



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

BOB MARTINEZ CENTER
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

July 26, 2013

Certified Mail, Return Receipt Requested
Number 7000 0520 0020 9373 6369

Ms. Teresa Valdes
HEMPLE (USA) Inc.
260 N. Sam Houston Pkwy East Suite 300
Houston, TX 77060

Subject: Approval of the HEMPLE (USA) Inc.
Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90,
Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings.
File No. EQ-812

Dear Ms. Valdes:

The Bureau of Petroleum Storage Systems has concluded its review of the Equipment Approval request dated June 3, 2013 that was submitted for HEMPLE (USA) Inc. for their Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings, pursuant to Rules 62-761.500(1)(d)4., 62-761.850(2), 762.501(1)(e), and 62-762.851(2), Florida Administrative Code (F.A.C.). The Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings are used as coating or sealant for aboveground or underground secondary containment systems.

Based on the information provided by HEMPLE (USA) Inc., the Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings provides environmental protection substantially equivalent to that provided by compliance with the requirements established in to Rules 62-761(1)(a)4., and 762.641(1)(e), F.A.C. and may be used as coatings or sealants of secondary containment for storage tank systems.

Pursuant to Rules 62-761.850(2), and 62-762.851(2), F.A.C., the request for the use of the HEMPLE (USA) Inc. Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S is approved in the State of Florida as coatings or sealants of secondary containment for aboveground or underground storage tank systems. The installation and operation shall be made in accordance with the manufacturer's recommendations.

Please be advised that the above referenced DEP rules are subject to change. If the above rule standards are modified in the future, this order may be modified or rescind for future upgrades and installations. Additionally, if the product(s) show a consistent pattern of failure(s), and therefore does not provide substantially equivalent environmental protection, the Department may rescind this order.

The Department's Order shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57, F.S., within **21** days of receipt of this Order. Persons who have filed such a petition may seek to mediate the dispute and choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning a hearing and pursuing mediation are set forth below.

Persons affected by this Order have the following options:

- A. If you choose to accept the Department's decision regarding the Order, you do not have to do anything. This Order is final and effective as of the date on the top of the first page of this Order.
- B. If you choose to challenge the decision, you may do the following:
 - 1. File a request for an extension of time to file a petition for hearing with the Department's Agency Clerk in the Office of General Counsel within **21** days of receipt of this Order. This request should be made if you wish to meet with the Department in an attempt to resolve any disputes without first filing a petition for hearing or negotiate an agreement to mediate; or
 - 2. File a petition for administrative hearing with the Department's Agency Clerk in the Office of General Counsel within **21** days of receipt of this Order.

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation under Section 120.573, F.S., and must negotiate an agreement to mediate within **10** days after the deadline for filing a petition.

How to Request an Extension of Time to File a Petition for Hearing

For good cause shown, pursuant to Rule 62-110.106(4), F.A.C., the Department may grant a request for an extension of time to file a petition for hearing. Such a request must be filed (received) by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, within **21** days of receipt of this Order. Petitioner, if different from the applicant, shall mail a copy of the request to the applicant at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under Sections 120.569 and 120.57, F.S.

How to File a Petition for Administrative Hearing

A person whose substantial interests are affected by this Order may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the

information set forth below and must be filed (received) by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida, 32399-3000, within **21** days of receipt of this Order. Petitioner, if different from the applicant shall mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under Sections 120.569 and 120.57, F.S.

Pursuant to Subsection 120.569(2), F.S., and Rule 28-106.201, F.A.C., a petition for administrative hearing shall contain the following information.

- a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any, the site owner's name and address, if different from the petitioner, the DEP facility number, and the name and address of the facility;
- b) A statement of when and how the petitioner received notice of the Department's action or proposed action;
- c) An explanation of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- d) A statement of the disputed issues of material fact, or a statement that there are no disputed facts;
- e) A concise statement of the ultimate facts alleged, including a statement of the specific facts the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- f) A statement of the specific rules or statutes the petitioner contends requires reversal or modification of the Department's action or proposed action; and
- g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's action or proposed action.

How to Pursue Mediation

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation. The election may be accomplished by filing with the Department a mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for hearing). The agreement must contain all the information required by Rule 28-106.404, F.A.C. The agreement, signed by all parties, must be received by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000 within **10** days after the deadline for filing a petition, as set forth above. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

Pursuant to Rule 28-106.404, F.A.C., an agreement to mediate must include the following.

- (i) The name, address, and telephone number of the persons who may attend the mediation, (also the DEP facility number, the name and address of the facility if applicable);
- (ii) The name, address, and telephone number of the mediator agreed to by the parties;

- (iii) How the costs and fees associated with the mediation will be allocated (the Department will not pay any of the costs of mediation);
- (iv) The agreement of the parties regarding the confidentiality of discussions and documents introduced during mediation to the extent authorized by law;
- (v) The date, time, and place of the first mediation session;
- (vi) The name of the party's representative who shall have authority to settle or recommend settlement; and
- (vii) The signature of the parties.

As provided in Section 120.573, F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, F.S., for holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons seeking to protect their substantial interests that would be affected by such a modified final decision must file their petitions within **21** days of receipt of this notice, or they shall be deemed to have waived their right to a proceeding under Sections 120.569 and 120.57, F.S. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57, F.S., are resumed.

This Order is final and effective as of the date on the top of the first page of this Order. Timely filing a petition for administrative hearing postpones the date this Order takes effect until the Department issues either a final order pursuant to an administrative hearing or mediation settlement.

Judicial Review

Any party to this Order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the Agency Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department (see below).

Questions

Any questions regarding the Department's review of your equipment approval should be directed to John Svec at (850)245-8845. Questions regarding legal issues should be referred to Rebecca

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Robinette, Office of General Counsel, at (850)245-2242. Contact with any of the above does not constitute a petition for administrative hearing, a request for a time extension to file a petition for hearing or an agreement to mediate.

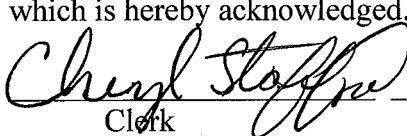
Sincerely,



Valerie K. Huegel, Chief
Bureau of Petroleum Storage Systems

VKH/jps

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52 Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.



Clerk

7/29/13
Date

(or Deputy Clerk)

Blome CP-83MP
Epoxy Adhesive / Mortar

PRODUCT DESCRIPTION

Blome CP-83MP is a two-part, epoxy adhesive/mortar used for the installation of abrasion resistant brick and tile linings. CP-83MP is designed for bonding alumina ceramic and basalt tile in lining applications requiring resistance to abrasion and erosion, as well as acids, bleaches, alkalis, solvents and other corrosive chemicals. CP-83MP is especially suited for use in wear tile applications requiring high bond strength, physical properties and good chemical resistance. Blome CP-83MP is resistant to caustic solutions, most dilute acids, hypochlorite bleaches and other harsh chemicals. The material is also well suited for use as concrete repair putty for filling form voids, crack repair and other concrete applications requiring high physical properties.

TYPICAL USES

Blome CP-83MP is suitable for bonding brick, tile, concrete and steel surfaces in a variety of applications including:

- Chutes, Hoppers and Troughs
- Slurry Pipe Linings
- Pulverizers, Ball Mills and Classifier Cones
- Concrete Crack Repair and Form Void Filling

HANDLING CHARACTERISTICS

Blome CP-83MP offers excellent trowelling and handling characteristics, with sufficient body and thixotropy to butter brick in place and secure them from slipping or sliding while the mortar cures. CP-83MP cures rapidly and provides an excellent bond to brick, tile and steel. This unique formulation produces excellent results while installing brick in horizontal, vertical and even overhead areas.

TYPICAL PROPERTIES

WET

- Components: Two (2) - Resin & Hardener
- Wet mortar density: 11 lbs. per gallon
- Mixed consistency: Creamy mortar
 - Pot life: 50°F 60 minutes
 - 77°F 30 - 40 minutes
- Initial set: 50°F 4 - 6 hours
- 77°F 1 - 2 hours
- Final cure 50°F 7 days minimum
- 77°F 5 days minimum

CURED

Absorption (ASTM C-413)	0.24%
Bond Strength to Cermaic Tile (Positester AT)	2,700 - 3,200 psi
Bond Strength to steel (20 mm pull PosiTester AT)	2,600 - 3,000 psi
Coefficient of Thermal Expansion (ASTM C-531)	12 - 14 x 10 ⁻⁶ in/in/°F
Color	Off White
Compressive Strength (ASTM C-579)	10,500 psi
Tensile Strength (ASTM C-307)	3,600 - 4,100 psi

PACKAGING & STORAGE

Blome CP-83MP is supplied as a two (2)-component product, with Resin and Hardener paste components. CP-83MP Resin (Part A) is packaged in one gallon cans; CP-83MP Hardener (Part B) is also packaged in one gallon cans.

Unit Size	Two (2) gallons
Resin	One (1) gallon can
Hardener	One (1) gallon can

Shelf life for CP-83MP components is 12-18 months. Keep CP-83MP components tightly sealed in original containers until ready for use. Store components in a cool, dry place, out of direct sunlight and on pallets at temperatures between 50°F – 80°F.

ESTIMATED COVERAGE

One two-gallon unit of CP-83MP covers approximately 14 ft² of tile lining when used as a setting bed for tile with a nominal 1/16" joint thickness between the tile. This is an estimated coverage rate and does not allow for waste, bed or side joint variations, or other job site contingencies.

BID SPECIFICATION GUIDE

Use Blome CP-83MP Epoxy Adhesive/Mortar as manufactured by Blome International, O'Fallon, MO.

JOB SITE ENVIRONMENTAL CONDITIONS

Blome CP-83MP is best applied while ambient temperatures are between 50°F and 90°F. Blome CP-83MP components, brick, tile and substrate temperatures must also be maintained in this range. Installations of CP-83MP should be protected from water and weather during installation and curing.

SURFACE PREPARATION

Steel substrates should be prepared by abrasive blasting or grinding to achieve near white metal clean to SSPC SP-10. Steel should exhibit a nominal 2-4 mil anchor profile. Blasted steel substrates must not be allowed to flash rust prior to installing epoxy adhesive. Concrete substrates to which Blome CP-83MP will be applied must have a minimum 28 day cure or a minimum compressive strength of 3,000 psi. Minimum tensile strength of concrete must be 300 psi when tested using a Schmidt Hammer. Concrete must be dry in

accordance with ASTM-4263 Plastic Sheet Test Method. Concrete surfaces must be free of all laitance, previously applied coatings or curing compounds, oil, and any dust or other loose materials prior to installation of CP-83HT bed joint.

Brick and tile to be installed with Blome CP-83MP must be clean, dry and oil free. If brick or tile has been frozen, they must be thawed completely and allowed to dry prior to installation with Blome CP-83MP. Liquid or Sheet applied membrane surfaces should be clean and dry prior to installation of Blome CP-83MP bed joint. These surfaces should be swept clean and be free of dirt, dust, water or other jobsite contaminants.

SAFETY PRECAUTIONS

Blome CP-83MP Resin, Hardener, and mixes of them present various health hazards if handled improperly. CP-83MP Resin will cause eye injury and irritate skin and CP-83MP Hardener is a corrosive. Wear safety glasses with side shields, gloves and long sleeve shirts to prevent all contact with skin and eyes. After working with Blome CP-83MP, wash thoroughly before eating, drinking, smoking or other activities.

APPLICATION EQUIPMENT

Blome CP-83MP is best mixed with a trowel or mixing stick. It may also be mixed with a KOL, pail type mixer or in a pail using a drill motor driven paddle blade. This mixing equipment must be clean, dry and free of any contaminants including Portland Cement, other mortars or resins. When mixed, CP-83MP is applied to brick and substrate with a pointing or margin trowel.

MIXING AND APPLICATION

CP-83MP is mixed at a 1:1 ratio by volume. Mix together equal volumes of Resin (Part A) and Hardener (Part B) and blend thoroughly for 1-2 minutes. The components have slightly contrasting colors; mix these two parts until a uniform color is achieved. Mix components for a minimum of 1-2 minutes, making sure there are no stripes or inconsistencies.

Place brick or tile in wet adhesive mortar in accordance with project specification. When laying brick, use a clean, dry pointing or margin trowel, butter brick or tile evenly on 4 or 5 sides. Slide buttered brick or tile into place, squeezing excess mortar from joints. Strike off excess mortar & remove. Joint thickness should be nominally 1/16".

CLEANUP

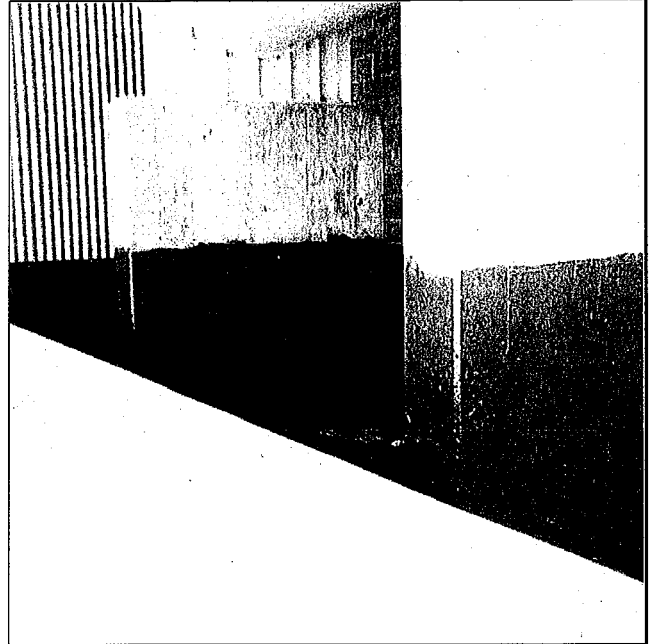
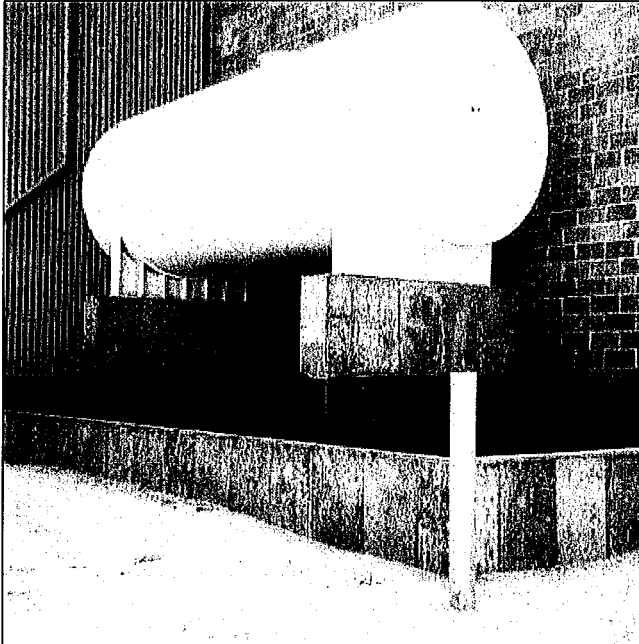
All tools, mixing equipment, gloves and application equipment should be cleaned up immediately using a citrus or biodegradable cleanser, with hot water, while material is still wet. If material begins to cure, solvent-based cleaners will be required for removal.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

Printed: July 15, 2012
Supersedes all previous literature

Part of the **HEMPEL** *Group*



98% H₂SO₄ Secondary
Containment Dyke,
Floor and Trenches in
Chemical Storage
room protected with
Blome "EC" System

BLOME
INTERNATIONAL
Protective Barriers For A Cleaner Environment



Job:
UNR Rohn, Inc.; Peoria, IL Dyke, Floor and Trench

Blome International

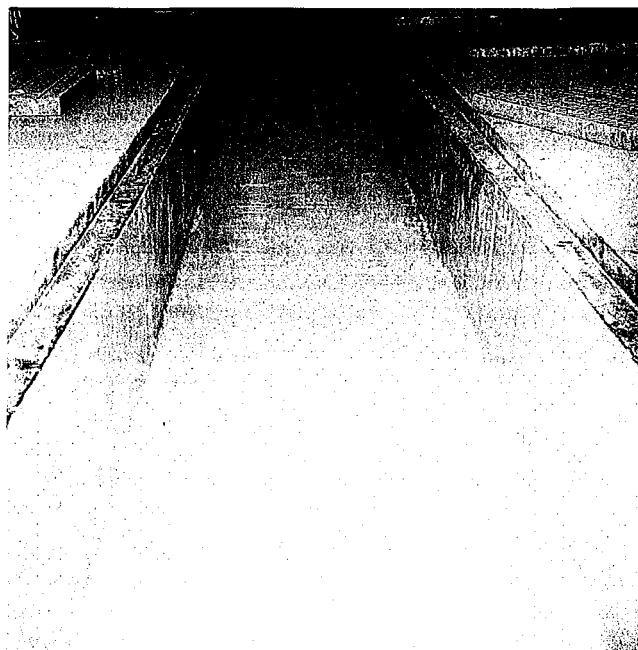
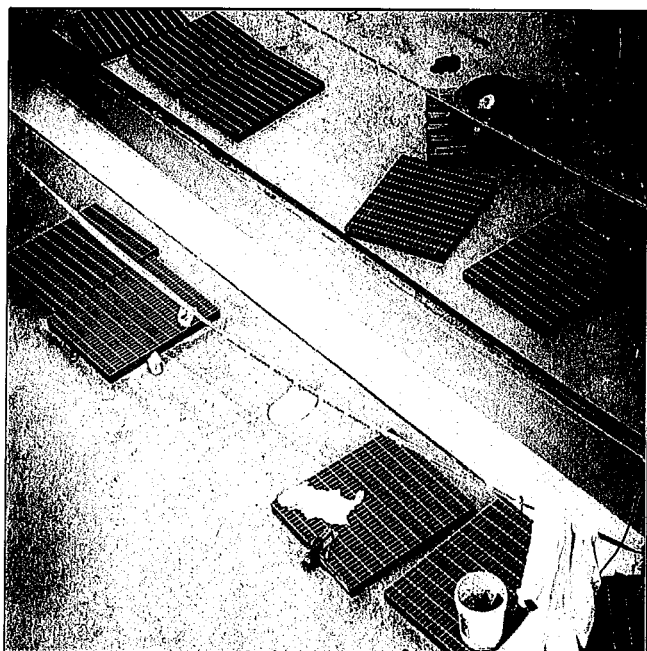
1450 Hoff Industrial Dr. O'Fallon, MO 63366
(636) 379-9119 fax (636) 379-0388

Comments: 98% Sulfuric Acid Containment Dyke,
Floor & Trench all lined using Novolac Epoxy "EC".

