position the membrane over the open joint and press the bottom portion of the center section down between the concrete interfaces.
- B. Mix the Polycrete 2020 bedding material as per manufacturer's directions. You may load the material into a bulk caulk gun. Place a 1" bead of Polycrete 2020 bedding mix to the area *under the corner of the wing and the seal body*. Then push the wing of the seal into the bedding, allowing material to "ooze" up through the holes in the seal. Spread out the remainder of the Polycrete 2020 to cover the entire recess surface including the vertical wall of the recess.
- C. Use a large Jiffy mixer paddle, mix the two Polycrete 1600 resin components together. Assure that there is no sign of streaking and the color is consistent. Add the sand and stone mixture. Blend the ingredients until there are no signs of sand pockets in the mix.
- D. Immediately place the mortar mix over the top of the wings of the CR(NC)-Series membrane. Completely fill the recess area. Compact the material so that no signs of honeycombing can occur.
- E. Level off the Polycrete 1600 and trowel the finish smooth. For best results, keep the surface of the trowel wiped clean.
- F. Allow the Polycrete to air cure for 4 - 12 hours. Clean up the work area, removing all containers, any extra materials, debris, etc.
- G. Prevent traffic from crossing the joints until the entire assembly is firmly cured.


3.04 Field Quality Control

- A. Work, which does not conform to the specified requirements, will be corrected and/or replaced as directed by the manufacturer and engineer.
- B. Manufacturer/installer will supply guaranty/warranty to the owner authority, as required.

END OF SECTION



NO.	Description	Date	By
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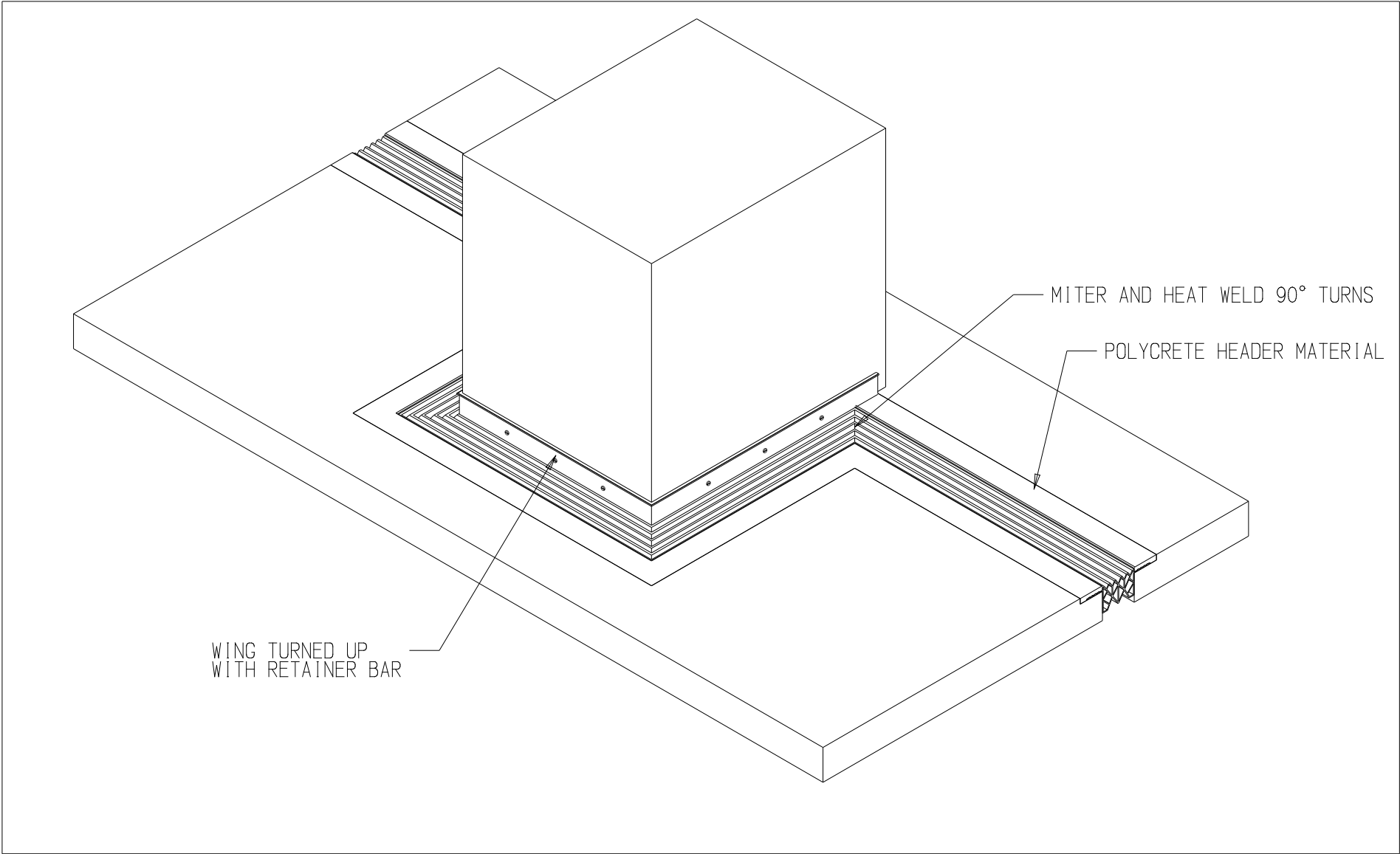


ERIE METAL SPECIALTIES

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

PROJECT:	
TITLE:	Standard Cross Sectional Views & Applications

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.: CD-900



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PROJECT:

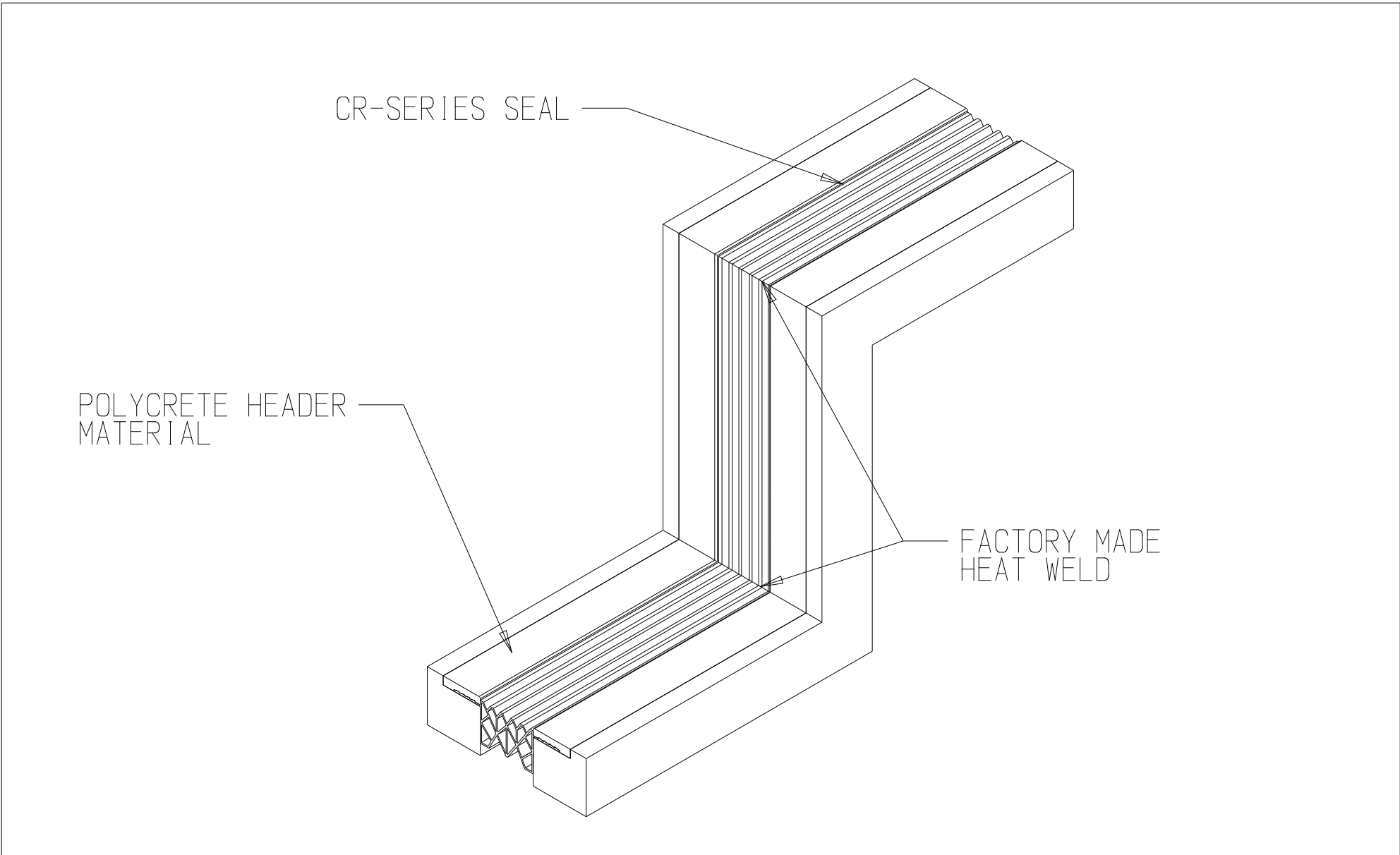
TITLE: CR-SERIES -COLUMN DETAIL

Detailed by: GMH	Date: 4-13-07
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Checked by:	Date: 4-13-07
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Scale: NTS	EMS Job #:
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Sheet #:	Drawing #:
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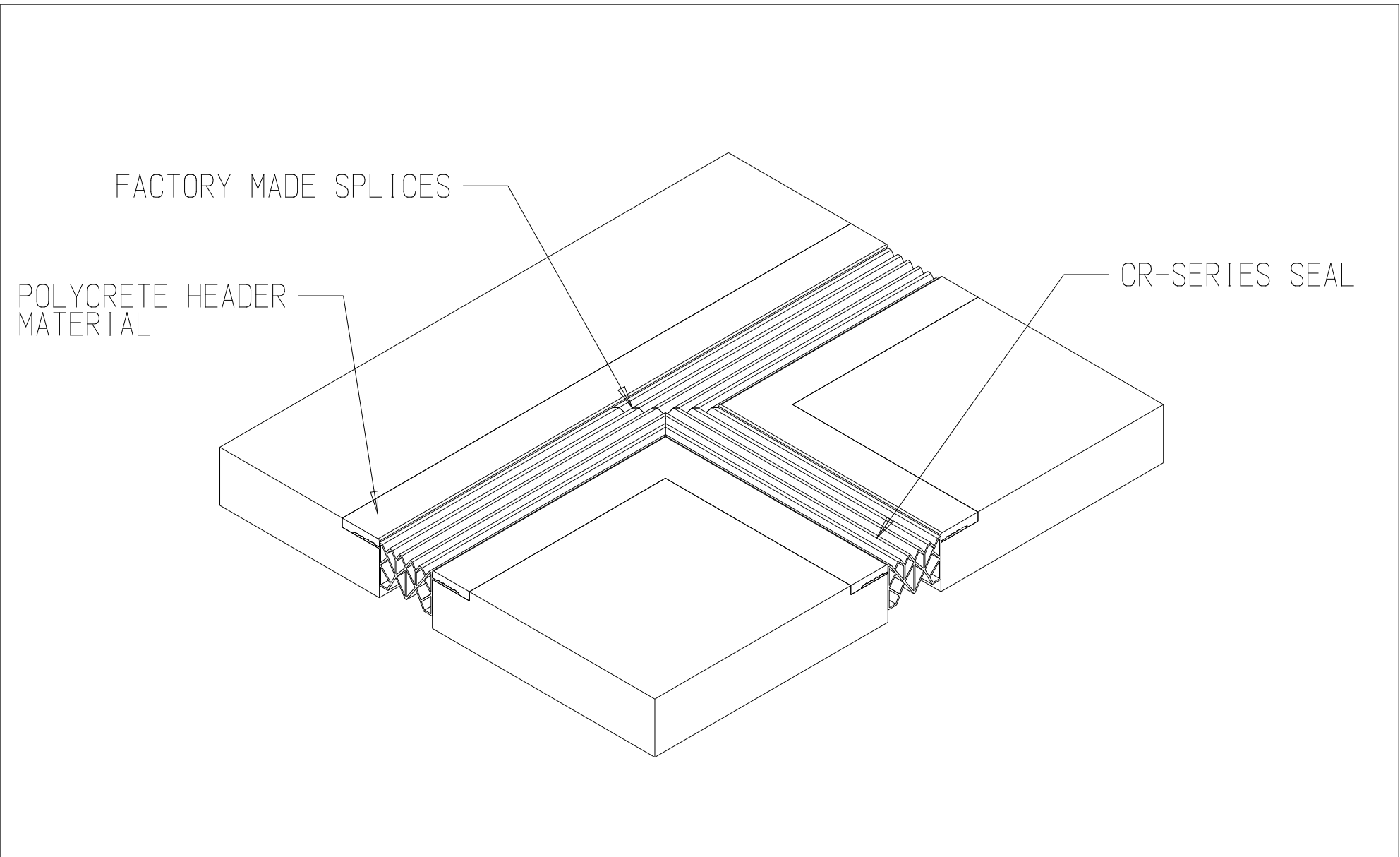


