



# 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)

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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:

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### A/E's REVIEW AND ACTION

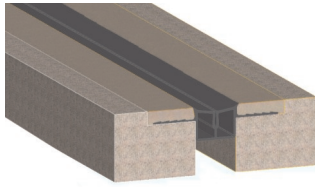
- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution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

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

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

# DW-Series



## Description

The Polycrete DW-Series Membrane System is designed for parking deck and open-air structures. It features a preformed

elastomeric membrane that 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.

The membrane incorporates a center section with a heavy-duty web structure and integral edge flaps with factory-punched holes. The Polycrete mixture penetrates the holes in the edge flaps and secures the part to the base of the concrete block-out.

The DW-Series shapes are specifically designed for applications where a smooth walking surface is required. Due to the special action of the top (horizontal) and center (vertical) webs of the cross-section, the seals provide a nearly constantly level surface during cyclic action.

**LEED Credits** - Up to two (2) LEED credits depending on the location of the project.

## Physical Properties

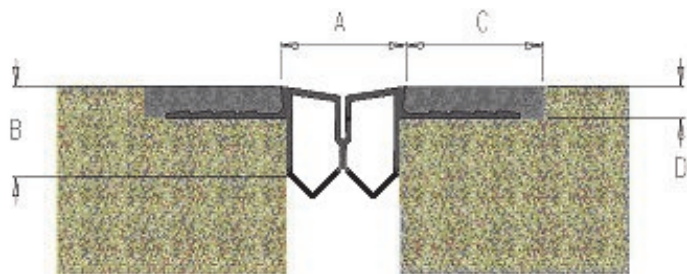
The system consists of two items: an elastomeric membrane and a field-cured header and bedding material.

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
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 MOVE- MENT IN (MM)	DIM. A: IN (MM)	DIM. B: IN (MM)
DW-150	0.75" (19)	1.00" (25)	3.00" (76)	2.25" (57)	1.50" (38.1)	1.81" (46)
DW-250	1.00" (25)	2.00" (51)	4.00" (102)	3.00" (76)	2.50" (63.5)	2.25" (57)
DW-350	1.25" (32)	3.00" (76)	5.00" (127)	3.75" (95)	3.50" (88.9)	2.25" (57)



# DW-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.

### 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 DW-membrane into joint opening. Assure that the seal is completely seated in the joint opening.

To apply the Polycrete 2020 bedding material, load the mixed material into a bulk caulking gun. Cut a 1" hole in the plastic tip of the caulk gun and dispense a continuous 1" round bead of bedding under the wing of the seal.