July, 1997

New Project

Contractor: Aupperle Const.



**Over 120,000 square feet
of Blome EC-66 installed
for process flooring.
Hundreds of feet of
trenching lined with
Blome TL-405AR.**

**Process Floors and
Trenches installed
using Blome EC
Systems at Colorado
Soda Ash Plant.**

BLOME
INTERNATIONAL
Protective Barriers For A Cleaner Environment



Job:
American Soda Corporation; Parachute, CO

1450 Hoff Industrial Dr. O'Fallon, MO 63366
(636) 379-9119 fax (636) 379-0388

Comments: Over 120,000 square feet of flooring and
trenches installed using various Blome systems.

October, 2000

New

Contractor: PMS; Houston, TX



Part of the HEMPEL Group



EC-66

High Performance Flexible Epoxy Coating

PRODUCT DESCRIPTION AND USES

EC-66 is a 100% solids, flexible epoxy that is virtually odor free. Typical applications include use as a chemical and water resistant coating and lining system for concrete floors, cooling tower basins and other applications which demand flexibility for bridging moving joints and cracks. The coating can be reinforced with one of two different high elongation fabrics to provide a system that will bridge working cracks as well as expansion joints. EC-66 reinforced with EC-125 fabric can bridge cracks and tolerate expansion joint movement up to 1/2" without cracking. EC-66, as packaged, is a semi-leveling material. However, it may be used as a high build coating system by adding a third component, Part C, which is a non-silica thixotrope (when using reinforcing fabric, Part C is not required). The product may be applied by airless spray, notched trowel, squeegee, brush or roller. To make a trowel/caulk grade or putty, add Part C. EC-66 cures to form an abrasion, chemical and water resistant coating with good flexibility, superior thermal shock, impact resistance and excellent crack bridging capabilities. Concrete slabs with severe cracking problems, as well as all construction and expansion joints, may be sealed using EC-66 reinforced with EC-125 or EC-60 Fabric. EC-66 reinforced with EC-60 Fabric is ideally suited for process flooring and secondary containment linings.

PACKAGING AND COVERAGE

EC-66 is available in a 3-gallon unit. Each unit consists of pre-measured Part A and Part B components. Bagged Part C thixotropic agent may be ordered separately. Coverage will be affected by the condition and type of substrate being coated (degraded vs. smooth, steel vs. concrete, etc.) and the applicators ability to maintain consistent thickness. To calculate theoretical coverage per gallon, divide desired mil thickness into 1604. The result will be the number of square feet per gallon. The thickness of

FABRIC	THICKNESS*	THEORETICAL COVERAGE
EC-60	60 to 70 mils	22 to 27 square feet/gallon
EC-125	125 to 135 mils	12 to 13 square feet/gallon

the coating system will vary depending on which fabric is used. The following is the thickness and theoretical coverage rates for fabric reinforced systems once they have been saturated with EC-66:

*Thickness listed represent finish thickness after saturation of fabric. Over-saturation of the fabrics will increase finish thickness and decrease coverage rates.

TYPICAL PROPERTIES

Solids by volume:	100%
Weight per Mixed Gallon:	10 lbs
Pot life @ 75°F:	30 to 45 min
Primer:	Steel: Optional Concrete: Primer 75
Hardness – ASTM D-2240 Shore A:	55
Abrasion Resistance – ASTM D-1044:	26 mg loss (CS 17 wheels – 1000 cycle, 1000 gram load)
Tensile Strength – ASTM D-638	2100 psi
Tensile Strength Reinforced with EC-125 fabric	3300 – 3600 psi
Tensile Elongation – ASTM D-638:	Neat 110%
Bond Strength – ASTM D-4541:	Concrete: cohesive failure in concrete

PACKAGING & STORAGE

Keep EC-66 components tightly sealed in their original containers until ready for use. Store at 50 to 85°F, the optimum temperature for material workability is 75 to 85°F.

Properly stored EC-66 has a minimum shelf life of 12 months.

SURFACE PREPARATION

Surfaces must be clean, dry and free of dust, dirt, oil, grease or other jobsite contamination. All surfaces must be free of contamination with chemicals prior to the coating application.

CONCRETE SURFACE PREPARATION

1. The concrete should be adequately cured.
2. Structurally sound and dry.
3. Free of dirt and contaminants.
4. All defects should be repaired.
5. All loose coatings must be removed.
6. The concrete to be lined should be prepared by abrasive blasting, shot blasting, grinding or, in some instances, it may be acid etched check with Blome International for specific recommendations.

APPLICATION OF NON-REINFORCED SYSTEMS

1. EC-66 may be applied by spray, trowel, squeegee or roller.
2. For spray applications, use a Graco 56:1 airless spray rig.
3. Mix and apply the primer 75 at approximately 4-6 mils and allow to set firm to the touch before proceeding.
4. Premix Part A and Part B in their individual containers prior to use.
5. Pour the entire contents of Part B into container holding Part A and mix thoroughly for 2-3 minutes using a Jiffy type mixer attached to a power drill.
6. Apply EC-66 to the specified thickness.
7. Allow to cure 36 hrs at 75°F before placing in service.

APPLICATION OF REINFORCED SYSTEMS

1. EC-66 may be applied by spray, trowel, squeegee or roller.
2. For spray applications, use a Graco 56:1 airless spray rig.
3. Mix and apply Primer 75 at approximately 4-6 mils and allow to set firm to the touch before proceeding.
4. Pre-cut reinforcing fabric into easy to handle sections and have them clearly marked as to where they go before mixing any material. Allow for a two-inch overlap of seams.
5. Premix Part A and Part B in their individual containers prior to use.
6. Pour the entire contents of Part B into container holding Part A and mix thoroughly for 2-3 minutes using a Jiffy type mixer attached to a power drill.
7. Apply a 20 – 30 mil base coat of EC-66 to the primed surface, and immediately imbed the fabric, using flat trowels or rollers and working from the center to the outer edges, remove any trapped air and cause the fabric to lay flat. Immediately apply additional EC-66 to thoroughly saturate the fabric. Use flat trowels to remove air pockets trapped in fabric. Overlap seams two inches.
8. Allow to cure 36 hours before placing in service.

CAUTION

Blome EC-66 components may cause skin irritation with prolonged or repeated contact. Handle with care and read the material safety data sheet, which is available for each product.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANTABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

Printed: July 15, 2012
Supersedes all previous literature

Part of the **HEMPEL** *Group*



Part of the HEMPEL Group



PRODUCT DESCRIPTION

EC-90 High Performance Novolac Epoxy Coating

EC-90 is a 100% solids, Novolac Epoxy coating that is used as a chemical resistant coating and lining system for secondary containment structures, concrete floors, and other process applications which demand resistance to harsh chemicals, and good durability. EC-90 is typically aggregate filled by the "seeded" or blended methods. Aggregate filled EC-90 results in a non-slip yet cleanable finished surface. The product can be reinforced with EC-Scrim to provide a system with high impact and thermal shock resistance. EC-90 reinforced with EC-Scrim is crack resistant and will effectively bridge minor cracks in concrete. EC-90, as packaged, is a semi-leveling material. However, it may be used as a high build coating system by adding a third component, Part C, which is a non-silica thixotrope. EC-90 may be applied by spray, notched trowel, squeegee, brush or roller. EC-90 is also installed as a 1/8" thick Dense Mortar Lining using Blome 410 Filler Powder. For a trowel/caulk grade or putty, add Part C or 410 Powder.

PACKAGING AND COVERAGE

EC-90 is available in 1, 5, and 25 gallon units. Each unit consists of pre-measured Part A and Part B components. The mix ratio of Part A to Part B is 4:1 by volume. Bagged Part C thixotropic agent, and/or Blome 410 Filler Powder are ordered separately. Coverage will be affected by the condition and type of substrate being coated (degraded vs. smooth, steel vs. concrete, etc.) and the applicator's ability to maintain consistent thickness. To calculate theoretical coverage per gallon, divide desired mil thickness into 1604. The result is the number of square feet per gallon.

TYPICAL PROPERTIES

Solids by volume:	100%
Weight per Mixed Gallon:	10 lbs
Pot life @ 75°F:	24 to 30 min
Cure Times @ 75°F: Cure firm	12 hrs
Chemical service:	36 hrs
Primer:	Steel: Optional Concrete: Primer 75
Compressive Strength- ASTM C-579:	16,000 psi
Tensile Strength - ASTM D-638:	7,500-8,000 psi
Flexural Strength - ASTM D 790	9,000 - 10,000 psi
Hardness - ASTM D-2240 Shore D:	75
Color:	Red, Gray

PACKAGING & STORAGE

Keep EC-90 components tightly sealed in their original containers until ready for use. Store at 50 to 85°F, The optimum temperature for material workability is 75 to 85°F. Properly stored EC-90 has a minimum shelf life of 12 months.

SURFACE PREPARATION

Surfaces must be clean, dry and free of dust, dirt, oil or grease. The surfaces must not be contaminated with chemicals or any other types of contaminants prior to the coating being applied.

CONCRETE SURFACE PREPARATION

1. The concrete should be adequately cured.
2. Structurally sound and dry.
3. Free and dirt and contaminants.
4. All defects should be repaired.
5. All loose coatings must be removed.
6. The concrete to be lined should be prepared by abrasive blasting, shot blasting, grinding or, in some instances, it may be acid etched check with Blome International for specific recommendations.

APPLICATION OF NON-REINFORCED, AGGREGATE FILLED SYSTEMS BY THE "SEEDED" METHOD

1. EC-90 may be applied by spray, trowel, squeegee or roller.
2. For spray applications, use a Graco 45:1 airless spray rig.
3. Mix and apply Primer 75 at approximately 4-6 mils and allow to set firm to the touch before proceeding.
4. Premix EC-90 Part A and Part B in their individual containers prior to use.
5. Pour the entire contents of Part B into container holding Part A and mix thoroughly for 2-3 minutes using a Jiffy type mixer attached to a power drill.
6. Apply EC-90 at the specified thickness.
7. While EC-90 is still wet, broadcast 20/40 mesh silica sand into the wet basecoat until a dry layer of sand appears on the surface. Allow to cure until firm.
8. Remove excess aggregate by sweeping. Repair any defective areas at this time by grinding and re-applying EC-90.
9. Apply a 10-15 mil top coat of EC-90 by squeegee and backrolling.
10. Allow to cure 36 hrs at 75°F before placing in service.

APPLICATION OF REINFORCED SYSTEMS

1. EC-90 may be applied by spray, trowel, squeegee or roller.
2. For spray applications, use a Graco 45:1 airless spray rig.
3. Mix and apply Primer 75 at approximately 4-6 mils and allow to set firm to the touch before proceeding.
4. Pre-cut EC-Scrim into easy to handle sections and have them clearly marked as to where they go before mixing any material. Allow for a two inch overlap of seams.
5. Premix EC-90 Part A and Part B in their individual containers prior to use.
6. Pour the entire contents of Part B into container holding Part A and mix thoroughly for 2-3 minutes using a Jiffy type mixer attached to a power drill.
7. Apply a 35 – 40 mil base coat of EC-90 to the primed surface, and immediately imbed EC-Scrim reinforcement, using flat trowels or rollers and working from the center to the outer edges, remove any trapped air and cause the EC-Scrim to lay flat. Immediately apply additional EC-90 to thoroughly saturate the fabric and apply a minimum of 60 – 75 mils. Overlap seams two inches.
8. Allow to cure 36 hours before placing in service.

CAUTION

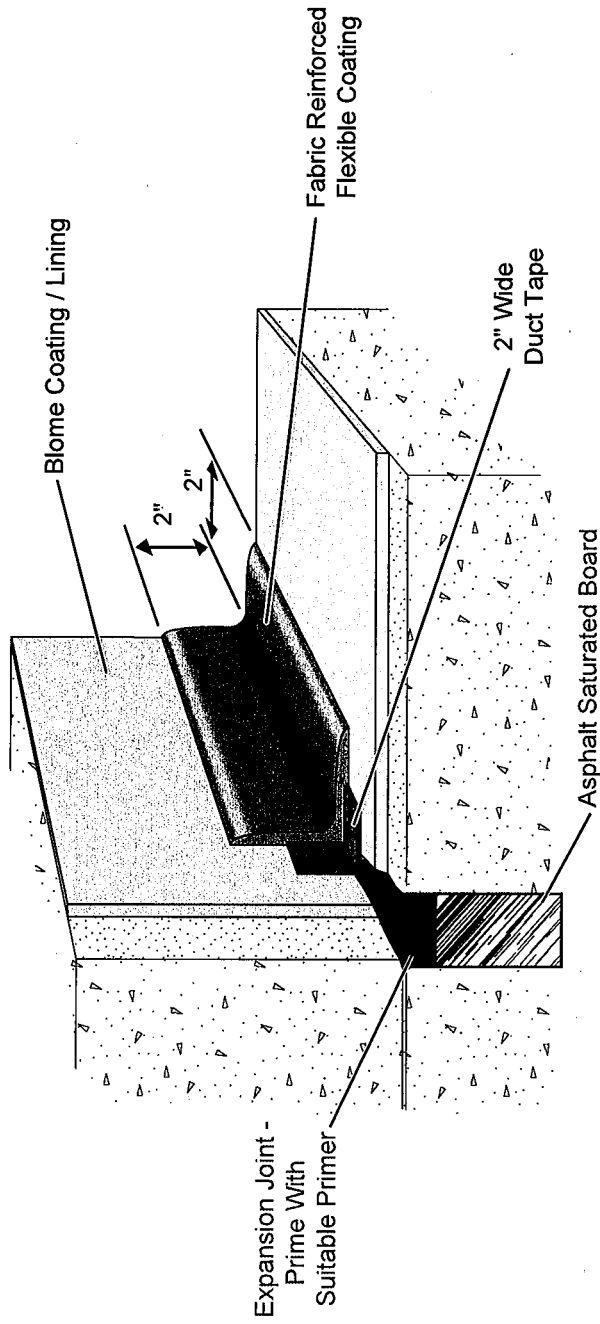
Blome EC-90 components may cause skin irritation with prolonged or repeated contact. Handle with care and read the material safety data sheet which is available for each product.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