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PROJECT:

TITLE: CR-SERIES -CURB DETAIL

Detailed by: GMH	Date: 4-13-07
Checked by:	Date: 4-13-07
Scale: NTS	EMS Job #:
Sheet #:	Drawing #:



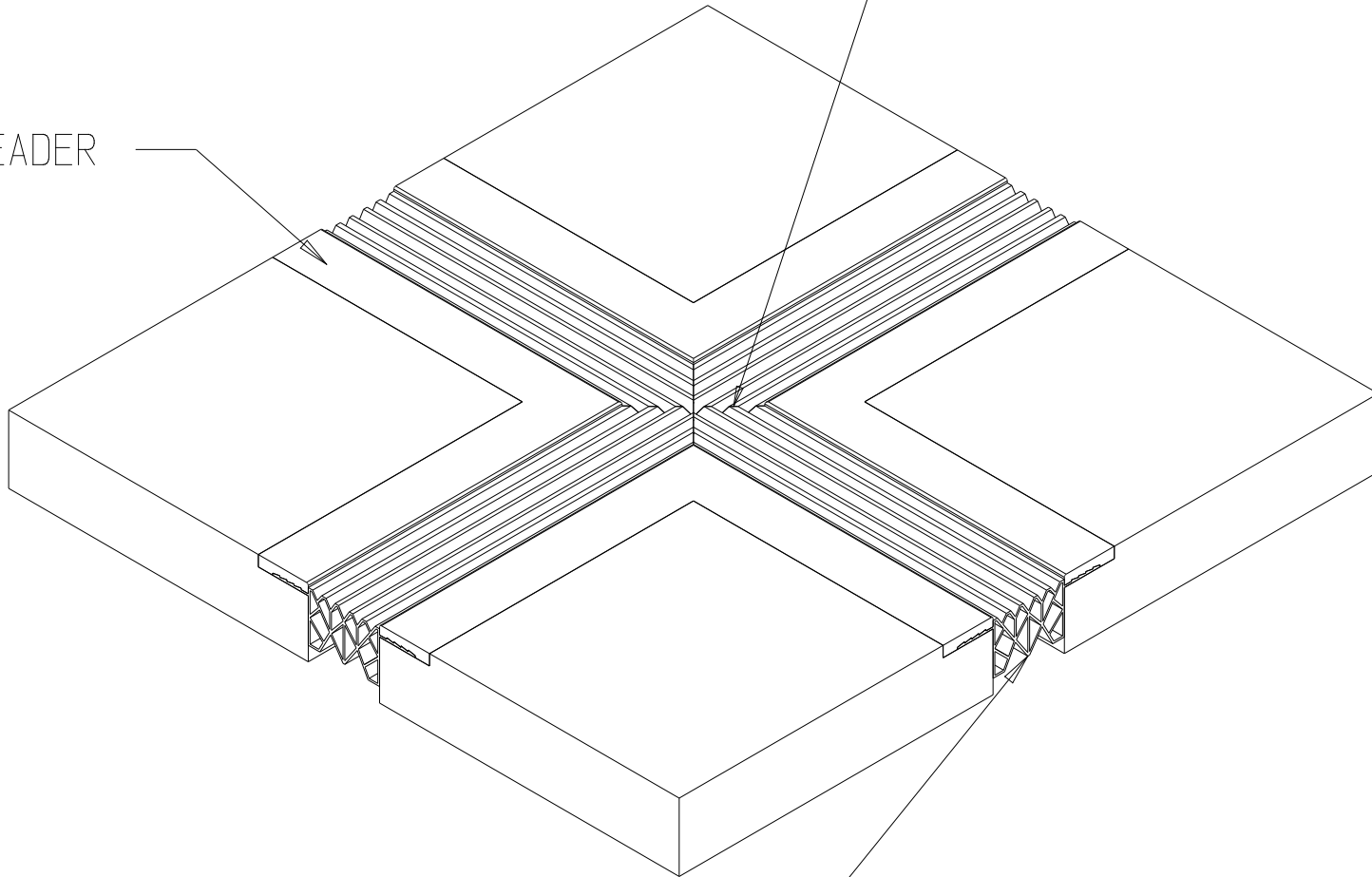
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PROJECT:
TITLE: CR-SERIES - T INTERSECTION DETAIL