Figure 1



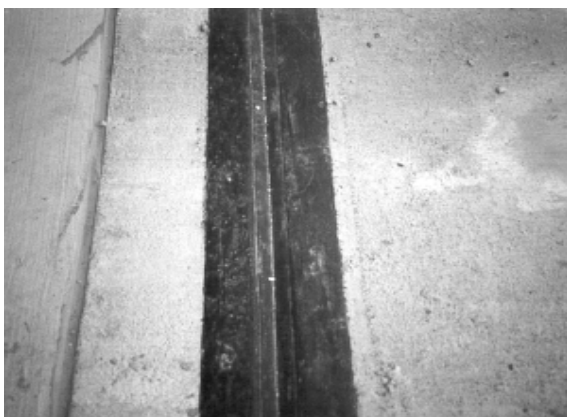
Figure 2

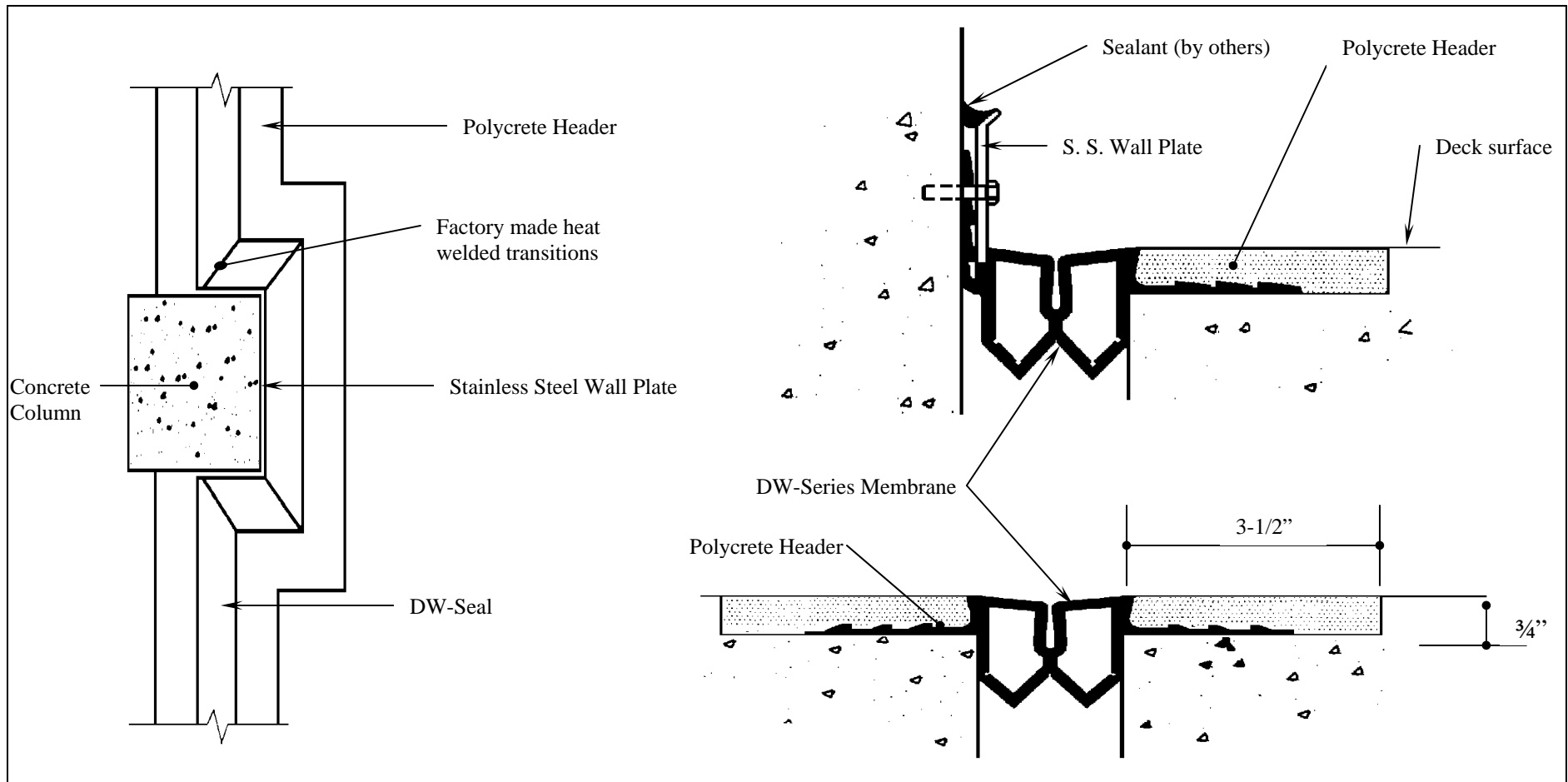
The photo to the left shows the 2020 bedding oozing up from the holes in the wing of the seal.

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

4. To mix the Polycrete 2020 bedding mix, pour part “B” into part “A”, mixing thoroughly. Apply a 1” caulked bead of Polycrete 2020 bedding mix to the area *under the wing of the seal* (Approximately 1/8” to 3/16” thick). Push the wing of the seal into the bedding, allowing material to “ooze” up through the holes in the seal. Spread the excess material to cover the surface of the recesses concrete including the 3/4” high sidewall of the recess. (See figure 2 on previous page.)
5. Pour the measured proportions of Polycrete 1600 (Parts A & B) into the 5 or 6 gallon mixing pail. Thoroughly mix the two components, approximately 1-2 minutes. 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.
6. 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. Repeat process until the expansion joint is completely filled on both sides.
7. 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.
8. Allow the material to develop full cure overnight or until header material is hard to the touch.