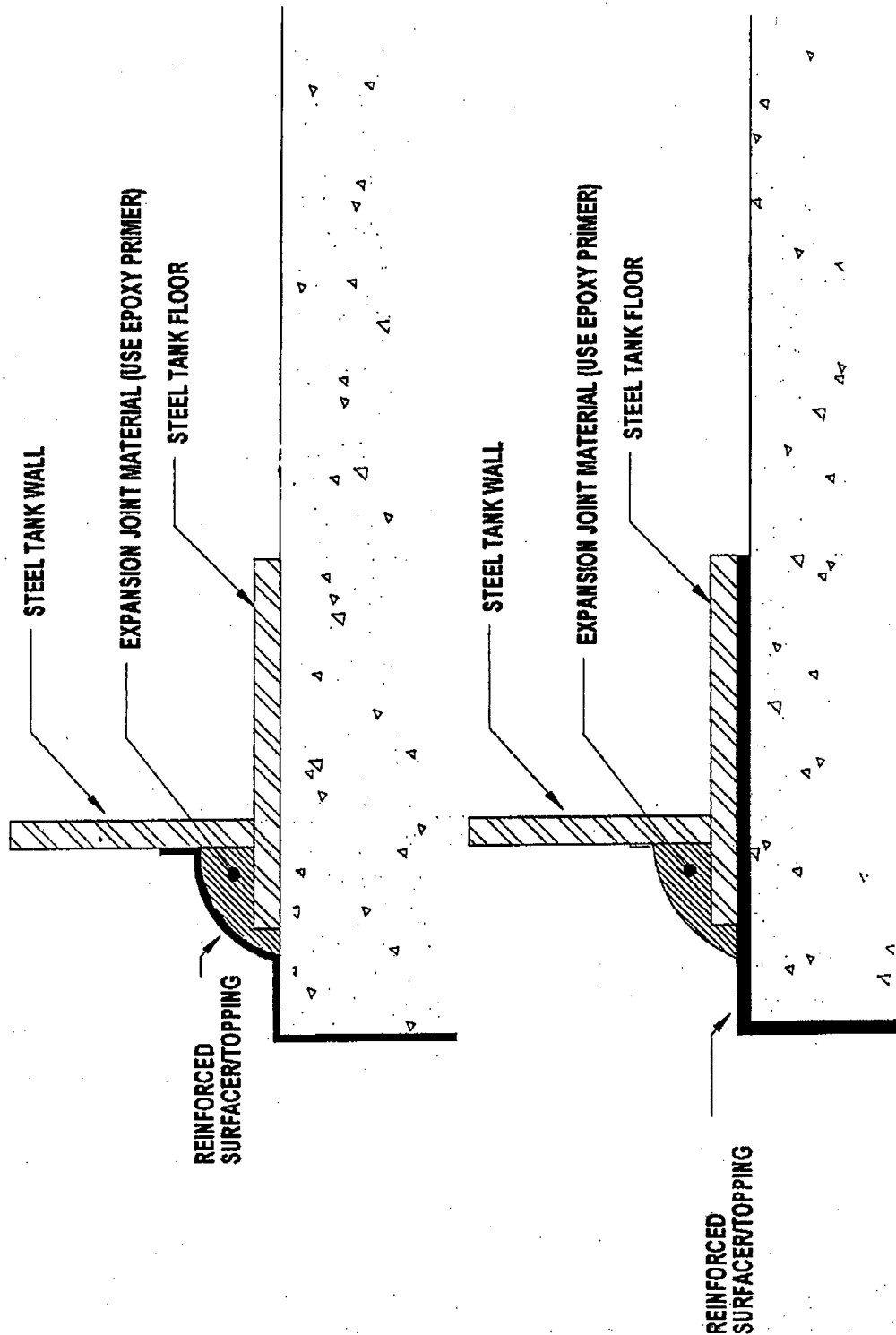
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Coating / Lining Applied At Joints Adjacent to Columns, Walls Or Equipment Supports

ECD - 1002



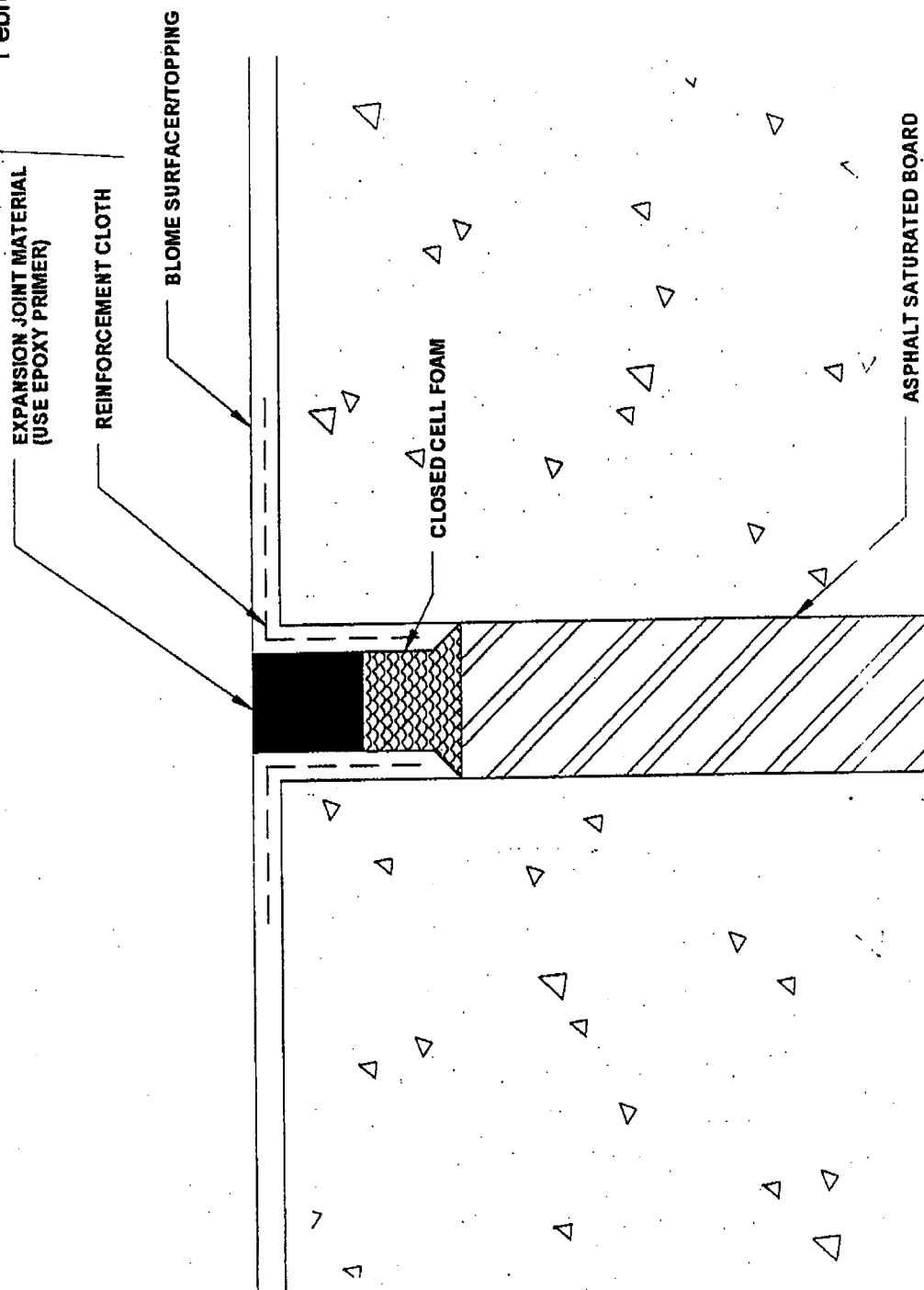
TANK PERIMETER SEAL

ECD-1006

BLOME
INTERNATIONAL

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O'Fallon, MO 63366
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www.blome.com e-mail info@blome.com

CONSTRUCTION DIAGRAMS
February 1, 2001

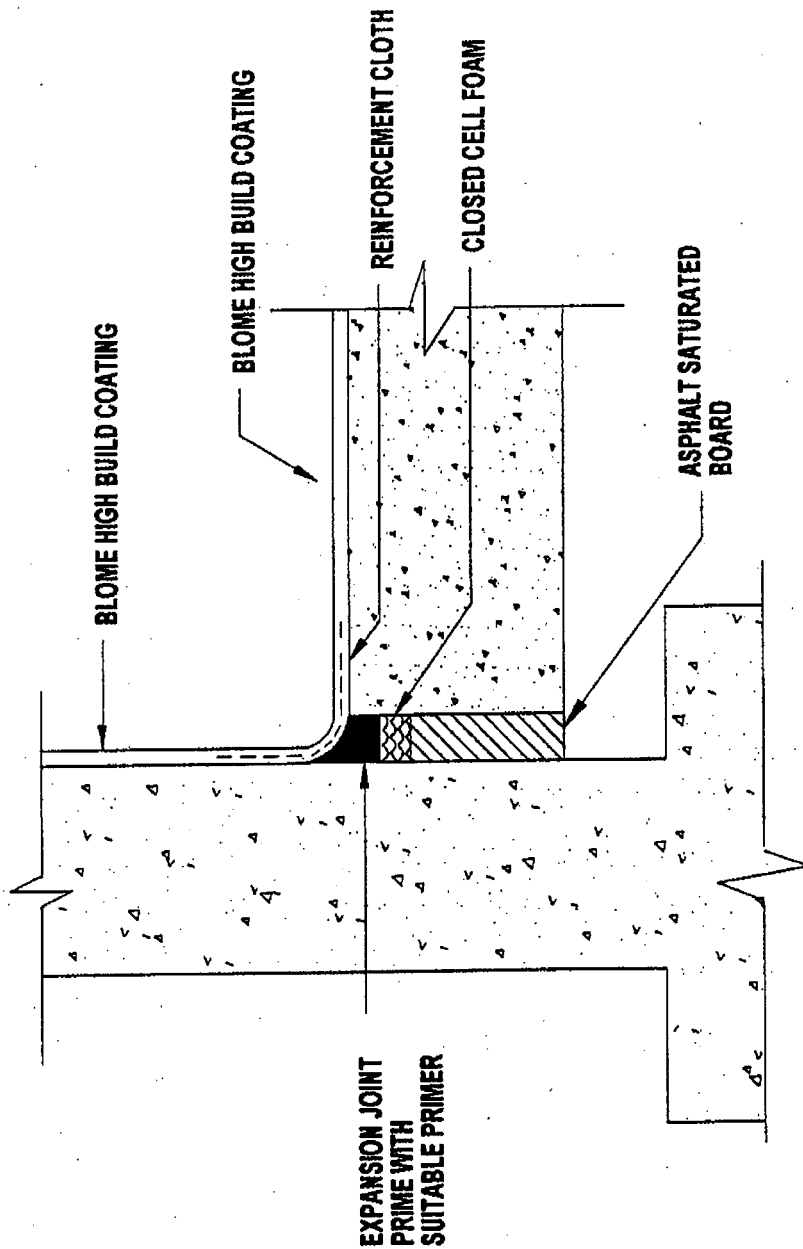


PREFERRED EXPANSION JOINT FOR MONOLITHIC TOPPINGS

ECD-1007

BLOME
INTERNATIONAL

1450 Hoff Industrial Drive
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www.blome.com e-mail info@blome.com



HIGH BUILD COATING APPLIED OVER JOINTS
ADJACENT TO COLUMNS, WALLS OR
EQUIPMENT SUPPORTS

ECD-1016

BLOME
INTERNATIONAL

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CONSTRUCTION DIAGRAMS
February 1, 2001

BLOME HIGH BUILD COATING

REINFORCEMENT CLOTH
6" WIDE

PLASTIC TAPE
2" WIDE

EXPANSION JOINT
COMPOUND

CLOSED CELL FOAM

EXPANSION BOARD

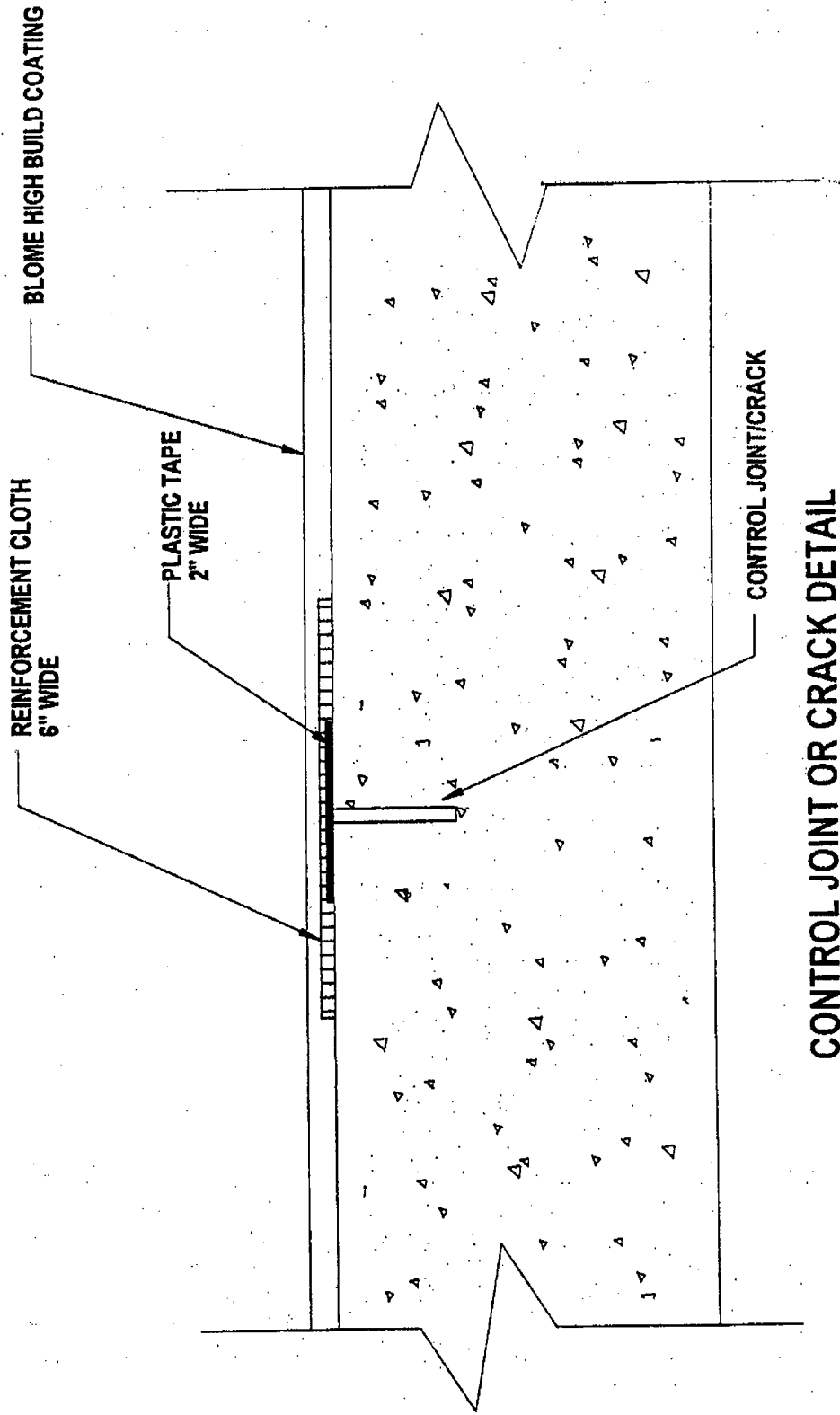
REINFORCED HIGH BUILD COATING OVER EXPANSION JOINTS
WITH MINIMAL MOVEMENT

ECD-1021

BLOME
INTERNATIONAL

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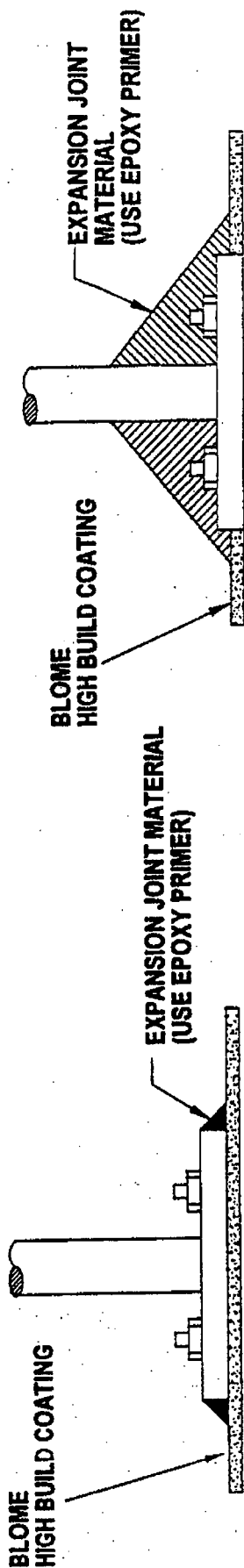
CONSTRUCTION DIAGRAMS
February 1, 2001



ECD-1022

BLOME
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EQUIPMENT FOOTING DETAILS

ECD-1023

BLOME
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EC- R540 **Moisture Tolerant Epoxy System**

DESCRIPTION

EC-R540 is a uniquely formulated, 100% solids, two component epoxy system that has a high degree of moisture tolerance. EC-R540 will cure and bond to clean, cured, wet concrete. Its high tolerance for wet surfaces makes it ideal for quick turn around projects where time does not allow for thorough drying of the surface to be coated or repaired. EC-R540 is a convenient mix ratio of 1:1 by volume. The product can be made into a dense, easy to trowel mortar using filler #410. As such, it can be troweled onto vertical or overhead surfaces with ease. EC-R540 can also be filled with 20/40 mesh silica and applied as a wear and impact resistant flooring. When reinforced with EC-Scrim the product exhibits increased crack and impact resistance. When using powder or aggregate fillers, EC-R540 can be used in underwater repair applications.