Detailed by: GMH	Date: 4-13-07
Checked by:	Date: 4-13-07
Scale: NTS	EMS Job #:
Sheet #:	Drawing #:

POLYCRETE HEADER MATERIAL

FACTORY MADE
HEAT WELDS



CR-SERIES SEAL



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PROJECT:

TITLE: CR-SERIES - CROSS INTERSECTION DETAIL

Detailed by: GMH

Date: 4-13-07

Checked by:

Date: 4-13-07

Scale: NTS

EMS Job #:

Sheet #:

Drawing #:

MATERIAL SAFETY DATA SHEET

SECTION I – MATERIAL IDENTIFICATION

MATERIAL NAME: Polycrete 1600 - PART A

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

Chemical name: Epoxy
Trade Name: Polycrete 1600 - PART A
Material Use: Expansion Joint filler

Chemical Family: Epoxy
Chemical formula: N/A
Molecular Weight: N/A

SECTION II – HAZARDOUS INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Percent (wt)</u>	<u>LD50 (rat, oral)</u>
Epoxy Resins	25085-99-8	30-60%	5000 mg/kg
Blocked Polyurethane Resin	(unknown)	30-60%	N/E
Glycidyl ether	68609-97-2	5-10%	N/E

SECTION III – PHYSICAL DATA

- PHYSICAL STATE: Liquid
- ODOR/APPEARANCE: Clear, slight epoxy odor
- ODOR THRESHOLD (ppm): NE
- SPECIFIC GRAVITY: 1.08
- VAPOR PRESSURE (mm): N/A
- VAPOR DENSITY (air = 1): N/A
- EVAPORATION RATE: N/A
- BOILING POINT: N/A
- SOLUBILITY IN WATER: Insoluble
- FREEZING POINT: N/A
- % VOLATILE (volume): 0%
- PH: N/A
- COEFFICIENT OF WATER/OIL DISTRIBUTION: N/E

SECTION IV – FIRE AND EXPLOSION HAZARD

- FLAMABILITY: Non-Flammable
- UNDER WHICH CONDITIONS: N/A
- MEANS OF EXTINCTION: Foam, CO2, Dry Chemical
- SPECIAL PROCEDURES: None
- FLASH POINT (F°): >200° C
- UPPER EXPLOSION LIMIT: N/E
- LOWER EXPLOSION LIMIT: N/E
- AUTOIGNATION TEMPERATURE: N/A
- HAZARD COMBUSTION PRODUCTS: CO2, CO, Smoke
- SENSITIVITY TO: N/A
- MECHANICAL IMPACT: NONE
- STATIC DISCHARGE: NONE

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART A

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY: Stable
If no, under what conditions. N/A
INCOMPATIBILITY TO OTHER SUBSTANCES: No
If yes, which one's. None recognized
REACTIVITY & UNDER WHAT CONDITIONS: None by itself
• Reacts with aliphatic amines, causing irreversible polymerization.
HARARDOUS DECOMPOSITION PRODUCTS: CO₂, CO, phenolics

SECTION VI – TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE OF EXPOSURE:

SKIN CONTACT SKIN ABSOROTION EYE CONTACT
 INHALATION ACUTE INHALATION CHRONIC INGESTION

EFFECTS OF ACUTE EXPOSURE:

- EYES: May cause slight irritation
- SKIN: May cause slight irritation
- INHALATION: May cause headache, nausea
- INGESTION: May cause nausea, vomiting

EFFECTS OF CHRONIC EXPOSURE:

- Prolonged or repeated exposure may cause skin sensitization.

ADDITIONAL HEALTH INFORMATION:

LD50 OF MATERIAL: See - SECTION II
LC50 OF MATERIAL: N/E
EXPOSURE LIMITS: N/E
IRRITANCY OF MATERIAL: Slight, eye & skin irritation
SENSITIZATION OF MATERIAL: Possible
SYNERGISTIC MATERIAL: None known
CARCINOGENICITY: NO
REPRODUCTIVE EFFECTS: None known
TERATOGENICITY: NO
MUTAGENICITY: NO

SECTION VII – FIRST AID MEASURES

EYES: Flush with water for 15 minutes. Get to medical attention.
SKIN: Wash with soap and water.
INHALATION: Remove to fresh air.
INGESTION: Get to medical attention

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART A

SECTION VIII – SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES:	Impervious
EYE PROTECTION:	Chemical splash goggles
RESPIRATORY PROTECTION:	Organic vapor (if no ventilation)
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing to prevent skin contact
ENGINEERING CONTROLS:	General ventilation

SECTION IX – SPILL OR LEAK INFORMATION

ENVIRONMENTAL RELEASES:

- Use absorbent material to soak up spills.
- Collect in suitable containers.

WASTE DISPOSABLE:

- Dispose of in accordance with local regulations.

SECTION X – HANDLING & STORAGE INFORMATION

HANDLING PROCEDURES:

- Guard against skin & eye exposure.

