EC-1000
Solvent-Free High Performance Epoxy Coating

DESCRIPTION AND USES

Blome EC-1000 is a 100% solids, epoxy coating designed primarily for protecting structural steel and tank exteriors from atmospheric corrosion in harsh chemical environments. EC-1000 is applied in a single coat for either thin film (8-10 mils) or high-build (15-20 mils) spray applications. EC-1000 is specially formulated with extended pot life for ease of application with standard airless or conventional spray equipment. This unique formulation offers 60 minutes working time in a five (5)-gallon mass, with pot life as long as 80-90 minutes in smaller mixed quantities. Its excellent bonding, edge-coat properties and chemical resistance make EC-1000 ideal for protecting steel in harsh vapor environments.

EC-1000 possesses the following characteristics:
Long Pot Life for airless spray application;
Material is supplied in pre-measured units;
Excellent edge coat properties;
100% solids;
Excellent chemical resistance;
Resistance to thermal shock, impact and wear;
High bond strength;
High cohesive strength;
Low permeability;
Resistance to cracking from torsional twisting;
Low odor

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

PACKAGING/COVERAGE

EC-1000 is available in l-gallon and 5-gallon units. Each unit consists of pre-measured Part A and Part B components. Application thickness may vary from 8-to-20 mils depending on expected service conditions. Consult Blome International‘s product data or technical service group for specific thickness recommendations.
Coverage rates will be affected by the condition of surface being coated (degraded vs. smooth, steel vs. concrete, etc.). To figure theoretical coverage per gallon divide desired mil thickness into 1,604. (For example, theoretical coverage for a 16 mil thickness is: 1,604 divided by 16 = approximately 100 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:	90 min
Cure Times @ 75°F - Dry to Touch:	16 hrs
Firm:	24 hrs
Service:	72 hrs
Primer:	Not required
Flammability:	Nonflammable

*Significantly less at elevated temperatures

TYPICAL PROPERTIES-CURED

Color	Gray, Red, Blue
Hardness - ASTM D-2240 Shore D:	70
Compressive Strength -ASTM C-579:	16,000 psi
Tensile Strength -ASTM D-638:	7,800 psi
Flexural Strength -ASTM D-790:	10,500 psi
Flexural Modulus of Elasticity -ASTM D-790:	5.5 psi x 10^5
Bond Strength -ASTM D-4541:	Concrete: failure in concrete Steel: 1, 750 psi
Water Vapor Transmission -ASTM E-96:	WVT: 0.0120 grain per hr ft^2
Permeability:	0.004 perm. in.

STORAGE AND SHELF LIFE

Keep EC-1000 components tightly sealed in their original containers until ready for use. Store at 50°F to 75°F, out of direct sunlight.
For applications on vertical surfaces, use within four months of manufacture date. EC-1000 otherwise has a shelf life of one year, when properly stored.
Refer to batch number on label for date of manufacture.

APPLICATION GUIDELINES

TEMPERATURE CONSIDERATIONS

1. The temperature of the surface to be coated, and the ambient air temperature, should be at least 55°F while applying EC-1000 and while it cures. If you wish to attempt to apply EC-1000 in cooler temperatures, tarp and heat the area to be coated to create and maintain the minimum 55°F conditions.

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

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

SURFACE PREPARATION -GENERAL

Surfaces must be dry and free of dirt, dust, oil, grease, chemicals and contaminants immediately prior to applying each coat of either primer or EC-1000.

SURFACE PREPARATION OF STEEL

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

2. Steel in Non-Immersion Service
   Abrasive blast steel surfaces to a near white metal finish with I to 2 mil anchor profile. (Ref. SSPC-SP-10)

MASKING

Mask surfaces that are not to be coated. EC-1000 is difficult to remove, once cured.

PRIMING

Steel -priming is optional.

APPLICATION EQUIPMENT

EC-1000 may be applied using a spray rig, brush or notched trowel. Use Graco “King” spray rig or Hydro-Cat spray rig or conventional spray equipment.

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 and purge hoses immediately if work is interrupted. Keep hoses out of direct sunlight and insulated or away from hot surfaces.

MIXING AND APPLICATION

EC-1000 may be thinned for certain spray applications. Use up to 5% by weight of MEK. Refer to the specifications for your project or consult Blome for alternate thinner recommendations.

1. The components must be individually agitated immediately prior to use:
   a. Part A - Blend each Part A component to a uniform consistency in its individual container, using a Jiffy type mixer.

   b. Part B - Stir each Part B component to a uniform color in its individual container.

2. 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 minutes at 75°F; 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 a proper film build.

4. Coating Thickness
   a. Horizontal Surfaces: The entire desired thickness may be put down on horizontal surfaces in a single coat.
   b. Vertical Surfaces: Minimum 15 mils and maximum 50 mils thickness may be applied to vertical surfaces.

SPARK TESTING STEEL

Spark testing is recommended for coated steel in immersion service. Test at 100 volts per mil.

1. Prepare surfaces for inter-coat adhesion as follows:
   a. Allow EC-1000 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 to remove gloss.

2. If work is interrupted, or at the end of the day, terminate the coating in a straight line.

3. As it cures, EC-1000 will sometimes develop a thin, oily film on its surface. This film is easily removed by washing with soap and water.

CLEANUP

Before material gels, tools and equipment should be cleaned using hot, soapy water. After EC-1000 begins to cure, xylene or MEK will be required.

SAFETY PRECAUTIONS

FOR INDUSTRIAL USE ONLY

Avoid contact with skin & eyes; do not ingest material or inhale vapors.

When mixing or applying EC-1000, 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 EC-1000 may cause skin irritation and/or allergic reactions.

Refer to Blome material safety data sheets on individual components.

CAUTION

EC-1000 may cause skin irritation with prolonged or repeated contact. Handle with care and read the material safety data sheet that 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.