GENERAL USES

EC-R540 is recommended for a wide variety of applications including:
Brick and tile mortar
Coating damp floor surfaces
Chemically resistant concrete coating
Lining below grade concrete pits, manholes and wet wells

PACKAGING AND COVERAGE

EC-R540 is packaged in 2 gallon units and 9 gallon units. The mix ratio of resin to hardener is equal parts by volume.
Coverage rates depend on many factors; condition of the surface being coated, skill of the applicator, type of system being installed i.e., silica filled or reinforced or both. Contact your Blome International Representative for assistance estimating material requirements for your particular project.

TYPICAL PROPERTIES

Compressive Strength:	14,500 psi
Tensile Strength:	9,700 psi
Shore D hardness:	75-85
Solids by Volume:	100%
Weight per Mixed Gallon:	9.5 lbs
Pot Life @ 70F:	30-40 minutes
Set firm @ 70F:	4-6 hrs
Chemical service @ 70F:	36 hrs
Color:	Red, Gray, Clear

STORAGE

Keep EC-R540 components tightly sealed in their original containers until ready for use. Store at 70 – 75F to facilitate handling and workability. Properly stored, EC-R540 has a minimum shelf life of 12 months

SURFACE PREPARATION CONCRETE

Concrete should be adequately cured, possess adequate integrity and not be expelling excess water of hydration. A rule of thumb for cure of new concrete is 28 days cure at 70°F but that is not an assurance that the concrete has achieved adequate physical properties. Concrete should exhibit a compressive strength of 3,000 psi minimum and tensile strength of 300 psi or higher.

Ground slabs and new concrete should be tested for excess moisture in accordance with ASTM D 4263 Plastic Sheet Test Method; any water on the backside of the sheet after overnight exposure will require additional curing before a coating can be applied.

We recommend utilization of a low water-cement ratio, preferably 0.38 and adequate super plasticizers for placement are recommended, particularly when cure time to coat is critical.

New concrete must also be free of curing compounds, form release agents and any other contamination that might inhibit adhesion. Old concrete must be free of existing coatings or toppings and any loose or unsound concrete must be removed.

All concrete must be cleaned, as necessary, in accordance with ASTM D 4258. The resultant surface should be free of all oil, grease, and other contamination. Consult Blome International for special procedures for oil contaminated surfaces.

Upon completion of cleaning, the concrete surface shall be prepared in accordance with ASTM D4259. The resultant surface should be free of laitance and efflorescence and have a surface texture similar to medium (60-80 grit sandpaper).

STEEL

Incidental steel surfaces to which EC-R540 is to be applied, should be abrasive blasted to a near white finish with an anchor profile of 2-3 mils. Steel surfaces intended for immersion service must be abrasive blasted to a white metal finish with a 3-4 mil anchor profile.

MASKING & PROTECTION

Mask or remove adjacent surfaces and equipment that are not to be coated and mask all termination points.

APPLICATION EQUIPMENT

Blome EC-R540 may be applied by brush, roller, trowel or serrated squeegee. Since brush application is often for small areas or touchup, disposable china bristle brushes are recommended. Roller covers should be phenolic core roller suitable for epoxies and the nap thickness should reflect the texture of the substrate. Flat squeegees may be used and solvent resistant squeegee blades will facilitate cleanup and reuse.

MIXING TECHNIQUE

We recommend using Jiffy type mixers for all mixing and stirring. When operating the mixer, avoid plunging it up and down in the bucket. This can fold air into the resin, which may cause bubbles to form in the coating after it has been applied. Be especially careful not to allow water to enter the mix.

WORKING TIME

The working time for Blome EC-R540 is 15-20 minutes at 75°F. Working time will be longer at cooler temperatures and will be much shorter at higher temperatures.

MIXING & APPLICATION

1. Add the Hardener to the Resin in a ratio of 1 parts Resin to 1 part Hardener by volume and thoroughly mix for 2-3 minutes.
2. When used as a primer or sealer, apply by brush, squeegee or roller at the recommended dry film thickness.
3. When used as a slurry, mix aggregate with resin/hardener mixture in a fixed arm mixer such as a KOL mixer until aggregate is wet out completely. Then spread with a rake or notched squeegee at the desired thickness.
4. When used as an aggregate broadcast system, apply at a uniform thickness of resin/hardener mixture with a notched squeegee and broadcast aggregate to saturation. Best results are obtained when the substrate is smooth, relatively level, and free of divots and protrusions.
5. When used as a trowel-applied topping, mix in a fixed arm mixer such as a KOL mixer until the aggregate is wet out completely. Screed mix out and hand trowel to the desired thickness.
6. EC-R540 can be used as a dense mortar lining. This system is ideal for vertical and overhead applications. To make EC-R540 into a dense mortar lining, add Blome #410 filler to desired consistency. The mix should be a creamy and trowelable mortar. Mix in a fixed arm mixer such as a KOL mixer until aggregate blend is wet out completely. Consult Blome International for specific details for using Blome EC-R540 in any of above-mentioned manners.
7. EC-R540 can be reinforced using Blome International EC-Scrim. When used in this manner, the EC-Scrim must be embedded into a fresh basecoat of aggregate filled EC-R540 followed by a topcoat adequate to cover the EC-Scrim.

TOUCH-UP & RECOATING

Blome EC-R540 may be recoated with itself or other Blome epoxy and epoxy novolac coatings and toppings within 24 hours without special surface preparation. Provided that the temperature during the curing has not exceeded 90°F and has not been exposed to direct sunlight for more than 8 hours. Beyond 24 hours, lightly sand to roughen before recoating.

CLEAN-UP

Before Blome EC-R540 gels, it may be cleaned from hand tools and equipment using hot, soapy water. Once it has gelled, xylene or MEK will be required for cleanup. Chlorinated solvents may be used if flammable solvents are not allowed.

CAUTION

Blome EC-R540 may cause skin irritation with prolonged or repeated contact. Avoid skin contact and follow the material safety data sheet, which is available for each product.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANTABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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EC- R590 **Multi-Purpose Epoxy System**

PRODUCT DESCRIPTION

EC-R590 is a 100% solids, two component economical epoxy system. EC-R590 is conveniently packaged in 1.25 gallon kits and 4.25 gallon kits. The mix ratio is 4:1 by volume. The product can be made into a dense, easy to trowel mortar using filler #410. As such, it can be troweled onto vertical or overhead surfaces with ease. EC-R590 can also be filled with 20/40 mesh silica and applied as a wear and impact resistant flooring. An economical polymer concrete is made by the addition of ¼" pea gravel along with 20/40 mesh silica. When reinforced with EC-Scrim the product exhibits increased crack and impact resistance.

GENERAL USES

EC-R590 is recommended for a wide variety of applications including:
Floor toppings
Casting of equipment footings
Chemically resistant coating for concrete surfaces
Lining below grade concrete pits, manholes and wet wells

PACKAGING AND COVERAGE

EC-R590 is packaged in 1.25 gallon units, 40 lb. (4.25 gallon) units, and 5 drum quantities. The mix ratio of resin to hardener is 4 Parts A to 1 Part B by volume. Coverage rates depend on many factors; condition of the surface being coated, skill of the applicator, type of system being installed i.e., silica filled or reinforced or both. Contact your Blome International Representative for assistance estimating material requirements for your particular project.

TYPICAL PROPERTIES OF AGGREGATE FILLED EC-R590

Compressive Strength:	14,160 psi
Tensile Strength:	9,700 psi
Flexural Strength:	5,650 psi
Shore D hardness:	75-85
Coefficient of thermal expansion:	14-16 X 10 ⁻⁶ in/in/F
Solids by Volume:	100%
Weight per Mixed Gallon:	9.5 lbs
Pot Life @ 70F:	30-40 minutes
Set firm @ 70F:	4-6 hrs
Chemical service @ 70F:	36 hrs
Color:	Red, Gray, Clear

STORAGE

Keep EC-R590 components tightly sealed in their original containers until ready for use. Store at 70 – 75F to facilitate handling and workability. Properly stored, EC-R590 has a minimum shelf life of 12 months

SURFACE PREPARATION CONCRETE

Concrete should be adequately cured, possess adequate integrity and not be expelling excess water of hydration. A rule of thumb for cure of new concrete is 28 days cure at 70°F but that is not an assurance that the concrete has achieved adequate physical properties. Concrete should exhibit a compressive strength of 3,000 psi minimum and tensile strength of 300 psi or higher.

Ground slabs and new concrete should be tested for excess moisture in accordance with ASTM D 4263 Plastic Sheet Test Method; any water on the backside of the sheet after overnight exposure will require additional curing before a coating can be applied.

We recommend utilization of a low water-cement ratio, preferably 0.38 and adequate superplasticizers for placement are recommended, particularly when cure time to coat is critical.

New concrete must also be free of curing compounds, form release agents and any other contamination that might inhibit adhesion. Old concrete must be free of existing coatings or toppings and any loose or unsound concrete must be removed.

All concrete must be cleaned, as necessary, in accordance with ASTM D 4258. The resultant surface should be free of all oil, grease, and other contamination. Consult Blome International for special procedures for oil contaminated surfaces.

Upon completion of cleaning, the concrete surface shall be prepared in accordance with ASTM D4259. The resultant surface should be free of laitance and efflorescence and have a surface texture similar to medium (60-80 grit sandpaper).

STEEL

Incidental steel surfaces to which EC-R590 is to be applied, should be abrasive blasted to a near white finish with an anchor profile of 2-3 mils. Steel surfaces intended for immersion service must be abrasive blasted to a white metal finish with a 3-4 mil anchor profile.

MASKING & PROTECTION

Mask or remove adjacent surfaces and equipment that are not to be coated and mask all termination points.

APPLICATION EQUIPMENT

Blome EC-R590 may be applied by brush, roller, trowel or serrated squeegee. Since brush application is often for small areas or touchup, disposable china bristle brushes are recommended. Roller covers should be phenolic core roller suitable for epoxies and the nap thickness should reflect the texture of the substrate. Flat squeegees may be used and solvent resistant squeegee blades will facilitate cleanup and reuse.

MIXING TECHNIQUE

We recommend using Jiffy type mixers for all mixing and stirring. When operating the mixer, avoid plunging it up and down in the bucket. This can fold air into the resin, which may cause bubbles to form in the coating after it has been applied. Be especially careful not to allow water to enter the mix.

WORKING TIME

The working time for Blome EC-R590 is 30-40 minutes at 70°F. Working time will be longer at cooler temperatures and will be much shorter at higher temperatures.

MIXING & APPLICATION

1. Add the Hardener to the Resin in a ratio of 4 parts Resin to 1 part Hardener by volume and thoroughly mix for 2-3 minutes.
2. When used as a primer or sealer, apply by brush, squeegee or roller at the recommended film thickness.

3. When used as a slurry, mix aggregate with resin/hardener mixture in a fixed arm mixer such as a KOL mixer until aggregate is wet out completely. Then spread with a rake or notched squeegee at the desired thickness.
4. When used as an aggregate broadcast system, apply at a uniform thickness of resin/hardener mixture with a notched squeegee and broadcast aggregate to saturation. Best results are obtained when the substrate is smooth, relatively level, and free of divots and protrusions.
5. When used as a trowel-applied topping, mix in a fixed arm mixer such as a KOL mixer until the aggregate is wet out completely. Screed mix out and hand trowel to the desired thickness.
6. EC-R590 can be used as a dense mortar lining. This system is ideal for vertical and overhead applications. To make EC-R590 into a dense mortar lining, add Blome #410 filler to desired consistency. The mix should be a creamy and trowelable mortar. Mix in a fixed arm mixer such as a KOL mixer until aggregate blend is wet out completely.
7. EC-R590 can be reinforced using Blome International EC-Scrim. When used in this manner, the EC-Scrim must be embedded into a fresh basecoat of aggregate filled EC-R590 followed by a topcoat adequate to cover the EC-Scrim.

Consult Blome International for specific details for using Blome EC-R590 in any of above-mentioned manners.

TOUCH-UP & RECOATING

Blome EC-R590 may be recoated with itself or other Blome epoxy and epoxy novolac coatings and toppings within 24 hours without special surface preparation. Provided that the temperature during the curing has not exceeded 90F and has not been exposed to direct sunlight for more than 8 hours. Beyond 24 hours, lightly sand to roughen before recoating.

CLEAN-UP

Before Blome EC-R590 gels, it may be cleaned from hand tools and equipment using hot, soapy water. Once it has gelled, xylene or MEK will be required for cleanup. Chlorinated solvents may be used if flammable solvents are not allowed.

CAUTION

Blome EC-R590 may cause skin irritation with prolonged or repeated contact. Avoid skin contact and follow the material safety data sheet, which is available for each product.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANTABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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Supersedes all previous literature

Part of the **HEMPEL** *Group*



Blome Primer 75 **Moisture Tolerant Epoxy Primer**

PRODUCT DESCRIPTION

Blome Primer 75 is a two-component, moisture-tolerant epoxy primer for steel, concrete and other substrates as specified. It is used to prime concrete, steel and other substrates prior to application of other Blome International coatings, linings, membranes, sealants and polymer concretes. It achieves a tenacious bond to the substrate and tolerates substrate dampness but not wet surfaces.

GENERAL USES

Blome Primer 75 is used as a primer for other Blome International materials in a wide variety of applications. Typical applications include:

- Secondary containment linings
- Tank linings
- Monolithic floor toppings
- In-situ polymer concrete installations
- Trench linings

HANDLING CHARACTERISTICS

- Blome 75 is available in convenient 2-parts resin to 1-part hardener kits. It is easily applied by brush, roller, spray or squeegee. Its excellent wetting characteristics and low viscosity facilitate application.
- Blome 75 is normally applied at 100 square feet per gallon on concrete and other porous surfaces.
- Blome 75 is normally applied at 150 square feet per gallon on steel and other non-porous substrates.
- Consult the data sheet for the Blome International overcoat material for additional details and revised film thickness requirements.
- Blome 75 is also available in a Low Temperature Curing version, which allows installation at temperatures as low as 40°F.

TYPICAL PROPERTIES **WET**

Color:	Milky White/Clear
Moisture Tolerance:	Good
Solids (by weight):	100%

CURED

Water absorption:	Very low, 0.16%
Adhesion to concrete:	500 psi (failure in concrete)

PACKAGING & STORAGE

Blome 75 is packaged in 1.5-gallon and 15-gallon kits. Each component is pre-measured and ready to use. Store unopened components in a dry place, out of direct sunlight and protected from the elements. Storage temperature should be 50-95°F. Properly stored, Blome 75 has a shelf life of 12 months. Refer to the date of manufacture printed on the label.

SPECIFICATION GUIDE

Prime all surfaces with a two-component, moisture-tolerant epoxy primer meeting the generic formulation and performance characteristics of Blome Primer 75 as manufactured by Blome International, O'Fallon, MO (800) 886-3455. Install in accordance with the latest data sheet for Blome Primer 75 and the corresponding Blome overcoat material as well as good industry practice.

APPLICATION GUIDELINES ENVIRONMENTAL CONDITIONS

Blome 75 should be applied at surface and air temperatures of 50°F minimum and 95°F maximum. The ideal temperature range is 60-90°F. Air temperature should always be at least 5°F greater than the current dew point. For applications at 40-60°F, we recommend using Blome 75 Low Temperature Cure. Applications below 40°F are not recommended because of the potential for coating over ice or frost; consult Blome for these low temperature applications.

JOBSITE STORAGE OF MATERIALS

Proper storage of Blome International products is important to a successful application. Follow these general storage procedures:

1. Store components (Part A and Part B) unopened, at 50-85°F, out of direct sunlight and protected from the elements.
2. Keep away from heat and flame. For the 24 to 48 hours just prior to use, adjust the storage temperature to 70-85°F to facilitate handling.

SURFACE PREPARATION- STEEL

The following recommendations generally apply to the proper surface preparation of steel for Blome 75 but consult the data sheet of the Blome overcoat material for any additional or superseding requirements for surface preparation.

1. Steel substrate must be free of all oil, grease, dirt, dust, mill scale, rust, existing coatings and other contamination.
2. All welds must be smooth and continuous. All weld splatter, buckshot, laminations, and slivers must be removed and ground smooth.
3. Undercuts and pinholes must be filled with weld metal and ground smooth.
4. *Atmospheric service:* Abrasive blast in accordance with SSPC-SP 10 Near White Blast Finish (NACE No. 2) and 2 to 4 mil dense, sharp anchor profile.
5. *Immersion service:* Abrasive blast in accordance with SSPC-SP 5 White Metal Blast Finish (NACE No. 1) and 2 to 4 mil dense, sharp anchor profile.

SURFACE PREPARATION- CONCRETE

The following recommendations generally apply to the proper surface preparation of concrete for Blome 75 but consult the data sheet of the Blome overcoat material for any additional or superseding requirements for surface preparation.

1. Concrete should be adequately cured, possess adequate integrity and not be expelling excess water of hydration. A rule of thumb for cure of new concrete is 28 days cure at 70°F but that is not an assurance that the concrete has achieved adequate physical properties.
2. Concrete should exhibit a compressive strength of 3,000 psi minimum and tensile strength of 300 psi or higher.