STORAGE REQUIREMENTS:

- No special requirements
- Keep from freezing

SECTION XI – REGULATORY INFORMATION

WHMIS CLASSIFICATION:	D2B
TDGA CLASSIFICATION:	Not regulated
UN NUMBER:	Not regulated
TSCA: (USA)	All ingredients on TSCA inventory.
CPEA: (Canada)	All ingredients on DSL (domestic substances list)

SECTION XII – PREPARATION INFORMATION

PREPARED BY:	Larry Prouty
Telephone number:	(905) 564-6100

ABBREVIATION NOTES:

- N/A = Not applicable
- N/E = Not established

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART A

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:.....01/05/09

SUPERCEDES:.....10/09/08

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

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

MATERIAL NAME: Polycrete 1600 - PART B (FC – fast cure)

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

Chemical name: Amine
Trade Name: Polycrete 1600 - PART B
Material Use: Epoxy curing solutionChemical Family: Amine
Chemical formula: N/A
Molecular Weight: N/A**SECTION II – HAZARDOUS INGREDIENTS**

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Percent (wt)</u>	<u>LD50 (rat, oral)</u>
Cyclohexanamine Resin	6864-37-5	60 – 100%	550 mg/kg

SECTION III – PHYSICAL DATA

PHYSICAL STATE	Liquid
ODOR/APPEARANCE:	Clear, slightly yellowish liquid, amine odor
ODOR THRESHOLD (ppm):	NE
SPECIFIC GRAVITY:	0.95
VAPOR PRESSURE (mm)	N/A
VAPOR DENSITY (air = 1):	N/A
EVAPORATION RATE:	N/A
BOILING POINT:	200° C
SOLUBILITY IN WATER	Insoluble
FREEZING POINT:	< 10° C
% VOLATILE (volume):	0%
PH:	N/A
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N/E

SECTION IV – FIRE AND EXPLOSION HAZARD

FLAMABILITY:	Non-Flammable
UNDER WHICH CONDITIONS:	N/A
MEANS OF EXTINCTION:	Foam, CO2, Dry Chemical
SPECIAL PROCEDURES:	N/A
FLASH POINT (F°):	175° C
UPPER EXPLOSION LIMIT:	N/E
LOWER EXPLOSION LIMIT:	N/E
AUTOIGNITION TEMPERATURE:	N/A
HAZARD COMBUSTION PRODUCTS:	CO2, CO, Smoke
SENSITIVITY TO:	NO
MECHANICAL IMPACT:	NONE
STATIC DISCHARGE:	NONE

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART B (FC – fast cure)

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY:	Stable
If no, under what conditions.	N/A
INCOMPATIBILITY TO OTHER SUBSTANCES:	YES
If yes, which one's.	Acids
REACTIVITY & UNDER WHAT CONDITIONS:	None by itself
• Reacts with acids, epoxy compounds	
HARARDOUS DECOMPOSITION PRODUCTS:	CO2, CO, nitrous oxides

SECTION VI – TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE OF EXPOSURE:

<input checked="" type="checkbox"/> SKIN CONTACT	<input checked="" type="checkbox"/> SKIN ABSOROTION	<input checked="" type="checkbox"/> EYE CONTACT
<input checked="" type="checkbox"/> INHALATION ACUTE	<input checked="" type="checkbox"/> INHALATION CHRONIC	<input checked="" type="checkbox"/> INGESTION

EFFECTS OF ACUTE EXPOSURE:

- EYES: Severe eye irritation
- SKIN: Corrosive to skin
- INHALATION: May cause burns to respiratory tract
- INGESTION: May cause burns to mouth & throat

EFFECTS OF CHRONIC EXPOSURE:

- May cause skin and/or respiratory sensitization.

ADDITIONAL HEALTH INFORMATION:

LD50 OF MATERIAL:	See - <u>SECTION II</u>
LC50 OF MATERIAL:	N/E
EXPOSURE LIMITS:	N/E
IRRITANCY OF MATERIAL:	Severe, eye & skin irritation
SENSITIZATION OF MATERIAL:	Skin & respiratory sensitization
SYNERGISTIC MATERIAL	None known
CARCINOGENICITY:	NO
REPRODUCTIVE EFFECTS:	None known
TERATOGENICITY:	NO
MUTAGENICITY:	NO

SECTION VII – FIRST AID MEASURES

EYES:	Immediately flush with water for 30 minutes. Get to medical attention.
SKIN:	Immediately flush with water for 15 minutes. Get medical attention.
INHALATION:	Remove to fresh air. If irritation persists, get to medical attention.
INGESTION:	Do not induce vomiting. Give large amounts of water if patient is conscious. Get to medical attention
ADDITIONAL INFORMATION:	Remove and wash contaminated clothing before reuse. Destroy contaminated shoes.

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART B (FC – fast cure)

SECTION VIII – SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES:	Impervious
EYE PROTECTION:	Chemical splash goggles
RESPIRATORY PROTECTION:	Organic vapor, or full face respirator
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing to prevent skin contact
ENGINEERING CONTROLS:	General ventilation

SECTION IX – SPILL OR LEAK INFORMATION

ENVIRONMENTAL RELEASES:

- Use absorbent material to soak up spills.
- Collect in suitable containers.

WASTE DISPOSABLE:

- Dispose of in accordance with local regulations.

SECTION X – HANDLING & STORAGE INFORMATION

HANDLING PROCEDURES:

- Guard against skin & eye exposure.