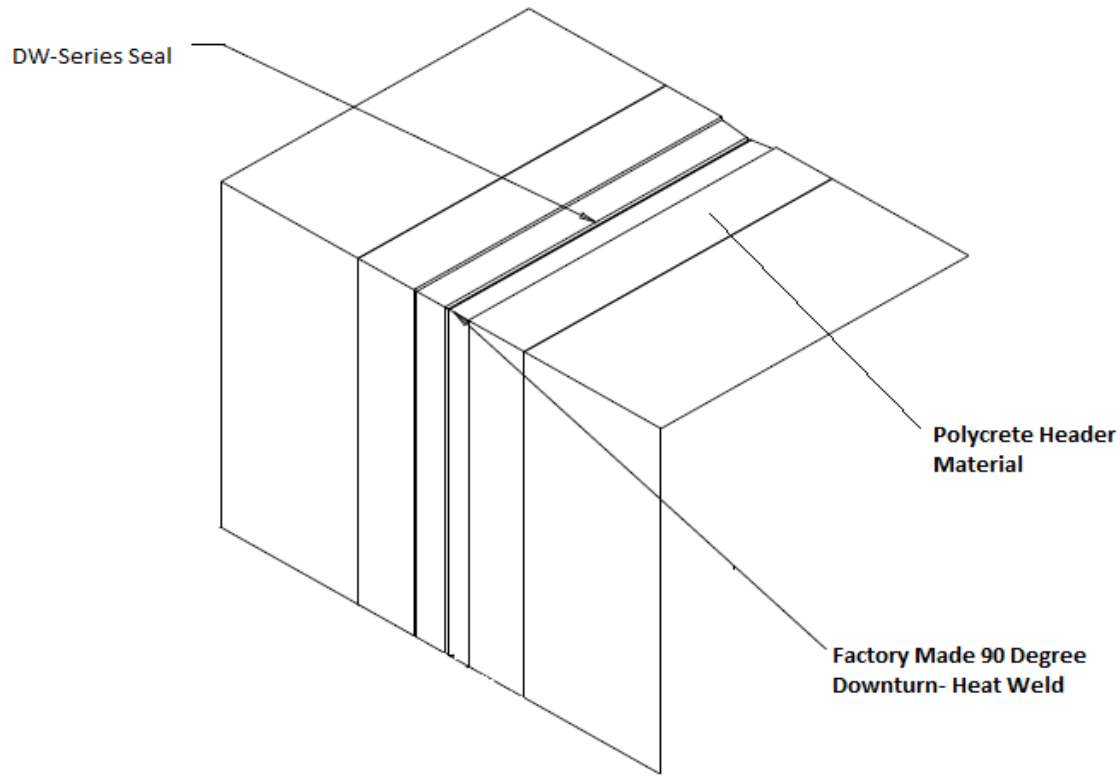
NO.	Description	Date	By
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Phone: (716) 542-3991 • Fax: (716) 542-3996 • E-mail sales@eriemetal.com