3. Ground slabs and new concrete should be tested for excess moisture in accordance with ASTM D 4263 Plastic Sheet Test Method; any water on the backside of the sheet after overnight exposure is an unacceptable surface for coating.
4. We recommend utilization of a low water-cement ratio, preferably 0.38 and adequate superplasticizers for placement is recommended, particularly when cure time to coat is critical.
5. New concrete must also be free of curing compounds, form release agents and any other contamination that might inhibit adhesion.
6. Old concrete must be free of existing coatings or toppings and any loose or unsound concrete must be removed. All concrete must be cleaned, as necessary, in accordance with ASTM D 4258. The resultant surface should be free of all oil, grease, and other contamination. Consult Blome International for special procedures for oil contaminated surfaces.
7. Upon completion of cleaning, the concrete surface shall be prepared in accordance with ASTM D4259.
8. The resultant surface should be free of laitance and efflorescence and have a surface texture similar to medium (60-80 grit sandpaper).

SURFACE PREPARATION- MISCELLANEOUS SURFACES

Consult Blome International for use over substrates other than steel or concrete.

MASKING & PROTECTION

Mask or remove adjacent surfaces and equipment that are not to be lined and all termination points.

APPLICATION EQUIPMENT

Blome 75 may be applied by brush, roller, squeegee or spray. Since brush application is often for small areas or touchup, disposable china bristle brushes are recommended. Roller covers should be phenolic core roller suitable for epoxies and the nap thickness should reflect the texture of the substrate. Flat squeegees may be used and solvent resistant squeegee blades will facilitate cleanup and reuse. Blome 75 may also be applied by spray using airless spray equipment or plural component spray equipment. A 30 to 1 ratio pump, 3/8" ID material line and a spray gun such as a Graco Silver Gun is suggested.

MIXING TECHNIQUE

We recommend using Jiffy type mixers for all mixing and stirring. When operating the mixer, avoid plunging it up and down in the bucket. This can fold air into the resin, which may cause bubbles to form in the coating after it has been applied. Be especially careful not to allow water to enter the mix.

WORKING TIME

The working time for Blome 75 is 30-35 minutes at 75°F in 1-½ gallon kits. Working time will be longer for cooler temperatures and will be much shorter at higher temperatures. Larger kit sizes will also reduce working time.

MIXING & APPLICATION

1. Add the hardener to the resin and thoroughly mix for at least 1-2 minutes. Uniform mixing is critical to uniform curing of the applied film.

2. Apply Blome 75 at a uniform thickness using the application method of choice. If applying by spray or squeegee to concrete surfaces, backroll to ensure adequate wetting of the substrate and encapsulation of any fines on the surface.
3. Topcoats are best applied within 24 hours after primer is applied. Topcoats may be applied while primer is tacky or after initial cure, within 24 hours at 75°F.

TOUCH-UP & RECOATING

Blome 75 may be recoated with itself or topcoated without special surface preparation within 24 hours. Beyond 24 hours, light sanding to de-gloss is recommended before recoating or topcoating. If Primer has cured for longer than seven (7) days, light sanding to de-gloss and repriming are recommended.

CLEAN-UP

The following tips will be helpful in cleaning hand tools and equipment after use. Before Blome 75 gels, it can be cleaned from hand tools and equipment using hot, soapy water. Spray equipment should be flushed periodically and at days end with solvent to avoid gelling in the equipment and hoses. Follow the equipment manufacturer's recommendations for proper cleaning and care instructions. After Blome 75 gels, xylene or MEK will be required for cleaning. Chlorinated solvents may be used if flammable solvents are not allowed.

CAUTION

Blome 75 may cause skin irritation with prolonged or repeated contact. Avoid skin contact and follow the material safety data sheet, which is available for each product.

WARRANTY

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Supersedes all previous literature

Part of the **HEMPEL** *Group*

TL-47-S
100% Solids Novolac Epoxy Tank Lining

DESCRIPTIONS AND USES

Blome International's Novolac Epoxy tank lining systems are formulated to offer superior resistance to many chemicals found in the petrochemical industry. Blome TL-47-S exhibits excellent resistance to crude oil, gasoline, diesel fuel and jet fuel.

TL-47-S is a high performance Novolac epoxy tank lining for immersion service. Typically spray applied, its high build properties allow thicknesses of 20 to 80 mils to be achieved in one coat on horizontal surfaces.

TL-47-S is a two component product with a 4:1 volumetric mix ratio.
TL-47-S possesses the following properties:

- Excellent chemical resistance;
- Thermal shock, impact and wear resistance;
- 100% solids;
- Long Pot Life for airless spray application;
- Excellent bond strength;
- Resistance to chipping and cracking due to torsional twisting;
- Superior edge coat properties;
- High cohesive strength;
- Low permeability;
- Low odor;
- Meets the requirements of API 652

Typical uses include:
Tank Linings, External Tank Coatings, Coating
Structural Steel in harsh environments.

PACKAGING/COVERAGE

TL-47-S is available in 1-gallon, 5-gallon, and 25-gallon units. Each unit consists of pre-measured Part A and Part B components.

Application thickness will vary depending on expected service conditions. Consult Blome International's Tank Lining Systems Guide or contact our technical service group for specific lining recommendations.

Coverage rates will be affected by the condition of surface being coated (degraded vs. smooth, steel vs. concrete, etc.). To calculate theoretical coverage per gallon, divide desired mil thickness into 1,604. (For example, theoretical coverage for a 30 mil thickness is: 1,604 divided by 30 = 53.46 square feet per gallon.) For practical coverage, make necessary allowances for condition of the substrate, temperatures, jobsite conditions, waste, overspray, etc.

TYPICAL PROPERTIES -WET

Solids by Volume:	100%
Weight per Mixed Gallon:	10 lbs
Pot Life @ 75°F:	45 to 60 min*

Cure Times @ 75°F: Dry to Touch: 12 hrs
Firm: 24 hrs
Chemical Service: 5 days
Primer: Not required on properly prepared steel
Flammability: Nonflammable

*Significantly less at elevated temperatures. May be extended to 75 to 90 minutes with the use of Blome Additive #7 Pot Life Extender.

TYPICAL PROPERTIES -CURED

Color: Medium Grey or Red
Hardness- ASTM D-2240 Shore D: 74
Compressive Strength -ASTM C-579: 15,000 psi
Tensile Strength -ASTM D-638: 7,900 psi
Flexural Strength -ASTM D-790: 13,500 psi
Flexural Modulus of Elasticity -ASTM D-790: 7.7 psi x 10⁵
Bond Strength -ASTM D-4541: Concrete:concrete failure
Steel: 1 ,500 psi
Water Vapor Transmission -ASTM E-96: 0.0120 grain per hr ft²
Permeability: 0.0036 perm. - in.

STORAGE AND SHELF LIFE

Keep TL-47-S components tightly sealed in their original containers until ready for use. Store at 50°F to 75°F out of direct sunlight.

APPLICATION GUIDELINES

For applications on vertical surfaces, use TL-47-S within four months of its date of manufacture. Otherwise, Blome TL-47-S has a shelf life of one year, when properly stored.

TEMPERATURE CONSIDERATIONS

The temperature of the surface to be coated and the ambient air temperature should be at least 50°F while applying TL-47-S and while it cures. If you attempt to apply TL-47-S in cooler temperatures, tarp and heat the area to be coated to maintain the minimum 50°F conditions.

Stop application if the temperature falls within 5°F of the dew point.

Outgassing bubbles may appear in TL-47-S if it is applied over concrete, particularly in direct sunlight, or when air and substrate temperatures are rising. This is due to the expansion of air and/or moisture trapped in the concrete. It is especially true of air entrained concrete. For best results, shade the work area and apply TL-47-S when the temperature of the concrete substrate is falling. A surface thermometer must be used to frequently monitor substrate temperature.

Twenty-four hours before application, all materials (components A and B) should be stored at a 75°F to 85°F, to facilitate handling and spraying.

SURFACE PREPARATION -GENERAL

Surfaces must be dry and free of dust, dirt, grease, oil, chemicals and contaminants immediately prior to applying each coat of either primer or TL-47-S.

SURFACE PREPARATION OF STEEL

1. Abrasive blast steel surfaces to a minimum near white metal finish with a 3 to 5 mil anchor profile. (Ref. SSPC-SP-10)
2. All welds should be continuous and should be ground to remove all sharp edges, laps, under cuts and other surface irregularities. Relatively smooth, ripple finished welds are acceptable. Stripecoat all welds just prior to applying coating.
3. Steel in Non -Immersion Service
Abrasive blast steel surfaces to a near white metal finish with 1 to 2 mil anchor profile. (Ref. SSPC-SP-10)

MASKING

Mask surfaces that are not to be coated. TL-47-S is difficult to remove, once cured.

PRIMING

Steel -priming not required.

APPLICATION EQUIPMENT

TL-47-S may be applied using a spray rig, brush or notched trowel. Use Graco 56:1 King airless spray rig with hopper feed or Graco Hydro-Cat fixed at a 4:1 volumetric ratio.

CARE OF SPRAY RIG HOSES

Take care to prevent the mixed material from setting up in your hoses. For best results, keep hoses as short as possible, purge hoses immediately if work is interrupted. Keep hoses out of direct sunlight and insulated or away from hot surfaces.

MIXING AND APPLICATION

TL-47-S may be thinned for certain applications. Use up to 5% by weight of Blome Additive #7. Refer to specifications for your project, or consult Blome International for alternate thinner recommendations. The mix ratio of Part A to Part B is 4:1 A to B by volume.

1. The components must be individually mixed immediately prior to use:
Part A: Blend Part A component to a uniform consistency in its individual container, using a Jiffy type mixer.
Part B: Blend Part B component to a uniform consistency in its individual container.
2. If you are using plural component equipment, skip this step. Otherwise:
Pour the entire contents of Part B into the container holding Part A and mix thoroughly for two minutes using a Jiffy type mixer. The temperature of the mixed material should be 75°F to 85°F for hot potting. The pot life of the mixture will be approximately 60 to 75 minutes at 75°F; significantly less time at elevated temperatures. The longer the material is in the bucket after mixing, the shorter its pot life will be. Therefore, use immediately once mixed.
3. Material should be applied in even coats.
If spraying, use multidirectional passes to ensure positive coverage and proper film build
4. Horizontal Surfaces
The entire thickness may be applied to horizontals in a single coat.
5. Vertical Surfaces
Minimum of 12 mils up to 25 mils may be applied to vertical surfaces in one coat.
6. Spark Testing Steel
Spark testing is recommended for coated steel in immersion service. Test at 100 volts per mil.
7. Prepare surfaces for inter-coat adhesion as follows:

- a. Allow TL-47-S to cure until firm before applying subsequent coats.
 - b. After the surface cures firm to the touch, but less than 24 hours, it must be washed with soap and water, rinsed and dried before re-coating.
 - c. Surfaces cured beyond 24 hours must be washed with soap and water, rinsed, dried and lightly sanded or abrasive blasted.
8. If work is interrupted, or at the end of the day, terminate the coating in a straight line.
 9. As it cures, TL-47-S will sometimes develop a thin, oily film on its surface. This film may be easily removed by washing with soap and water.

CLEANUP

Before material gels, tools and equipment should be cleaned using hot, soapy water. After TL-47-S begins to cure, thinners will be required. Chlorinated solvents may be used if flammable solvents are prohibited.

SAFETY PRECAUTIONS FOR INDUSTRIAL USE ONLY

Avoid contact with skin and eyes; do not ingest material or inhale vapors. When working with TL-47-S, always wear chemical goggles, appropriate rubber gloves, and other appropriate safety clothing. When spraying in confined areas, wear a fresh air hood and make provisions for forced air ventilation. When spraying in open areas, a NIOSH approved respirator suitable for organic vapors can replace fresh air hood. Prolonged or repeated exposure to the Part A and Part B components of TL-47-S may cause skin irritation and/or allergic reactions. Refer to Blome Material Safety Data Sheets for individual components.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANT ABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection there with regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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**BLOME EC-90 AND/OR TL 47S SECONDARY CONTAINMENT NOVOLAC
EPOXY COATINGS/ LINERS SYSTEMS FOR DIESEL FUEL, GASOLINE AND
CHEMICAL PROTECTION**

1 GENERAL

1.1 SUMMARY

- 1.1.1 Work, in general, includes furnishing and installing:
- 1.1.2 Chemically resistant coating system that shall be applied as an aggregate filled coating system (A.F.S.).
- 1.1.3 Flexible reinforced joint system.

1.2 SUBMITTALS

- 1.2.1 Current product data, specifications, application guidelines and general recommendations by Blome covering each material required for work.
 - 1.2.1.1 Provide "stepped" samples for systems utilizing multiple coats.

1.3 QUALITY ASSURANCE

- 1.3.1 Manufacturer Qualifications: A firm with not less than 5 years successful experience in producing chemically resistant coating materials of types equivalent to those required for this project.
- 1.3.2 Installer Qualifications: Firm which has been technically instructed and approved by coating manufacturer.
- 1.3.3 Single-Source Responsibility: Provide primers and accessory materials produced or approved for use by the same manufacturer as the chemically resistant coating system.
- 1.3.4 Examine the substrate and the conditions under which chemically resistant coating work is to be performed; do not proceed with the work until conditions have been corrected in an acceptable manner.
- 1.3.5 Weather Conditions: Proceed with chemically resistant coating work only when weather conditions comply with manufacturer's recommendations and will permit the materials to be applied in accordance with the manufacturer's printed recommendations.

- 1.3.6 Chemical Resistance: Products shall be resistant to chemicals determined by Owner/Engineer to be required for the Project.

1.4 DELIVERY, STORAGE AND HANDLING

- 1.4.1 Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

- 1.4.1.1 Product name or title of material.
- 1.4.1.2 Product description (generic classification or binder type).
- 1.4.1.3 Manufacturer's stock number and date of manufacture.
- 1.4.1.4 Color name and number.

- 1.4.2 Comply with manufacturer's instructions for storage and handling.

- 1.4.2.1 Store materials in tightly covered containers in a well-ventilated and protected area out of direct sunlight. Storage area temperature shall be kept between 60 and 90 degrees F and optimum storage temperature shall be 80 degrees F. Do not use materials which have been improperly stored or which have been stored for more than one year from date on label of container. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
- 1.4.2.2 Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing and application.

1.5 PROJECT CONDITIONS

- 1.5.1 Pre-Installation Conference When Required by Owner: Meet at project site well in advance of time scheduled for work to proceed, and review requirements for work and conditions that could possibly interfere with successful performance. Require Contractor, Sub-contractor/Applicator and Owner-Engineer to attend conference.
- 1.5.2 Weather Conditions: Proceed with installation when weather conditions are in compliance with manufacturer's recommended limitations.

2 PRODUCTS

2.1 MATERIALS:

2.1.1 Chemically Resistant Epoxy Coating: Provide chemically resistant epoxy coating system which is described in appendix "A". The system will be applied as an aggregate filled system, manufactured by Blome International, St. Louis, MO, 636-379-9119, complete with all primers and accessory materials required for a complete system. Color as selected by Owner/Engineer from manufacturer's standard color line.

2.1.2 Miscellaneous Coating Materials:

2.1.2.1 Aggregate: 20/40 mesh rounded silica aggregate, dry, cleaned, bagged.

2.1.2.2 Restoration Materials: Comply with manufacturer's recommendations for types of materials required to repair substrate prior to coating (if required). Blome EC 66, MP 83 or Blome 590 blended with proper aggregates (Part C) to provide a surfacing material.

2.1.2.3 Ancillary Products: Type as recommended by the coating manufacturer provided at locations indicated and at such additional locations as recommended by coating system manufacturer. (i.e. flexible joint system products)

3 EXECUTION

3.1 SUBSTRATE PREPARATION:

3.1.1 Comply with manufacturer's current application guidelines for the preparation of the substrate to receive the coating system. The result of the surface preparation will be a surface texture equivalent to medium grit sand paper. All laitance must be removed. Acceptable methods of preparation include, but are not limited to, Abrasive Blasting, Diamond Grinding and UHP Water Jetting.

3.1.2 Clean the substrate of dust, debris and other substances that would be detrimental to the successful performance of the materials and work of this Section.

3.1.2.1 Concrete surfaces shall have cured a minimum of 28 days, unless otherwise approved by coating system manufacturer.