STORAGE REQUIREMENTS:

- Keep in a cool dry place & well ventilated location
- Keep containers tightly sealed
- Do not allow to freeze

SECTION XI – REGULATORY INFORMATION

WHMIS CLASSIFICATION:	D2B, E
TDGA CLASSIFICATION:	Class 8, packing group III
UN NAME:	Dimethylmethylenedicyclohexanamine
UN NUMBER:	UN 2735
TSCA: (USA)	All ingredients on TSCA inventory.
CPEA: (Canada)	All ingredients on DSL (domestic substances list)

SECTION XII – PREPARATION INFORMATION

PREPARED BY:	Larry Prouty
Telephone number:	(905) 564-6100

ABBREVIATION NOTES:

- N/A = Not applicable
- N/E = Not established
- FC = Fast Cure

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART B (FC – fast cure)

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:.....01/05/09

SUPERCEDES:.....10/09/08

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

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

MATERIAL NAME: Polycrete 1600 - PART C (Sand)

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

Chemical name: Silica
Trade Name: Polycrete 1600
Material Use: Expansion Joint fillerChemical Family: Silica
Chemical formula: Si O₂
Molecular Weight: N/A**SECTION II – HAZARDOUS INGREDIENTS**

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Percent (wt)</u>	<u>LD50 (rat, oral)</u>
Crystalline silica	14808-60-7	60-100%	NE

SECTION III – PHYSICAL DATA

PHYSICAL STATE	Solid
ODOR/APPEARANCE:	Odorless, dry aggregate mix
ODOR THRESHOLD (ppm):	NE
SPECIFIC GRAVITY:	2.7
VAPOR PRESSURE (mm)	N/A
VAPOR DENSITY (air = 1):	N/A
EVAPORATION RATE:	N/A
BOILING POINT:	N/A
SOLUBILITY IN WATER	Insoluble
FREEZING POINT:	N/A
% VOLATILE (volume):	0%
PH:	N/A
COEFFICIENT OF WATER/OIL DISTRIBUTION:	NE

SECTION IV – FIRE AND EXPLOSION HAZARD

FLAMABILITY:	Non-Flammable
UNDER WHICH CONDITIONS:	N/A
MEANS OF EXTINCTION:	N/A
SPECIAL PROCEDURES:	N/A
FLASH POINT (F°):	NONE
UPPER EXPLOSION LIMIT:	N/A
LOWER EXPLOSION LIMIT:	N/A
AUTOIGNITION TEMPERATURE:	N/A
HAZARD COMBUSTION PRODUCTS:	N/A
SENSITIVITY TO:	NO
MECHANICAL IMPACT:	NONE
STATIC DISCHARGE:	NONE

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART C

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY:	Stable
If no, under what conditions.	N/A
INCOMPATIBILITY TO OTHER SUBSTANCES:	No
If yes, which one's.	None recognized
REACTIVITY & UNDER WHAT CONDITIONS:	Reacts with hydrofluoric acid to generate the volatile corrosive gas SiF ₄
HARARDOUS DECOMPOSITION PRODUCTS:	None

SECTION VI – TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE OF EXPOSURE:

<input checked="" type="checkbox"/> SKIN CONTACT	<input checked="" type="checkbox"/> SKIN ABSOROTION	<input checked="" type="checkbox"/> EYE CONTACT
<input checked="" type="checkbox"/> INHALATION ACUTE	<input checked="" type="checkbox"/> INHALATION CHRONIC	<input checked="" type="checkbox"/> INGESTION

EFFECTS OF ACUTE EXPOSURE:

- EYES/SKIN: May cause slight irritation
- INHALATION: May cause slight irritation

EFFECTS OF CHRONIC EXPOSURE:

- Prolonged or repeated exposure may cause scarring of the lungs with cough and shortness of breath. A delayed injury, silicosis, may result from breathing free silica. Crystalline silica has been classified by international agency for research on cancer (IARC) as 2A – probable carcinogenic to humans.

ADDITIONAL HEALTH INFORMATION:

LD50 OF MATERIAL:	See - <u>SECTION II</u>
LC50 OF MATERIAL:	N/E
EXPOSURE LIMITS:	0.1 mg/m ³ (for crystalline silica)
IRRITANCY OF MATERIAL:	NO
SENSITIZATION OF MATERIAL:	NO
SYNERGISTIC MATERIAL	None known
CARCINOGENICITY:	YES, SEE ABOVE
REPRODUCTIVE EFFECTS:	None known
TERATOGENICITY:	NO
MUTAGENICITY:	NO

SECTION VII – FIRST AID MEASURES

EYES:	Flush with water. Get to medical attention if irritation persists.
SKIN:	Wash with soap and water.
INHALATION:	Remove to fresh air.
INGESTION:	Get to medical attention

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART C

SECTION VIII – SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES:	Adequate to protect from abrasive products.
EYE PROTECTION:	Safety glasses
RESPIRATORY PROTECTION:	Dust mask (or approved respirator if TLV exceeds 0.1 mg/m ³).
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing.
ENGINEERING CONTROLS:	General ventilation to keep dust levels below the recommended TLV of mg/m ³ .

SECTION IX – SPILL OR LEAK INFORMATION

ENVIRONMENTAL RELEASES:

- Sweep up spills.
- Collect in suitable containers.

WASTE DISPOSABLE:

- Dispose of in accordance with local regulations.

SECTION X – HANDLING & STORAGE INFORMATION

HANDLING PROCEDURES:

- Guard against inhalation of dust.