<b>PROJECT:</b>
<b>TITLE:</b> Sectional Views of the DW-Series Profile

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-104



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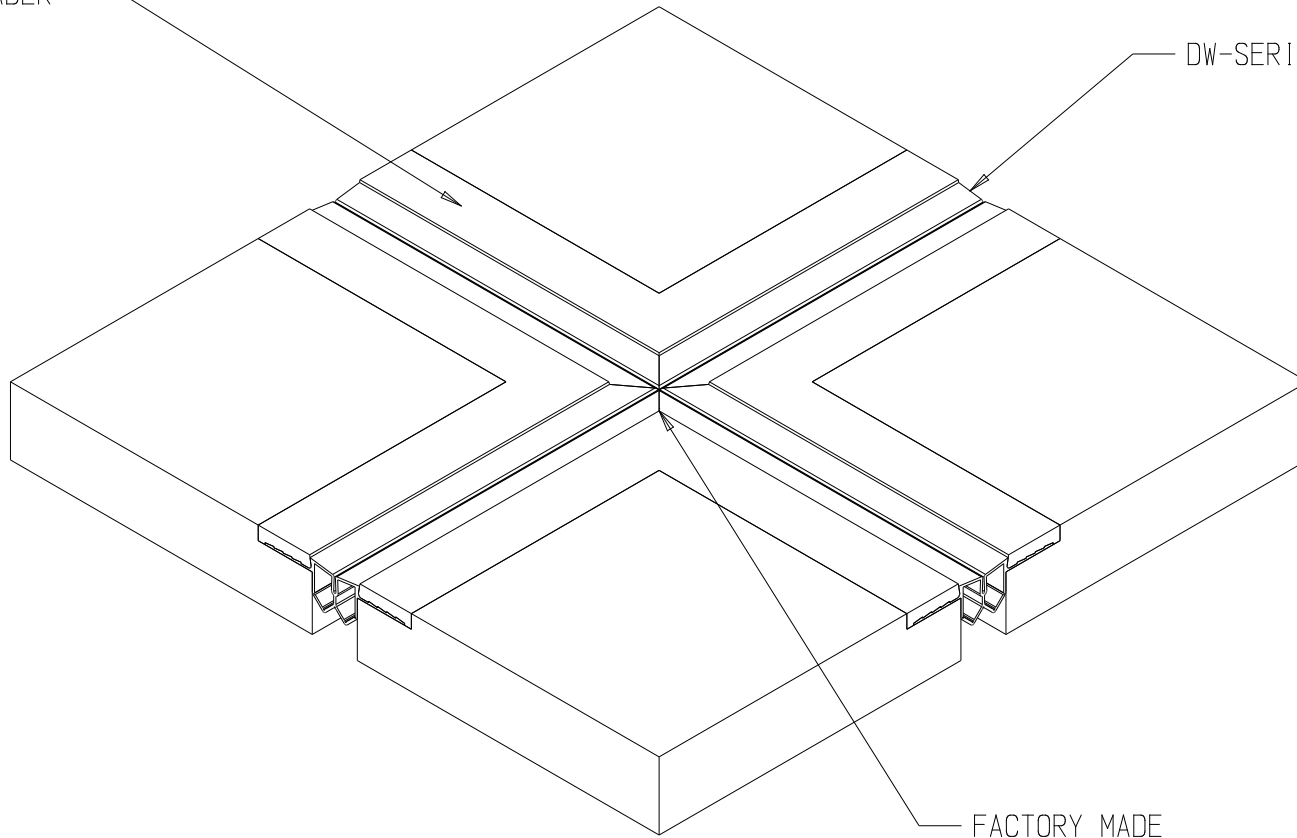
Phone: (716) 542-3991 • Fax: (716) 542-3996 • E-mail sales@eriemetal.com

<b>PROJECT:</b>
<b>TITLE:</b> 90 Degree Downturn drawing of DW-Series

Detailed by: NBD	Date: 12/09/15
Checked By: AWG	Date: 12/09/15
Scale: NTS	EMS Job #:
Sheet No.: 1 of 1	Drawing No.: CD-104

POLYCRETE HEADER MATERIAL

DW-SERIES SEAL



FACTORY MADE HEAT WELDS



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**PROJECT:**

**TITLE: DW-SERIES -CROSS INTERSECTION DETAIL**

Detailed by: GMH

Date: 6-13-07

Checked by:

Date: 6-13-07

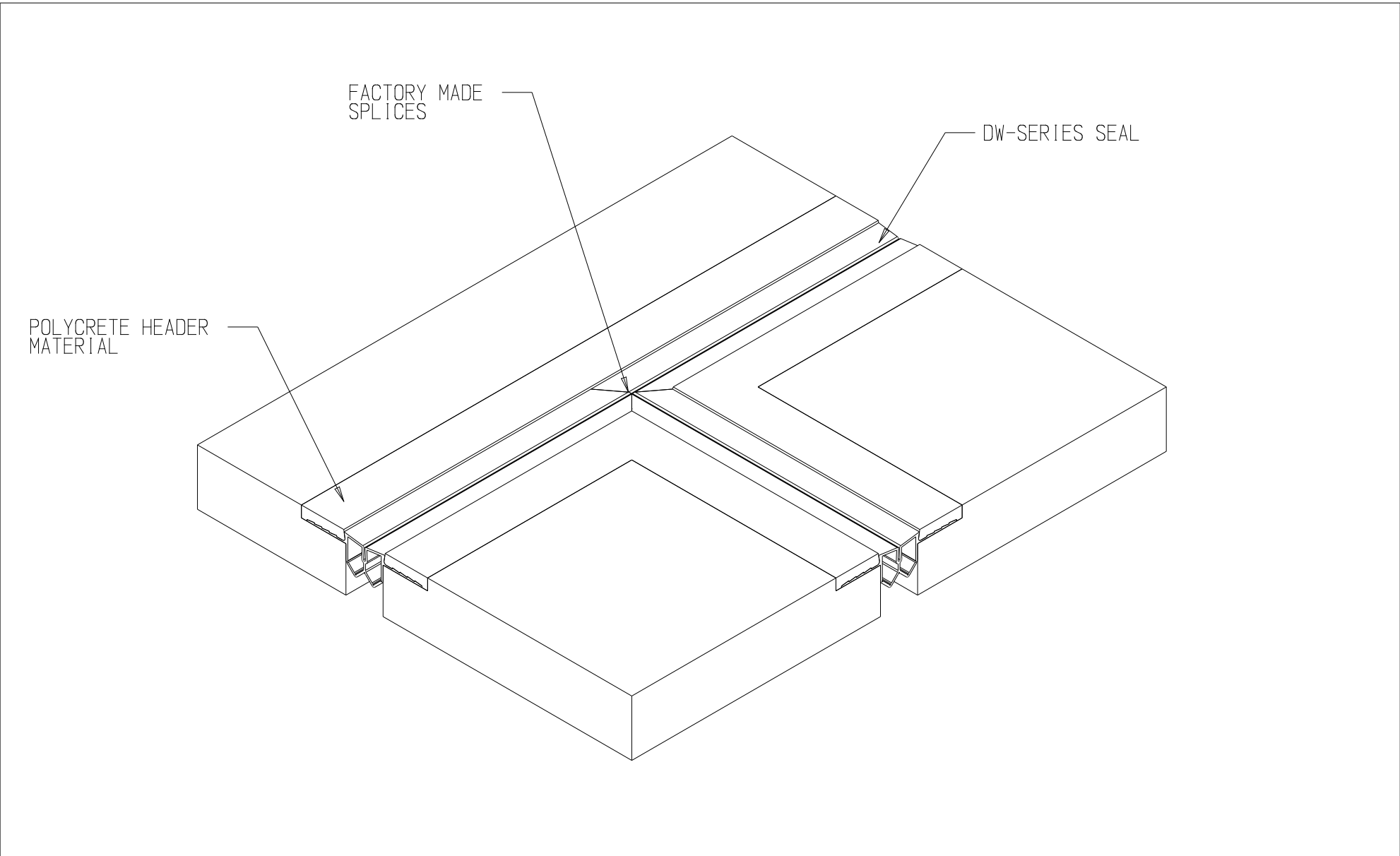
Scale: NTS

EMS Job #:

Sheet #:

Drawing #:



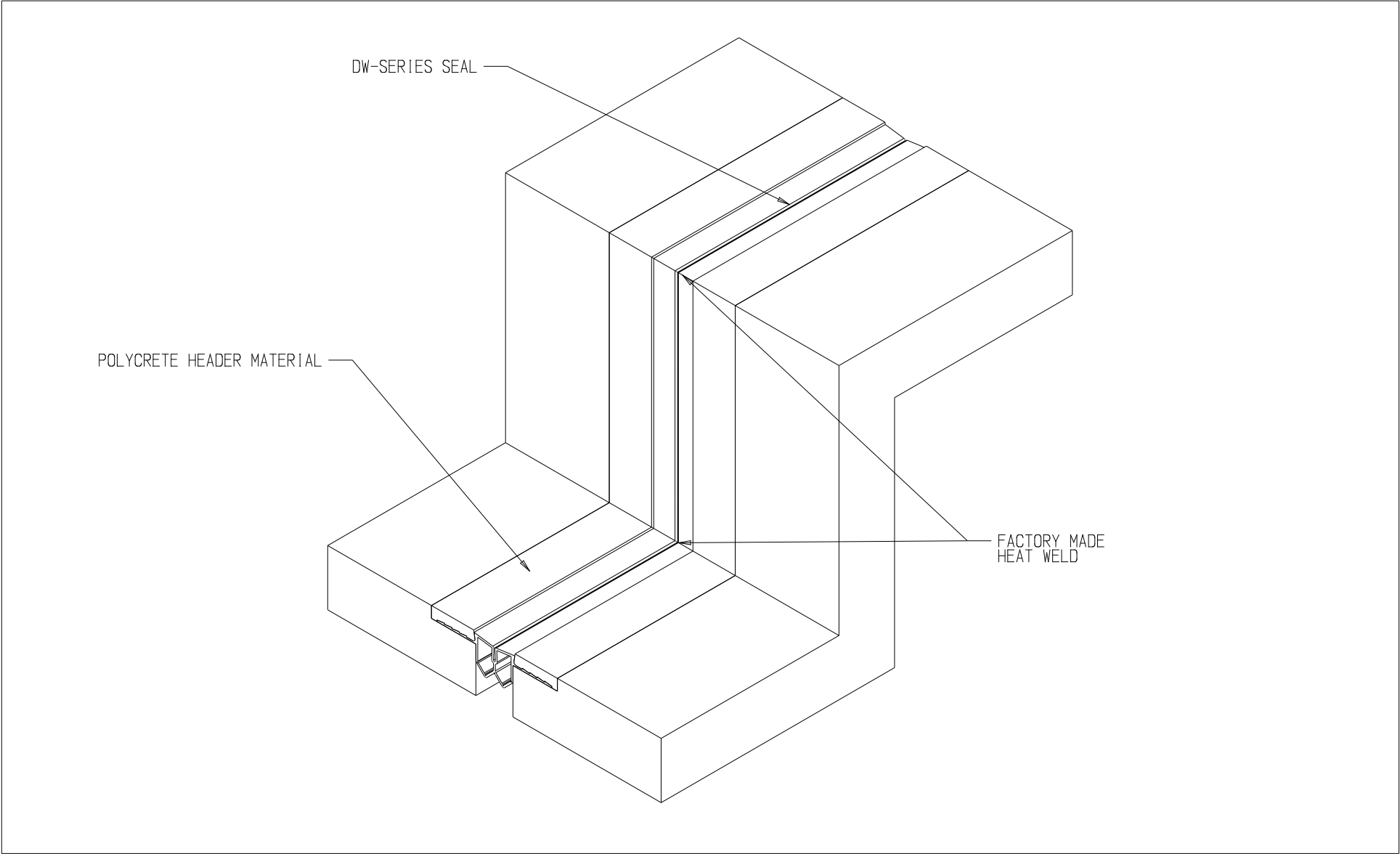


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**PROJECT:**

**TITLE: DW-SERIES -T INTERSECTION DETAIL**

Detailed by: GMH	Date: 6-13-07
Checked by:	Date: 6-13-07
Scale: NTS	EMS Job #:
Sheet #:	Drawing #:



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**PROJECT:**

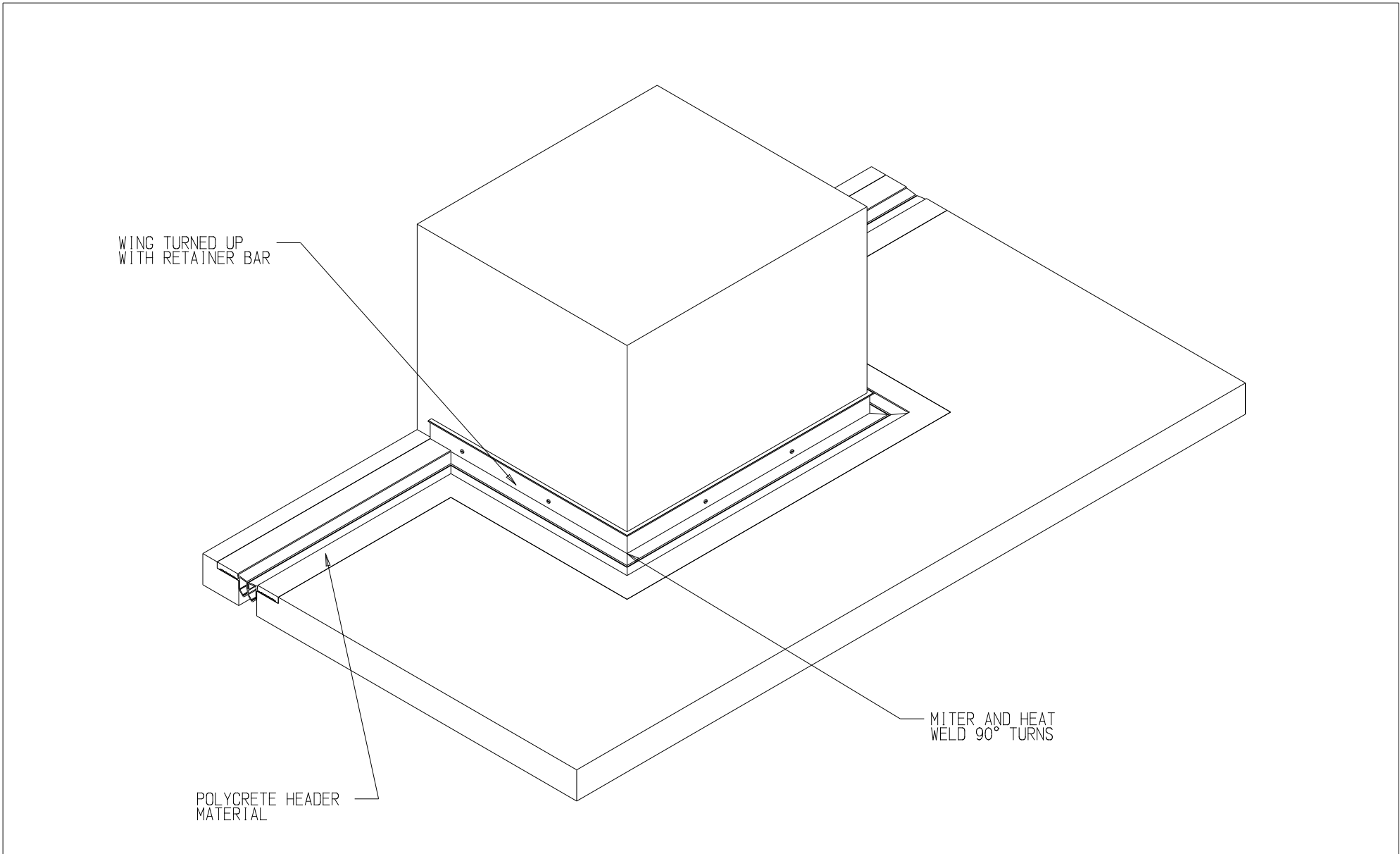
**TITLE: DW-SERIES -CURB DETAIL**

Detailed by: GMH	Date: 6-13-07
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Checked by:	Date: 6-13-07
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Scale: NTS	EMS Job #:
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Sheet #:	Drawing #:
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**PROJECT:**

**TITLE: DW-SERIES -COLUMN DETAIL**

Detailed by: GMH	Date: 6-13-07
Checked by:	Date: 6-13-07
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, CO<sub>2</sub>, 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: CO<sub>2</sub>, 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: CO<sub>2</sub>, 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:	CO <sub>2</sub> , 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:**

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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 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 O<sub>2</sub>  
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 <sub>4</sub>
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 <sup>3</sup> (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 <sup>3</sup> ).
OTHER PROTECTIVE EQUIPMENT:	Appropriate clothing.
ENGINEERING CONTROLS:	General ventilation to keep dust levels below the recommended TLV of mg/m <sup>3</sup> .

**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:**

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 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 <sub>2</sub> , 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



ERIE METAL  
SPECIALTIES

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

**MSDS 2016**

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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 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 B  
Material Use: Epoxy curing pastesChemical 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 <sub>2</sub> , 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 <sub>2</sub> , 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 <sub>2</sub> , 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:**

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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