3.1.2.2 Substrates shall be structurally sound.

- 3.1.2.3 Repair all vertical areas, if required by owner, so that they are free of honeycombs, voids and projections, in accordance with manufacturer's application guidelines.
- 3.1.3 Treat all joints, penetrations, transitions and similar project requirements using manufacturer's recommended materials and current application guidelines and construction details. (see attached)
- 3.1.4 Concrete surfaces shall be visibly dry and pass test (no condensation) prior to application of the coating system. Test for moisture in concrete using ASTM D 4263-88 "Standard Test Method For Indicating Moisture In Concrete By The Plastic Sheet Method". In the absence of condensate, the applicator may begin coating operations.
- 3.1.5 Concrete Restoration: Comply with coating manufacturer's printed recommendations and owner's requirements for repair of damaged and unacceptable substrates.
 - 3.1.5.1 Restoration for Concrete with Surface Deterioration:
 - 3.1.5.1.1 Horizontal Surfaces: (If Required)
 - 3.1.5.1.1.1 Extent of Erosion:
 - 3.1.5.1.1.1.1 0 to 1/2 inch: Specified coating bulked with appropriate aggregate mix.
 - 3.1.5.1.1.1.2 1/2 to 1 inch: Specified coating bulked with aggregate mix or "Blome Polymer Concrete".
 - 3.1.5.1.1.1.3 1 to 4 inches: Blome polymer concrete or manufacturer's rapid hardening mortar, "Blome 925".
 - 3.1.5.1.2 Vertical Surfaces: (If required)
 - 3.1.5.1.2.1 Extent of Erosion:
 - 3.1.5.1.2.1.1 0 to 1/2 inch: Blome 75 bulked with sand and "Part C" or specified coating bulked with "Part C".
 - 3.1.5.1.2.1.2 1/2 to 1 inch: Blome 75 epoxy primer, bulked with sand and "Part C" or manufacturer's polymer concrete.

3.1.5.1.2.1.3 1 to 4 inches: Blome's
polymer concrete, or
manufacturer's rapid
hardening mortar, Blome
925.

3.1.6 Prepare and prime all other substrates as recommended by the
coating system manufacturer.

3.1.7 Mask off adjoining surfaces not to receive coating materials and
close off drains to prevent spillage and migration of liquid
materials outside the coating area or into the drainage system.

3.2 MATERIALS PREPARATION:

3.2.1 Mix and prepare coating materials in accordance with
manufacturer's directions.

3.2.2 Maintain containers used in mixing and application of coating in a
clean condition, free of foreign materials and residue.

3.3 INSTALLATION:

3.3.1 Comply with Blome's current application guidelines for the
installation of the entire coating system. Apply coating by
spraying, roller coating or pouring liquid onto substrate and
distributing with a notched squeegee short nap roller or trowel to
provide a uniform film thickness.

3.3.2 Apply total thickness of coating in the number of coats
recommended by the manufacturer. Provide coating thickness as
specified herein.

3.3.2.1 New Concrete and Existing Concrete:

3.3.2.1.1 Secondary Containment Area - Foot Traffic:

3.3.2.1.1.1 Horizontal Surfaces: 60 mil
aggregate filled coating system.

3.3.2.1.1.2 Vertical Surfaces: 30 mils.

3.3.2.1.1.3 Details as indicated by drawings &
owner.

3.3.2.1.2 General Guidelines

3.3.2.1.2.1 Apply Blome #75 Primer at the rate
of 250 SF/gallon to properly
prepared surface.

- 3.3.2.1.2.2 Apply Blome Epoxy Coating @ 35 mils wet film thickness or at the rate of 45 SF/gallon on horizontal surfaces. (This thickness must be checked every 40 – 50 square feet.)
- 3.3.2.1.2.3 Apply 30 mils wet film thickness to vertical wall surfaces. The Epoxy Coating must have Part "C" added to it so that it will "hang" on the wall surface requiring thicknesses of 30 mils and higher.
- 3.3.2.1.2.4 If surfacing/filling is needed the use of Blome 83MP or Blome 590 is acceptable.
- 3.3.2.1.2.5 Horizontal surfaces will be saturated with clean, bagged 20/40 mesh silica sand at the rate of 1.5 lbs per square foot or until the surface appears dry. The sand must be broadcast evenly into film while it is still wet.
- 3.3.2.1.2.6 When the coating has cured enough to support weight, the excess sand will be removed and 20 - 25 mils of the Epoxy Coating will be applied over the surface to seal it.
- 3.3.2.1.2.7 Do not coat over expansion joints or isolation joints. Refer to detailed drawings for coating system requirements on these areas.
- 3.3.2.1.2.8 If the joints are coated, they must be saw cut prior to applying the joint detail.
- 3.3.2.1.2.9 All sumps and below grade installations will require polymer concrete restoration.

3.3.3 Aggregate, if needed:

- 3.3.3.1 Apply surface aggregate promptly after base coat has been applied and while it is still fluid. Remove and dispose of loose aggregate after system has cured.
- 3.3.3.2 Where required, aggregate shall be mixed in with coating/lining in accordance with manufacturer's current printed mixing and application guidelines.

3.4 FIELD QUALITY CONTROL

3.4.1 The right is reserved by Engineer/Owner to invoke the following material testing procedure on the coating system:

- 3.4.1.1 Engage services of an independent testing laboratory to test installed coating. Testing of materials at project site shall be taken in presence of Contractor and Owner.
- 3.4.1.2 Testing laboratory will perform appropriate tests for any or all of following characteristics:
 - 3.4.1.2.1 Measure dry film thickness per ASTM D 4138-88, "Standard Test Method For Measurement Of Dry Film Thickness Of Protective Coating Systems By Destructive Means".
 - 3.4.1.2.2 Test the bond strength of protective coating system per ASTM D 4541-85, "Standard Method For Pull-Off Strength Of Coatings Using Portable Adhesion Testers".
 - 3.4.1.2.3 Test the coating/lining applied to steel surfaces for pinholes per National Association of Corrosion Engineers Standard RP0188-88, "Recommended Practice Discontinuity (Holiday) Testing Of Protective Coatings".

3.4.2 As a minimum, it is required that completed coating system specified be free from the following defects:

- 3.4.2.1 Pinholes in coating/lining.
- 3.4.2.2 Uncured material.
- 3.4.2.3 Debris and foreign materials in the cured coating/lining.
- 3.4.2.4 Inadequate thickness.
- 3.4.2.5 Use of materials not authorized in specification.
- 3.4.2.6 Unauthorized variance from specifications.

These specifications were prepared by Biome International, Inc. ("BLOME INTERNATIONAL") for the sole use of the Contractor performing work for the "Owner" named herein and are meant as general guidelines only. The purpose of these specifications is to recommend products for the protection and enhancement of the appearance of the items set forth in these specifications. BLOME INTERNATIONAL assumes no liability in the performance of these specifications and is not responsible for any damages, including consequential or incidental damages, or loss as a result of performance of or compliance with the recommendations contained in these specifications. These specifications have been prepared at the request of the Owner named herein to address corrosion issues, are based on the factual information provided to BLOME INTERNATIONAL by the Owner, and do not in any way address structural soundness of any identified surface or item. These specifications do not warrant or represent the proper manufacture of any of the products recommended herein and BLOME INTERNATIONAL specifically disclaims any responsibility for damages or loss due to the use of the specified materials. The Contractor performing the work in accordance with these specifications shall be responsible for worker safety and compliance with all State, Local and Federal guidelines, specifically including but not limited to those rules and regulations pertaining to the removal and disposal of hazardous materials, associated with the performance of the specified work. It is the sole responsibility of the Contractor and the Owner of the property with respect to which these guidelines are being applied to determine if the guidelines set forth in these specifications are appropriate with respect to the intended use for any particular job. The Contractor shall use all products only for their intended purposes



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and in accordance with manufacturer guidelines. BLOME INTERNATIONAL GIVES NO GUARANTEE, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND BLOME INTERNATIONAL ASSUMES NO LIABILITY IN CONNECTION THEREWITH.

Appendix A covers both the concrete system as well as the steel system.

Secondary Containment Area Application Guidelines

Item	Surface Preparation	Coating System
-Floor -Tank Pad -Pump Pedestals -Walls	-Power wash entire surface to remove contaminants. Neutralize substrate prior to preparation. -Remove all loose, deteriorated coating, including areas that have delaminated from the substrate and sound "hollow" when tapped with a hammer. -Acceptable methods of removal include, but are not limited to, the following: -UHP water blast -Abrasive blast -Diamond grinder -Scabblers or rotopeen -The intent of the preparation is to remove all failed coating, feather all edges, render the exposed aggregate clean dry and have a neutral pH. All areas that have intact, undamaged coating should be mechanically abraded to provide a "tooth" for the new system. -Remove all sludge, debris, water and loose concrete from the sump. -Neutralize the sump walls and floor. -Make sure surface to be coated is clean and dry before proceeding.	<u>Walls, Floor, Pads and Pedestals</u> -Prime all surfaces with Blome 75 Primer at 10 mils DFT. -Repair all deteriorated areas using Blome 83 MP or Blome EC-590 plus Blome 410 Powder. -Apply Blome EC-90 or Blome EC-66 60 mil aggregate filled system to floors, if needed. Systems are designed to be applied at various thicknesses 25 mils to 80 mils when needed -Apply Blome EC-90 or EC-66 plus Part C at 30 mils to walls and tank/pump pads NOTE: Blome TL 47S is an alternative for the Top Coat on Secondary Containment application not requiring a fast return to service.

MATERIAL SAFETY DATA SHEET

Product No.: CP83HT/MPH

SECTION I

-XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME CP-83HT/CP-83MPH HARDENER

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 01/14/13

SECTION II - INGREDIENTS/HAZARD INFORMATION

CRYSTALLINE SILICA

* CAS No.: 14808-60-7 Percent By Weight: 45 To 50 LEL: NA UEL:
 OSHA PEL: NA ppm 0.098 mg/M3 TWA ACGIH TLV: NA ppm 0.05 mg/M3 TWA
 LD50: NA LC50: NA V.P.(1) NA
 Listed On(2) a: N b: N c: N d: Y e: Y f: Y g: Y h: N
 RESPIRABLE DUST CAN CAUSE SILICOSIS, CANCER, AUTOIMMUNE DISEASES

POLYAMIDOAMINE

* CAS No.: 68605-86-7 Percent By Weight: 20 To 25 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: >1250 MG/KG ORAL LC50: >700 PPM/1 HR V.P.(1) 7.5
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 LD50 DERMAL >2000 MG/KG CORROSIVE TO SKIN

CALCIUM METASILICATE

* CAS No.: 13983-17-0 Percent By Weight: 10 To 15 LEL: NA UEL: NA
 OSHA PEL: ppm 5 mg/M3 TWA ACGIH TLV: ppm 3 mg/M3 TWA
 LD50: NA LC50: NA V.P.(1)
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

DIETHYLANILINE

* CAS No.: 91-66-7 Percent By Weight: 1 To 5 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: NA LC50: NA V.P.(1)
 Listed On(2) a: N b: N c: Y d: Y e: N f: N g: N h: N
 CERCLA RQ1000LBS, NEW JERSEY AND PENN LABEL LAW

AMORPHOUS SILICA

* CAS No.: 112926-00-8 Percent By Weight: 1 To 5 LEL: NA UEL: NA
 OSHA PEL: NA ppm 6 mg/M3 TWA ACGIH TLV: NA ppm 10 mg/M3 TWA
 LD50: NA LC50: NA V.P.(1) NA
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 Contains no crystalline silica.

TRIETHYLENETETRAMINE

* CAS No.: 112-24-3 Percent By Weight: 1 To 5 LEL: NA UEL:
 OSHA PEL: NA ppm NA mg/M3 TWA ACGIH TLV: NA ppm NA mg/M3 TWA
 LD50: LC50: V.P.(1) <.001@68
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 Can cause skin and eye burns.

DIETHYLENETRIAMINE

* CAS No.: 111-40-0 Percent By Weight: 1 To 5 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: 1000 mg/kg skin LC50: NA V.P.(1) .9
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 LD50 2330 mg/kg oral
 BENZYL ALCOHOL

MATERIAL SAFETY DATA SHEET

Product No.: CP83HT/MPH

SECTION I

-XVI

SECTION II - INGREDIENTS/HAZARD INFORMATION Con't.

* CAS No.: 100-51-6 Percent By Weight: 1 To 5 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: 1200 MG/KG LC50: NE V.P.(1) 0.1
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

BISPHENOL A

* CAS No.: 80-05-7 Percent By Weight: 1 To 5 LEL: NE UEL: NE
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: NE LC50: NE V.P.(1) .9
 Listed On(2) a: N b: Y c: N d: Y e: N f: N g: Y h: N

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
 g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation. Benzyl alcohol is a severe eye irritant

Swallowing: No effects anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Crystalline silica has been classified as carcinogenic for humans (2A) by IARC. The excessive inhalation of crystalline silica is also a known cause of silicosis. (Risk depends on duration and level of exposure.) Other possible chronic effects are silicosis, cancer, scleroderma and tuberculosis. The main route of entry is inhalation of crystalline silica. Dry silica powder should be handled with great care. When the silica is mixed and wetted by the other components the risk of inhalation is greatly reduced.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Use a good quality hand lotion to add back natural protective oils to the skin. Remove soiled clothing and laundry before reuse. Get medical assistance.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

MATERIAL SAFETY DATA SHEET

Product No.: CP83HT/MPH

SECTION I

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SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:

FLASH POINT: NONE

EXTINGUISHING MEDIA: In case of fire, use CO2, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. EXOTHERMIC REACTION: When mixed with a second reactive component and kept in a mass (larger than 1/2 gallon or larger of mixed material) for longer than the pot life the material can exotherm to a very high temperature and decompose from the heat of the reaction. DO NOT BREATHE ANY OF THE FUMES!. See section on HAZARDOUS

DECOMPOSITION: During emergency conditions, overexposure to decomposition products may cause a health hazard.

Symptoms may not be immediately apparent. Obtain medical attention if exposed.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional fire-fighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Do not store above 90F or near a heat source or fire or open flame. Store large quantities in buildings designed to comply with OSHA 1910.106. Keep container closed when not in use. Do not transfer contents to bottles or other unlabelled containers. Do not reuse empty containers. Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

CRYSTALLINE SILICA RESPIRATORY PROTECTION. This product contains SILICA. Use a NIOSH approved air purifying or supplied-air-respirator where airborne concentrations of crystalline silica (quartz) are expected to exceed exposure limits. (see table below). Appropriate respiratory protection for reparable crystalline silica is based on the airborne exposure concentration and duration of exposure for the particular use of the respirator. A respiratory protection program in accordance with OSHA standard 28CFR 1910.134 must be implemented whenever workplace conditions warrant use of a respirator ANSI Standard Z88.2 (recent revision) "American National Standard for Respiratory Protection" should also be considered. All tight-fitting respirators must be fit-tested either qualitatively or quantitatively for each respirator user. NIOSH recommends the use of respiratory protection when effective engineering controls are not feasible, or while they are being installed to control workplace exposures to crystalline silica.

MATERIAL SAFETY DATA SHEET

Product No.: CP83HT/MPH

SECTION I

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SECTION VIII - PERSONAL PROTECTION Con't.

Airborne Silica

Concentration Minimum Respiratory Protection

Up to 0.5mg/m³ Any air-purifying respirator with a high efficiency (HEPA) filter.Up to 1.25mg/m³ Any powered air-purifying full-face respirator with a HEPA filter

Or any supplied-air-respirator operated in continuous flow mode.

Up to 2.5mg/m³ Any powered air-purifying full-face respirator with a HEPA filter

Or any powered air-purifying-respirator with a tight fitting face piece and a HEPA filter.

Up to 25mg/m³ Any supplied-air-respirator operated in a pressure-demand or other positive pressure mode.Emergency Up to 500mg/m³ Any self-contained breathing apparatus with a full-face piece and is operated in pressure-demand mode or other positive pressure mode.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended. Discard the gloves when they are penetrated by the liquid. Wash with soap and water and use a protective cream. Use new gloves.

EYE PROTECTION: Do not get in eyes. Safety eyewear with splash guards or side shields are recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended. If the clothing is penetrated by the liquid remove the clothing and launder before reuse. Wash the affected area with soap and water and use a protective cream. If shoes or boots are penetrated DO NOT REUSE. (Feet tend to sweat and leach out chemicals from the saturated leather). Wash the affected area with soap and water and apply protective cream. Use new shoes and or boots. Depending on the severity and extent of the skin contact medical assistance maybe required. If there is repeated contact or if irritation is felt seek medical advice before continuing to work with the products.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Generally not miscible or soluble in water.

ODOR: Mild.

WEIGHT PER GALLON: 13.79 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE: ()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY: (X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY: ()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with: mineral acids, amines, and strong bases.:

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the pot life. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

MATERIAL SAFETY DATA SHEET

Product No.: CP83HT/MPH

SECTION I

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SECTION X - STABILITY AND REACTIVITY Con't.

HAZARDOUS POLYMERIZATION of Individual Components: (X)WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART

VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: PAINT,8,UN3066,PGIII

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients. This product contains a chemical known to the state of California to cause cancer.

SECTION XVI - OTHER INFORMATION

HMIS CODE HEALTH (2) FLAMMABILITY 0 REACTIVITY 0 PROTECTION (X) see Supervisor

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET

Product No.: EC-66R

SECTION I -XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME EC-66 RESIN

MANUFACTURER: BLOME INTERNATIONAL
1450 HOFF INDUSTRIAL DRIVE
O'FALLON, MO 63366

PHONE NO.: 636-379-9119

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 01/03/12

SECTION II - INGREDIENTS/HAZARD INFORMATION

EPOXY RESIN BLEND

* CAS No.: TS6264 Percent By Weight: 35 To 40 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: Skin 20,000 mg/kg LC50: LD 50 ORAL >5000 mg/kg V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Skin sensitizer.