STORAGE REQUIREMENTS:

- None

SECTION XI – REGULATORY INFORMATION

WHMIS CLASSIFICATION:	D2A
TDGA CLASSIFICATION:	Not regulated
UN NUMBER:	Not regulated
TSCA: (USA)	All ingredients on TSCA inventory.
CPEA: (Canada)	All ingredients on DSL (domestic substances list)

SECTION XII – PREPARATION INFORMATION

PREPARED BY:	Larry Prouty
Telephone number:	(905) 564-6100

ABBREVIATION NOTES:

- N/A = Not applicable
- N/E = Not established

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 1600 - PART C

SECTION XIII – U.S. REGULATORY INFORMATION:

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ISSUE DATE:.....01/05/09

SUPERCEDES:.....10/09/08

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

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

MATERIAL NAME: Polycrete 2020 Bedding - PART A (white)

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

Chemical name: N/A
Trade Name: Polycrete 2020 Bedding - PART A
Material Use: AdhesiveChemical Family: Mixture
Chemical formula: N/A
Molecular Weight: N/A**SECTION II – HAZARDOUS INGREDIENTS**

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Percent (wt)</u>	<u>LD50 (rat, oral)</u>
Epoxy Resins	25068-38-6	30-60%	11,400 mg/kg
Butyl glycidyl ether	2426-08-6	1-5%	2,050 mg/kg

SECTION III – PHYSICAL DATA

- PHYSICAL STATE: Thick paste
- ODOR/APPEARANCE: White, slight epoxy odor
- ODOR THRESHOLD (ppm): NE
- SPECIFIC GRAVITY: 1.5
- VAPOR PRESSURE (mm): N/A
- VAPOR DENSITY (air = 1): N/A
- EVAPORATION RATE: N/A
- BOILING POINT: N/E
- SOLUBILITY IN WATER: Insoluble
- FREEZING POINT: N/A
- % VOLATILE (volume): 0%
- PH: N/A
- COEFFICIENT OF WATER/OIL DISTRIBUTION: N/E

SECTION IV – FIRE AND EXPLOSION HAZARD

- FLAMABILITY: Non-Flammable
- UNDER WHICH CONDITIONS: N/A
- MEANS OF EXTINCTION: Foam, CO2, Dry Chemical
- SPECIAL PROCEDURES: None
- FLASH POINT (F°): >249° C
- UPPER EXPLOSION LIMIT: N/E
- LOWER EXPLOSION LIMIT: N/E
- AUTOIGNITION TEMPERATURE: N/A
- HAZARD COMBUSTION PRODUCTS: CO2, CO, Smoke
- SENSITIVITY TO: N/A
- MECHANICAL IMPACT: NONE
- STATIC DISCHARGE: NONE

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 2020 - PART A

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY:	Stable
If no, under what conditions.	N/A
INCOMPATIBILITY TO OTHER SUBSTANCES:	NO
If yes, which one's.	No one recognized
REACTIVITY & UNDER WHAT CONDITIONS:	None by itself
• Reacts with aliphatic amines, causing irreversible polymerization.	
HARARDOUS DECOMPOSITION PRODUCTS:	CO ₂ , CO, phenolics

SECTION VI – TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE OF EXPOSURE:

<input checked="" type="checkbox"/> SKIN CONTACT	<input checked="" type="checkbox"/> SKIN ABSOROTION	<input checked="" type="checkbox"/> EYE CONTACT
<input checked="" type="checkbox"/> INHALATION ACUTE	<input checked="" type="checkbox"/> INHALATION CHRONIC	<input checked="" type="checkbox"/> INGESTION

EFFECTS OF ACUTE EXPOSURE:

- EYES: May cause slight eye irritation
- SKIN: May cause slight irritation to skin
- INHALATION: May cause headache, nausea
- INGESTION: May cause nausea & vomiting

EFFECTS OF CHRONIC EXPOSURE:

- Prolonged or repeated exposure may cause skin sensitization.

ADDITIONAL HEALTH INFORMATION:

LD50 OF MATERIAL:	See - <u>SECTION II</u>
LC50 OF MATERIAL:	N/E
EXPOSURE LIMITS:	N/E
IRRITANCY OF MATERIAL:	Slight, eye & skin irritation
SENSITIZATION OF MATERIAL:	Possible
SYNERGISTIC MATERIAL	None known
CARCINOGENICITY:	NO
REPRODUCTIVE EFFECTS:	None known
TERATOGENICITY:	NO
MUTAGENICITY:	May cause mutagenicity effects

SECTION VII – FIRST AID MEASURES

EYES:	Flush with water for 15 minutes. Get to medical attention.
SKIN:	Wash with soap and water.
INHALATION:	Remove to fresh air.
INGESTION:	Get to medical attention

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 2020 - PART A

SECTION VIII – SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES:	Impervious
EYE PROTECTION:	Chemical splash goggles
RESPIRATORY PROTECTION:	Organic vapor (id no ventilation)
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing to prevent skin contact
ENGINEERING CONTROLS:	General ventilation

SECTION IX – SPILL OR LEAK INFORMATION

ENVIROMENTAL RELEASES:

- Use absorbent material to soak up spills.
- Collect in suitable containers.

WASTE DISPOSABLE:

- Dispose of in accordance with local regulations.

SECTION X – HANDLING & STORAGE INFORMATION

HANDLING PROCEDURES:

- Guard against skin & eye exposure.

STORAGE REQUIREMENTS:

- Do not allow to freeze

SECTION XI – REGULATORY INFORMATION

WHMIS CLASSIFICATION:	D2B
TDGA CLASSIFICATION:	Not regulated
UN NAME:	Not regulated
UN NUMBER:	Not regulated
TSCA: (USA)	All ingredients on TSCA inventory.
CPEA: (Canada)	All ingredients on DSL (domestic substances list)

SECTION XII – PREPARATION INFORMATION

PREPARED BY:	Larry Prouty
Telephone number:	(905) 564-6100

ABBREVIATION NOTES:

- N/A = Not applicable
- N/E = Not established



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MATERIAL SAFETY DATA SHEET

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MATERIAL NAME: Polycrete 2020 - PART A

SECTION XIII – U.S. REGULATORY INFORMATION:

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ISSUE DATE:.....01/05/09

SUPERCEDES:.....10/09/08

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

MATERIAL SAFETY DATA SHEET

SECTION I – MATERIAL IDENTIFICATION

MATERIAL NAME: Polycrete 2020 Bedding - PART B (black)