EPOXY RESIN LIQUID

* CAS No.: 25085-99-8 Percent By Weight: 30 To 35 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: Skin 20,000 mg/kg LC50: LD 50 ORAL >5000 mg/kg V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: Y h: N
Skin sensitizer.

GYCIDYL ETHER

* CAS No.: 68609-96-1 Percent By Weight: 10 To 15 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: NE LC50: NE V.P.(1)
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Skin Sensitizer

HYDROCARBON RESIN

* CAS No.: 25155-81-1 Percent By Weight: 5 To 10 LEL: NA UEL:
OSHA PEL: NA ppm NA mg/M3 TWA ACGIH TLV: NA ppm NA mg/M3 TWA
LD50: NA LC50: NA V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

MICA

* CAS No.: 12001-26-2 Percent By Weight: 5 To 10 LEL: NA UEL:
OSHA PEL: NA ppm 3 mg/M3 TWA ACGIH TLV: NA ppm 3 mg/M3 TWA
LD50: LC50: V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Respirable dust for TLV & PEL.

AMORPHOUS SILICA

* CAS No.: 112926-00-8 Percent By Weight: 1 To 5 LEL: NA UEL: NA
OSHA PEL: NA ppm 6 mg/M3 TWA ACGIH TLV: NA ppm 10 mg/M3 TWA
LD50: NA LC50: NA V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Contains no crystalline silica.

COLOR PIGMENT MIXTURE

* CAS No.: NA Percent By Weight: 1 To 5 LEL: NA UEL: NA
OSHA PEL: NE ppm 3.5 mg/M3 TWA ACGIH TLV: NE ppm 3.5 mg/M3 TWA
LD50: NA LC50: NA V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Mixture of prime pigments to make color. See formula for color pig.

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

MATERIAL SAFETY DATA SHEET

Product No.: EC-66R

SECTION I -XVI

SECTION II - INGREDIENTS/HAZARD INFORMATION Con't.

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHE D: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: FLASH POINT: 201 °F Seta flash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain

MATERIAL SAFETY DATA SHEET

Product No.: EC-66R

SECTION I -XVI

SECTION VI - ACCIDENTAL RELEASE MEASURES Con't.

spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers. Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. **BYSTANDERS:** Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. **EXPLOSION PROOF VENTILATION:** Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature. Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or side shields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

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Product No.: EC-66R

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SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES Con't.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 9.53 Pounds

PERCENT VOLATILE BY VOLUME: 0.14

EVAPORATION RATE:()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY:(X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY:()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the pot life. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION:()MAY OCCUR (X)WILL NOT OCCUR.

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the material out in thin thickness (1/4 inch or less) to avoid the mass reaction.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: NOT REGULATED

SECTION XV - REGULATORY INFORMATION

This product contains 0.01 pounds per gallon (1 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.01 lbs./gal. (1 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. This product contains a chemical known to the state of California to cause cancer.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 2 (F)lammability 1 (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL

to be accurate, but we do

01/03/12

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Product No.: EC-66R

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SECTION XVI - OTHER INFORMATION Con't.

not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

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Product No.: EC-80H

SECTION I -XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME EC-80 HARDENER AND EC-90 HARDENER

MANUFACTURER: BLOME INTERNATIONAL
1450 HOFF INDUSTRIAL DRIVE
O'FALLON, MO 63366

PHONE NO.: 636-379-9119

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 10/24/06

SECTION II - INGREDIENTS/HAZARD INFORMATION

BENZENE1,3,DIMETHANEAMINE

* CAS No.: 1477-55-0 Percent By Weight: 40 To 45 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: >1250 MG/KG ORAL LC50: >700 PPM/1 HR V.P.(1) 7.5
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
LD50 DERMAL >2000 MG/KG CORROSIVE TO SKIN, SENSITIZER OF ANIMALS

BENZYL ALCOHOL

* CAS No.: 100-51-6 Percent By Weight: 30 To 35 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: 1200 MG/KG LC50: NE V.P.(1) 0.1
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

DIETHYLENETRIAMINE

* CAS No.: 111-40-0 Percent By Weight: 10 To 15 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: 1000 mg/kg skin LC50: NA V.P.(1) .9
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
LD50 2330 mg/kg oral

BISPHENOL A

* CAS No.: 80-05-7 Percent By Weight: 5 To 10 LEL: NE UEL: NE
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: NE LC50: NE V.P.(1) .9
Listed On(2) a: N b: Y c: N d: Y e: N f: N g: Y h: N

TRIETHYLENETETRAMINE

* CAS No.: 112-24-3 Percent By Weight: 1 To 5 LEL: NA UEL:
OSHA PEL: NA ppm NA mg/M3 TWA ACGIH TLV: NA ppm NA mg/M3 TWA
LD50: LC50: V.P.(1) <.001@68
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Can cause skin and eye burns.

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Inhalation of vapors may severely damage contacted tissue and produce scarring. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring.

Eyes and Skin: Contact with the undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Benzyl alcohol is a severe eye irritant

MATERIAL SAFETY DATA SHEET

Product No.: EC-80H

SECTION I - XVI

SECTION III - HAZARD IDENTIFICATION Con't.

Swallowing: Ingestion may cause death unless treated promptly.

CHRONIC: Repeated and prolonged exposure may cause allergic reaction/sensitization. Repeated and prolonged exposure may result in: adverse respiratory effects (cough, tightness of chest or shortness of breath), adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as defatting, rash, or irritation), adverse skin effects (such as rash, irritation or corrosion). Repeated and prolonged exposure to low concentrations of vapor may cause: sore throat, loss of consciousness which are transient.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: FLASH POINT: 201 °F Setaflash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers. Keep out of reach of children.

MATERIAL SAFETY DATA SHEET

Product No.: EC-80H

SECTION I -XVI

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breath them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. **BYSTANDERS:** Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. **EXPLOSION PROOF VENTILATION:** Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature. Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or shields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 9.00 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE: ()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY: (X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY: ()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed

MATERIAL SAFETY DATA SHEET

Product No.: EC-80H

SECTION I -XVI

SECTION X - STABILITY AND REACTIVITY Con't.

material that is kept in 1/2 gallon or larger mass longer than the potlife. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm), Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION:()MAY OCCUR (X)WILL NOT OCCUR.

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the material out in thin thickness (1/4 inch or less) to avoid the mass reaction.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: PAINT,8,UN3066,PGIII

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)health 3 (F)lammability 1 (R)activity 1

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET
Product No.: ECR540R**SECTION I - XVI****SECTION I - PRODUCT & COMPANY IDENTIFICATION**

BLOME EC-R540 RESIN

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 12/08/09

SECTION II - INGREDIENTS/HAZARD INFORMATION**EPOXY RESIN LIQUID**

* CAS No.: 25085-99-8

Percent By Weight: 85 To 90 LEL: NA UEL: NA

OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: Skin 20,000 mg/kg LC50: LD 50 ORAL >5000 mg/kg V.P.(1) NA

Listed On(2) a: N b: N c: N d: Y e: N f: N g: Y h: N

Skin sensitizer.

TMP TRIGLYCIDYL ETHER

* CAS No.: 30499-70-8

Percent By Weight: 10 To 15 LEL: UEL:

OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: Not Established LC50: Not Established V.P.(1)

Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

Eye and Skin Irritant and Snsitizer

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen

g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION**EFFECTS OF OVEREXPOSURE - ACUTE:**

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically.

MATERIAL SAFETY DATA SHEET

Product No.: ECR540R

SECTION I - XVI

SECTION IV - FIRST AID MEASURES Con't.

Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:

FLASH POINT: 201 °F Setofflash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers. Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. BYSTANDERS: Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. EXPLOSION PROOF VENTILATION: Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash

MATERIAL SAFETY DATA SHEET

Product No.: ECR540R

SECTION I - XVI

SECTION VIII - PERSONAL PROTECTION Con't.

point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature.

Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or sideshields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 9.55 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE: ()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY: (X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY: ()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the potlife. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION of Individual Components: (X)WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART

VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

MATERIAL SAFETY DATA SHEET

Product No.: ECR540R

SECTION I -XVI

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: NOT REGULATED

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 1 (F)lammability 1 (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET
Product No.: ECR590H

SECTION I - XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME ECR590 HARDENER

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 12/08/09

SECTION II - INGREDIENTS/HAZARD INFORMATION

POLYAMIDOAMINE

* CAS No.: 68605-86-7 Percent By Weight: 45 To 50 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: >1250 MG/KG ORAL LC50: >700 PPM/1 HR V.P.(1) 7.5
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 LD50 DERMAL >2000 MG/KG CORROSIVE TO SKIN

DIETHYLENETRIAMINE

* CAS No.: 111-40-0 Percent By Weight: 35 To 40 LEL: NA UEL: NA
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: 1000 mg/kg skin LC50: NA V.P.(1) .9
 Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
 LD50 2330 mg/kg oral

BISPHENOL A

* CAS No.: 80-05-7 Percent By Weight: 15 To 20 LEL: NE UEL: NE
 OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
 LD50: NE LC50: NE V.P.(1) .9
 Listed On(2) a: N b: Y c: N d: Y e: N f: N g: Y h: N

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
 g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; may affect the brain or nervous system causing dizziness, headache, nausea, weakness and fatigue. Extreme exposure can result in unconsciousness and even respiratory arrest.

WARNING: Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Eye or Skin Contact: Causes eye and skin irritation.

Swallowing: Can cause stomach and/or intestinal irritation, nausea, vomiting and diarrhea. Aspiration of vomitus can cause chemical pneumonitis, which can be fatal.

CHRONIC: Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

MATERIAL SAFETY DATA SHEET

Product No.: ECR590H

SECTION I - XVI

SECTION III - HAZARD IDENTIFICATION Con't.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, summon medical assistance immediately. If breathing ceases, restore using approved CPR techniques and summon medical assistance immediately.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: In case of skin contact, wash area thoroughly with soap and water. Remove soiled clothing. Get medical assistance if irritation persists.

IF SWALLOWED: DO NOT INDUCE VOMITING. Consult physician immediately. Aspiration of vomitus can cause chemical pneumonitis which can be fatal.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:

FLASH POINT: 170 °F Setaflash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(A) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO2, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat and flame. Due to pressure build-up, closed containers exposed to extreme heat may explode. Never use a welding or cutting torch on or near container (even empty) as product or its residue may ignite. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition (heat, flame). Do not smoke. Avoid breathing vapors. Before attempting clean-up refer to hazard caution information in other sections of this material safety data form. Ventilate area. Contain spilled material and remove with inert absorbent and non-sparking tools. Store in closed containers until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Keep away from heat and flame. Do not smoke. Prevent build-up of vapors by maintaining continuous flow of fresh air.

Do not store for long periods above 100°F or near fire or open flame. Store large quantities in buildings designed to comply with OSHA 1910.106. Keep container closed when not in use. Do not transfer contents to bottles or other unlabelled containers. Do not reuse empty containers.

Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined

MATERIAL SAFETY DATA SHEET

Product No.: ECR590H

SECTION I - XVI

SECTION VIII - PERSONAL PROTECTION Con't.

areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. Heavy solvent vapors should be removed from lower levels of the work area and all ignition sources should be eliminated. **BYSTANDERS:** Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. **EXPLOSION PROOF VENTILATION:** Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature. Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or sideshields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Negligible.

ODOR: Characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 8.22 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE: ()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY: (X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY: ()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the potlife. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and

MATERIAL SAFETY DATA SHEET

Product No.: ECR590H

SECTION I -XVI

SECTION X - STABILITY AND REACTIVITY Con't.

toxic fumes at elevated temperatures. Nitric acid in a fire, nitrosamines, Aldehydes, The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION of Individual Components: (X)WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS:PAINT,8,UN3066,PGIII

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 2 (F)lammability 2 (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET

Product No.: BPARTC

SECTION I - XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME PART C

MANUFACTURER: BLOME INTERNATIONAL
1450 HOFF INDUSTRIAL DRIVE
O'FALLON, MO 63366

PHONE NO.: 636-379-9119

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 02/15/07

SECTION II - INGREDIENTS/HAZARD INFORMATION

CELLULOSE

* CAS No.: 9004-34-6 Percent By Weight: 100 LEL: NA UEL: NA
OSHA PEL: ppm 5 mg/M3 TWA ACGIH TLV: ppm 5 mg/M3 TWA
LD50: NE LC50: NE V.P.(1)
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

Breathing: Irritation of the respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

SECTION V - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: In case of fire, use CO2, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SPECIAL FIRE FIGHTING PROCEDURES: NONE

SECTION VI - ACCIDENTAL RELEASE MEASURES

Use dustless methods to pick up dry material. Store in closed container until properly disposed.

SECTION VII - HANDLING AND STORAGE

Keep out of reach of children.

MATERIAL SAFETY DATA SHEET

Product No.: BPARTC

SECTION I - XVI

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: Use only with adequate ventilation. Only NIOSH/MSHA approved respirators should be used. Select the respirator by evaluation of the type of application being used and the nature of the area of application and the expected concentration of particles that could be breathed by the operator and by the lowest PEL for the dust encounter in the application. When ever using respirators refer to OSHA 1910.134 for proper respirator use and follow manufacture's directions. The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Insoluble

ODOR: No odor.

WEIGHT PER GALLON: 10.00 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE: Not applicable.

VAPOR DENSITY: Not applicable.

SECTION X - STABILITY AND REACTIVITY

STABILITY: () UNSTABLE (X) STABLE

INCOMPATIBILITY: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: () MAY OCCUR (X) WILL NOT OCCUR

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: NOT REGULATED

MATERIAL SAFETY DATA SHEET

Product No.: BPARTC

SECTION I - XVI

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 0 (F)lammability (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET
Product No.: BP75H

SECTION I - XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME PRIMER 75 HARDENER

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 1/3/12

SECTION II - INGREDIENTS/HAZARD INFORMATION

ISOPHORONEDIAMINE

* CAS No.: 2855-13-2 Percent By Weight: 65 To 70 LEL: NE UEL: NE
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: NE LC50: NE V.P.(1)
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Can cause eye and skin burns or irritation.

BENZYL ALCOHOL

* CAS No.: 100-51-6 Percent By Weight: 20 To 25 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: 1200 MG/KG LC50: NE V.P.(1) 0.1
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

DIETHYLANILINE

* CAS No.: 91-66-7 Percent By Weight: 5 To 10 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: NA LC50: NA V.P.(1)
Listed On(2) a: N b: N c: Y d: Y e: N f: N g: N h: N

CERCLA RQ1000LBS, NEW JERSEY AND PENN LABEL LAW

TRIETHYLENETETRAMINE

* CAS No.: 112-24-3 Percent By Weight: 1 To 5 LEL: NA UEL:
OSHA PEL: NA ppm NA mg/M3 TWA ACGIH TLV: NA ppm NA mg/M3 TWA
LD50: LC50: V.P.(1) <.001@68
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N

Can cause skin and eye burns.

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen

g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Benzyl alcohol is a severe eye irritant

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the

MATERIAL SAFETY DATA SHEET
Product No.: BP75H

SECTION I -XVI

SECTION III - HAZARD IDENTIFICATION Con't.

worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: FLASH POINT: 201 °F Seta flash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers.

Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper

MATERIAL SAFETY DATA SHEET
Product No.: BP75H

SECTION I -XVI

SECTION VIII - PERSONAL PROTECTION Con't.

respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. BYSTANDERS: Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. EXPLOSION PROOF VENTILATION: Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature. Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or side shields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 8.41 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE:()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY:(X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY:()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the pot life. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION of Individual Components: (X)WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART

MATERIAL SAFETY DATA SHEET
Product No.: BP75H

SECTION I -XVI

SECTION X - STABILITY AND REACTIVITY Con't.

VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: PAINT,8,UN3066,PGIII

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 2 (F)lammability 1 (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET
Product No.: BP75R

SECTION I -XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME PRIMER 75 RESIN

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 1/3/12

SECTION II - INGREDIENTS/HAZARD INFORMATION

EPOXY RESIN LIQUID

* CAS No.: 25085-99-8

Percent By Weight: 90 To 95 LEL: NA UEL: NA

OSHA PEL: NE ppm NE

mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: Skin 20,000 mg/kg

LC50: LD 50 ORAL >5000 mg/kg V.P.(1) NA

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: Y h: N

Skin sensitizer.

BENZYL ALCOHOL

* CAS No.: 100-51-6

Percent By Weight: 5 To 10 LEL: NA UEL: NA

OSHA PEL: NE ppm NE

mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: 1200 MG/KG

LC50: NE V.P.(1) 0.1

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen

g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Benzyl alcohol is a severe eye irritant

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically.

MATERIAL SAFETY DATA SHEET
Product No.: BP75R

SECTION I -XVI

SECTION IV - FIRST AID MEASURES Con't.

Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: FLASH POINT: 201 °F Seta flash
OSHA 29 CFR - 1910.106(a)
Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers. Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. BYSTANDERS: Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. EXPLOSION PROOF VENTILATION: Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash

MATERIAL SAFETY DATA SHEET
Product No.: BP75R

SECTION I -XVI

SECTION VIII - PERSONAL PROTECTION Con't.

point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature.

Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or side shields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 9.63 Pounds

PERCENT VOLATILE BY VOLUME: 0.00.

EVAPORATION RATE:()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY:(X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY:()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the pot life. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION of Individual Components: (X)WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

MATERIAL SAFETY DATA SHEET
Product No.: BP75R

SECTION I -XVI

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: NOT REGULATED

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 2 (F)lammability 1 (R)eactivity 0

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

MATERIAL SAFETY DATA SHEET

Product No.: TL42SH

SECTION I -XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME TL-42S & TL-47S HARDENER

MANUFACTURER: BLOME INTERNATIONAL
1450 HOFF INDUSTRIAL DRIVE
O'FALLON, MO 63366

PHONE NO.: 636-379-9119

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 11/01/08

SECTION II - INGREDIENTS/HAZARD INFORMATION

POLYAMIDOAMINE

* CAS No.: 68605-86-7 Percent By Weight: 70 To 75 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: >1250 MG/KG ORAL LC50: >700 PPM/1 HR V.P.(1) 7.5
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
LD50 DERMAL >2000 MG/KG CORROSIVE TO SKIN

DIETHYLENETRIAMINE

* CAS No.: 111-40-0 Percent By Weight: 10 To 15 LEL: NA UEL: NA
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: 1000 mg/kg skin LC50: NA V.P.(1) .9
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
LD50 2330 mg/kg oral

BISPHENOL A

* CAS No.: 80-05-7 Percent By Weight: 5 To 10 LEL: NE UEL: NE
OSHA PEL: NE ppm NE mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA
LD50: NE LC50: NE V.P.(1) .9
Listed On(2) a: N b: Y c: N d: Y e: N f: N g: Y h: N

TRIETHYLENETETRAMINE

* CAS No.: 112-24-3 Percent By Weight: 5 To 10 LEL: NA UEL:
OSHA PEL: NA ppm NA mg/M3 TWA ACGIH TLV: NA ppm NA mg/M3 TWA
LD50: LC50: V.P.(1) <.001@68
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Can cause skin and eye burns.

AMORPHOUS SILICA

* CAS No.: 112926-00-8 Percent By Weight: 1 To 5 LEL: NA UEL: NA
OSHA PEL: NA ppm 6 mg/M3 TWA ACGIH TLV: NA ppm 10 mg/M3 TWA
LD50: NA LC50: NA V.P.(1) NA
Listed On(2) a: N b: N c: N d: Y e: N f: N g: N h: N
Contains no crystalline silica.

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen
g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and

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SECTION III - HAZARD IDENTIFICATION Con't.

nausea.

CHRONIC: Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause dust disease of the lungs.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: FLASH POINT: 201 °F Setaflash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional firefighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers.

Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release

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SECTION VIII - PERSONAL PROTECTION Con't.

of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breath them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

VENTILATION: Use only with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep air contaminant concentration below current applicable safety and health standards in the mixing, application and curing areas, and to remove sanding dusts of dried coating and decomposition product during welding and flame cutting on surfaces coated with this product. **BYSTANDERS:** Applicator should insure that fumes or spray mists do not drift into areas where bystanders are likely to be during the application period by keeping bystanders sufficiently away from the work area to insure no exposure and by using adequate ventilation when necessary. Caution should be used to insure that vapors do not collect in off hours. Anyone entering the work area should be properly protected and instructed. **EXPLOSION PROOF VENTILATION:** Only explosion proof ventilation equipment should be used to provide adequate ventilation unless the flash point of the mixed product is a minimum of 40 degrees F above the ambient temperature and the coated surface temperature. Do not apply to surfaces over 130 degrees F surface temperature.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or sideshields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 8.11 Pounds

PERCENT VOLATILE BY VOLUME: 0.00

EVAPORATION RATE:()Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY:(X)Heavier ()Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY:()UNSTABLE (X)STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the potlife. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2

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SECTION X - STABILITY AND REACTIVITY Con't.

ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION: () MAY OCCUR (X) WILL NOT OCCUR.

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the material out in thin thickness (1/4 inch or less) to avoid the mass reaction.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: PAINT,8,UN3066,PGIII

SECTION XV - REGULATORY INFORMATION

This product contains 0.00 pounds per gallon (0 grams/liter) volatile organic compounds. The VOC less water and exempt solvents is 0.00 lbs./gal. (0 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 3 (F)lammability 1 (R)eactivity 1

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.

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SECTION I - XVI

SECTION I - PRODUCT & COMPANY IDENTIFICATION

BLOME TL-47S RESIN ALL COLORS

MANUFACTURER: BLOME INTERNATIONAL

PHONE NO.: 636-379-9119

1450 HOFF INDUSTRIAL DRIVE

O'FALLON, MO 63366

EMERGENCY PHONE NUMBER: (800)-424-9300

MSDS ISSUE DATE: 03/06/13

SECTION II - INGREDIENTS/HAZARD INFORMATION

EPOXY NOVOLAC

* CAS No.: 28064-14-4

Percent By Weight: 60 To 65 LEL: NA UEL: NA

OSHA PEL: NE ppm NE

mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: >5000MG/KG

LC50: NA

V.P.(1) NONE

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

Skin Sensitizer.

CRYSTALLINE SILICA

* CAS No.: 14808-60-7

Percent By Weight: 10 To 15 LEL: NA UEL:

OSHA PEL: NA ppm 0.098

mg/M3 TWA ACGIH TLV: NA ppm 0.05 mg/M3 TWA

LD50: NA

LC50: NA

V.P.(1) NA

Listed On(2) a: N b: N

c: N d: Y e: Y f: Y g: Y h: N

RESPIRABLE DUST CAN CAUSE SILICOSIS, CANCER, AUTOIMMUNE DISEASES

COLOR PIGMENT MIXTURE

* CAS No.: NA

Percent By Weight: 5 To 10 LEL: NA UEL: NA

OSHA PEL: NE ppm 3.5

mg/M3 TWA ACGIH TLV: NE ppm 3.5 mg/M3 TWA

LD50: NA

LC50: NA

V.P.(1) NA

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

No unbound Titanium Dioxide in this product.

NEOPENTYL GLYCOL DIGYCIDYL ETHER

* CAS No.: 17557-23-2

Percent By Weight: 5 To 10 LEL: NA UEL: NA

OSHA PEL: NE ppm NE

mg/M3 TWA ACGIH TLV: NE ppm NE mg/M3 TWA

LD50: NE

LC50: NE

V.P.(1)

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

MICA

* CAS No.: 12001-26-2

Percent By Weight: 1 To 5 LEL: NA UEL:

OSHA PEL: NA ppm 3

mg/M3 TWA ACGIH TLV: NA ppm 3 mg/M3 TWA

LD50:

LC50:

V.P.(1) NA

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

Reparable dust for TLV & PEL.

AMORPHOUS SILICA

* CAS No.: 112926-00-8

Percent By Weight: 1 To 5 LEL: NA UEL: NA

OSHA PEL: NA ppm 6

mg/M3 TWA ACGIH TLV: NA ppm 10 mg/M3 TWA

LD50: NA

LC50: NA

V.P.(1) NA

Listed On(2) a: N b: N

c: N d: Y e: N f: N g: N h: N

Contains no crystalline silica.

* Defined as hazardous per 29 CFR 1910.1200 ** Indicates Active Ingredient

(1) Vapor Pressure In mm Hg

(2) a = SARA 302/304 b = SARA 313 c = CERCLA 103(a) d = TSCA e = NTP Carcinogen f = IARC Carcinogen

g = California Prop. 65 h = OSHA Carcinogen

NOTE: Multi-component products when mixed will have the cumulative hazards of all components.

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SECTION III - HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE - ACUTE:

Breathing: Irritation of the respiratory tract; headache, nausea, dizziness.

Eye or Skin Contact: May cause eye and skin irritation.

Swallowing: No effect anticipated from ingestion incidental to normal use. Larger quantities may cause distress of the digestive tract and nausea.

CHRONIC: Crystalline silica has been classified as carcinogenic for humans (2A) by IARC. The excessive inhalation of crystalline silica is also a known cause of silicosis. (Risk depends on duration and level of exposure.) Other possible chronic effects are silicosis, cancer, scleroderma and tuberculosis. The main route of entry is inhalation of crystalline silica. Dry silica powder should be handled with great care. When the silica is mixed and wetted by the other components the risk of inhalation is greatly reduced.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: If you are allergic or have been sensitized to: epoxies, amines, isocyanates, detergents, or other chemicals see a physician prior to use. Some individuals may require protective creams if they are sensitive to chemicals. If none of these conditions exist and you use the product in accordance with the Safe Handling and Use Information (Sections VII and VIII) you should expect no mild medical conditions to be aggravated. However if the worker is exposed for an extended period the repeated washing of skin areas with soap and water or other cleaning solutions can remove a large part of the natural protective oils in the skin and require the worker to use a protective cream after each washing to replace the oils removed by washing.

ROUTE(S) OF ENTRY: (X)SKIN (X)BREATHING (X)SWALLOWING

SECTION IV - FIRST AID MEASURES

IF BREATHED: Remove to fresh air.

IF IN EYES: In case of eye contact, flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF ON SKIN: Remove with soap and water. Remove soiled clothing.

IF SWALLOWED: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician immediately. Treat symptomatically. Never give anything by mouth to an unconscious person.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:

FLASH POINT: 205 °F Seta flash

OSHA 29 CFR - 1910.106(a)

Parts 18-19

Combustible Liquid - Class III(B) Not Regulated (FHSA)

EXTINGUISHING MEDIA: In case of fire, use CO₂, Dry Chemical, Foam or other National Fire Protection Association (NFPA) approved method for treating a Class B Fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Due to pressure build-up, closed containers exposed to extreme heat may explode. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Summon professional fire-fighters. Use full protective equipment including self-contained breathing apparatus. Water spray may be ineffective. If water is used, fog nozzles are preferable. If exposed to fire or extreme heat, water should be used to cool closed containers and prevent pressure build-up or rupture of the container or possible auto-ignition.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Wash with water. Before attempting clean-up, refer to hazard caution information in other sections of this material safety data form. Contain spilled material and remove with inert absorbent. Store in closed container until properly disposed of.

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SECTION VII - HANDLING AND STORAGE

Store below 110°F and keep from freezing. Keep container closed when not in use. Do not reuse empty containers.

Keep out of reach of children.

SECTION VIII - PERSONAL PROTECTION

RESPIRATORY PROTECTION: All workers and bystanders must be protected from exposure above Section II limits. Avoid breathing vapors, spray mist or sanding dust. Application by brush, roller, squeegee, or trowel will result in the lowest release of hazardous materials. When spray applied in outdoor or open areas with unrestricted ventilation, and during sanding or grinding operations, use NIOSH/MSHA approved mechanical filter respirator to remove solid airborne particles of over spray or sanding dust. Follow the crystalline silica respiratory protection paragraph when silica is present. When used in confined areas, wear NIOSH/MSHA approved air supply respirators or hoods. Use NIOSH/MSHA approved respirators when flame cutting, welding, brazing and sanding material coated with this product. The fumes from these operations can be hazardous. Do not breathe them. Always use adequate ventilation. Whenever using respirators refer to OSHA 1910.134 for proper respirator use and safety program. The applicator determines the type of area in which the application is being made (unrestricted, restricted, or confined). The best determination of respirator type to use in a particular application is to monitor for the hazardous materials during actual application. The applicator should contact a qualified safety engineer for proper selection of safety equipment based on the application conditions.

CRYSTALLINE SILICA RESPIRATORY PROTECTION. This product contains SILICA. Use a NIOSH approved air purifying or supplied-air-respirator where airborne concentrations of crystalline silica (quartz) are expected to exceed exposure limits. (see table below). Appropriate respiratory protection for respirable crystalline silica is based on the airborne exposure concentration and duration of exposure for the particular use of the respirator. A respiratory protection program in accordance with OSHA standard 28CFR 1910.134 must be implemented whenever workplace conditions warrant use of a respirator ANSI Standard Z88.2 (recent revision) "American National Standard for Respiratory Protection" should also be considered. All tight-fitting respirators must be fit-tested either qualitatively or quantitatively for each respirator user. NIOSH recommends the use of respiratory protection when effective engineering controls are not feasible, or while they are being installed to control workplace exposures to crystalline silica.

Airborne Silica**Concentration Minimum Respiratory Protection**

Up to 0.5mg/m3 Any air-purifying respirator with a high efficiency (HEPA) filter.

Up to 1.25mg/m3 Any powered air-purifying full-face respirator with a HEPA filter

Or any supplied-air-respirator operated in continuous flow mode.

Up to 2.5mg/m3 Any powered air-purifying full-face respirator with a HEPA filter

Or any powered air-purifying-respirator with a tight fitting face piece and a HEPA filter.

Up to 25mg/m3 Any supplied-air-respirator operated in a pressure-demand or other positive pressure mode.

Emergency Up to 500mg/m3 Any self contained breathing apparatus with a full-face piece and is operated in pressure-demand mode or other positive pressure mode.

PROTECTIVE GLOVES: Do not get on skin. Solvent impermeable gloves to prevent contact are recommended.

EYE PROTECTION: Do not get in eyes. Solvent resistant safety eyewear with splash guards or side shields is recommended to prevent contact.

OTHER PROTECTIVE EQUIPMENT: Do not get on skin. Solvent impermeable clothing and boots to prevent contact are recommended.

HYGIENIC PRACTICES: Remove and wash soiled clothing before reuse. It is very important to use clean clothing in areas where chaffing can occur. Like the neck and collar area and the wrist area. Wash hands before eating, smoking or using the washroom. Remove any contaminated clothing and clean before reuse. Shoes and boots if contaminated must be replaced. Note that the washing of exposed areas on a regular and frequent basis can cause that area to become sensitive. The daily and frequent use of a protective cream in sensitive areas is recommended.

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SECTION VIII - PERSONAL PROTECTION Con't.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

WATER SOLUBILITY: Dilutable.

ODOR: Mild, characteristic of solvents listed in SECTION II.

WEIGHT PER GALLON: 11.31 Pounds

PERCENT VOLATILE BY VOLUME: 0.33

EVAPORATION RATE: () Faster (X) Slower Than Ether

BOILING RANGE: NA

VAPOR DENSITY: (X) Heavier () Lighter Than Air -

SECTION X - STABILITY AND REACTIVITY

STABILITY: () UNSTABLE (X) STABLE

INCOMPATIBILITY: Avoid contact with materials that are incompatible with water.

HAZARDOUS DECOMPOSITION PRODUCTS: May cause hazardous fumes when heated to decomposition or from mixed material that is kept in 1/2 gallon or larger mass longer than the pot life. The following represents a partial list: (from burning, heating, or reaction with other materials). Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. nitrosamines. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic. An other unidentified phenolic and organic compounds and oxides of metals listed in Section II. Treat all of these fumes as hazardous and DO NOT BREATHE.

HAZARDOUS POLYMERIZATION of Individual Components: (X) WILL NOT OCCUR.

HAZARDOUS POLYMERIZATION of Mixed Components: (X) MAY OCCUR

MIXED PRODUCT SHOULD NOT BE KEPT IN QUANTITIES GREATER THAN 3 LBS WEIGHT (approx. 1 QUART VOLUME LONGER THAN 25 TO 35 MINUTES. The product reacts quickly when in large mixed masses and develops heat quickly. It is possible for the mass to reach decomposition temperatures and give off dangerous gasses. ALWAYS pour the mixed material out in thin thickness (1/4 inch or less) to avoid the mass reaction exotherm. Amounts of less than 1/2" in depth left in container will generally polymerize without undo heat increase.

SECTION XI - TOXICOLOGICAL INFORMATION

No information available.

SECTION XII - ECOLOGICAL INFORMATION

No information available.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations. Incinerate only in approved facility. Do not incinerate closed containers.

SECTION XIV - TRANSPORTATION INFORMATION

DOT CLASS: NOT REGULATED

SECTION XV - REGULATORY INFORMATION

This product contains 0.02 pounds per gallon (2 grams/liter) volatile organic compounds. The VOC less water and exempt

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SECTION XV - REGULATORY INFORMATION Con't.

solvents is 0.02 lbs./gal. (2 gms./L.)

This product may contain chemicals as contaminants which are known to the state of California to cause cancer, birth defects or other reproductive harm. See Section II Ingredients. This product contains a chemical known to the state of California to cause cancer.

SECTION XVI - OTHER INFORMATION

HMIS RATING: (H)ealth 1* (F)lammability 1 (R)eactivity 1

The information contained herein is based on data believed by BLOME INTERNATIONAL to be accurate, but we do not assume any liability for the accuracy of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones which exist. Anyone intending to rely on any recommendation or to use any equipment, technique or material mentioned should also satisfy himself that he can meet all applicable safety and health standards.