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

Chemical name: N/A
Trade Name: Polycrete 2020 Bedding - PART B
Material Use: Epoxy curing pastes

Chemical Family: Mixture
Chemical formula: N/A
Molecular Weight: N/A

SECTION II – HAZARDOUS INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Percent (wt)</u>	<u>LD50 (rat, oral)</u>
Polyamide Resin	68082-29-1	10-30%	N/E
Triethylene Tetramine	112-24-3	10-30%	2,500 mg/kg

SECTION III – PHYSICAL DATA

PHYSICAL STATE	Thick paste
ODOR/APPEARANCE:	Black, amine odor
ODOR THRESHOLD (ppm):	NE
SPECIFIC GRAVITY:	1.5
VAPOR PRESSURE (mm)	N/A
VAPOR DENSITY (air = 1):	N/A
EVAPORATION RATE:	N/A
BOILING POINT:	N/E
SOLUBILITY IN WATER	Slightly miscible
FREEZING POINT:	N/A
% VOLATILE (volume):	0%
PH:	N/A
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N/E

SECTION IV – FIRE AND EXPLOSION HAZARD

FLAMABILITY:	Non-Flammable
UNDER WHICH CONDITIONS:	N/A
MEANS OF EXTINCTION:	Foam, CO ₂ , Dry Chemical
SPECIAL PROCEDURES:	None
FLASH POINT (F°):	118° C
UPPER EXPLOSION LIMIT:	N/E
LOWER EXPLOSION LIMIT:	N/E
AUTOIGNITION TEMPERATURE:	N/E
HAZARD COMBUSTION PRODUCTS:	CO ₂ , CO, Smoke
SENSITIVITY TO:	N/A
MECHANICAL IMPACT:	NONE
STATIC DISCHARGE:	NONE

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 2020 Bedding - PART B (black)

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY:	Stable
If no, under what conditions.	N/A
INCOMPATIBILITY TO OTHER SUBSTANCES:	YES
If yes, which one's.	Oxidizing agents, aldehydes, ketones, acrylates
REACTIVITY & UNDER WHAT CONDITIONS:	None by itself
• Reacts with oxidizing agents, bases, epoxy compounds.	
HARARDOUS DECOMPOSITION PRODUCTS:	CO ₂ , CO, nitrous oxides

SECTION VI – TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE OF EXPOSURE:

<input checked="" type="checkbox"/> SKIN CONTACT	<input checked="" type="checkbox"/> SKIN ABSOROTION	<input checked="" type="checkbox"/> EYE CONTACT
<input checked="" type="checkbox"/> INHALATION ACUTE	<input checked="" type="checkbox"/> INHALATION CHRONIC	<input checked="" type="checkbox"/> INGESTION

EFFECTS OF ACUTE EXPOSURE:

- EYES: Severe eye irritation
- SKIN: Corrosive to skin
- INHALATION: Severe irritation
- INGESTION: May cause burns to mouth & throat

EFFECTS OF CHRONIC EXPOSURE:

- May cause skin and/or respiratory sensitization.

ADDITIONAL HEALTH INFORMATION:

LD50 OF MATERIAL:	See - <u>SECTION II</u> (not established for this product)
LC50 OF MATERIAL:	N/E
EXPOSURE LIMITS:	N/E
IRRITANCY OF MATERIAL:	Severe, eye & skin irritation
SENSITIZATION OF MATERIAL:	Skin & respiratory sensitization
SYNERGISTIC MATERIAL	None known
CARCINOGENICITY:	NO
REPRODUCTIVE EFFECTS:	None known
TERATOGENICITY:	NO
MUTAGENICITY:	NO

SECTION VII – FIRST AID MEASURES

EYES:	Immediately flush with water for 30 minutes. Get to medical attention.
SKIN:	Immediately flush with water for 15 minutes. Get medical attention.
INHALATION:	Remove to fresh air. If irritation persists, get to medical attention.
INGESTION:	Do not induce vomiting. Give large amounts of water if patient is conscious. Get to medical attention
ADDITIONAL INFORMATION:	Remove and wash contaminated clothing before reuse. Destroy contaminated shoes.

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 2020 Bedding - PART B (black)

SECTION VIII – SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES:	Impervious
EYE PROTECTION:	Chemical splash goggles
RESPIRATORY PROTECTION:	Organic vapor, or full face respirator
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing to prevent skin contact
ENGINEERING CONTROLS:	General ventilation

SECTION IX – SPILL OR LEAK INFORMATION

ENVIRONMENTAL RELEASES:

- Use absorbent material to soak up spills.
- Collect in suitable containers.

WASTE DISPOSABLE:

- Dispose of in accordance with local regulations.

SECTION X – HANDLING & STORAGE INFORMATION

HANDLING PROCEDURES:

- Guard against skin & eye exposure. Ground all transfer equipment.
- Tubing of copper and copper alloys are quickly corroded by this product.

STORAGE REQUIREMENTS:

- Do not allow to freeze

SECTION XI – REGULATORY INFORMATION

WHMIS CLASSIFICATION:	D1B, D2B, E
TDGA CLASSIFICATION:	Class 8, packing group III
UN NAME:	N/A
UN NUMBER:	UN 1760
TSCA: (USA)	All ingredients on TSCA inventory.
CPEA: (Canada)	All ingredients on DSL (domestic substances list)

SECTION XII – PREPARATION INFORMATION

PREPARED BY:	Larry Prouty
Telephone number:	(905) 564-6100

ABBREVIATION NOTES:

- N/A = Not applicable
- N/E = Not established

MATERIAL SAFETY DATA SHEET

MATERIAL NAME: Polycrete 2020 - PART B

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:.....01/05/09

SUPERCEDES:.....10/09/08

PREPARED BY: Erie Metal Specialties, Inc.
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