

EC-5521MT S

Sprayable, Flexible, Moisture-tolerant Epoxy Novolac Coating System

PRODUCT DESCRIPTION

Blome EC-5521MT S is a two-component, moisture-tolerant, 100% solids epoxy novolac elastomer with excellent chemical resistance and physical properties. It is particularly resistant to strong alkalis, moderate-strong mineral acids, mild oxidizers and salts. It has excellent adhesion to a variety of substrates including concrete, tile, brick, and metal. It will also bond to epoxy, vinyl ester and polyurethane-based systems. Blome EC-5521MT S can be brushed, rolled or sprayed at up to 30 mils per coat, making it ideal for use as a membrane/coating for sealing seams and other areas subject to movement.

GENERAL USES

Blome EC-5521MT S is generally used as a membrane/coating for sealing seams and other areas subject to movement. EC-5521MT S 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-5521MT S reinforced with EC-60 fabric or EC-125 fabric can bridge cracks and tolerate expansion joint movement up to 1/4" without cracking under brick or tile applications. Blome EC-5521MT S will adhere to damp substrates and is ideal for use in areas where typical coatings applications include:

Bolted tank seams	Food & Beverage floors
Process tank weld seams	Trenches & Sumps
Cooling tower basins	Secondary containment
Assembly plant areas	Brick/Tile membrane

Blome EC-5521MT S is formulated to hang on vertical surfaces at up to 30 mils per coat, making it ideal for use as a membrane or sealing seams and other areas subject to movement.

Blome EC-5521MT S can be used outdoors and in a wide variety of chemical environments. Exposure to sunlight and certain chemicals may cause discoloration. Discoloration alone should not be regarded as a sign of deterioration unless it is accompanied by defects such as cracking, erosion or swelling.

HANDLING CHARACTERISTICS

Blome EC-5521MT S is available as a 2-part coating system. It can be applied at thicknesses over 30 mils per coat by adding Filler - Part C thixotrope for vertical applications (consult Blome for additional information). It may be rolled or sprayed by conventional airless spray equipment. Blome EC-5521MT S will cure at temperatures as low as 40 F (5 C), for installation at the lower operating temperatures of dairy and cold processing facilities. Blome EC-5521MT S tolerates damp surfaces and humid conditions.

TYPICAL PROPERTIES WET

Solids by Volume (VOC):	100% (0 lbs/gal, 0 g/L)
Mixed Density:	10.9 lbs/gal, 81.5 lbs/cu ft (1.31 g/cm ³)
Work Life @ 77°F (25 C):	40-45 minutes (1 gallon mix)
Initial Set Time @ 77°F (25 C):	4-6 hours
Final Cure @ 77°F (25 C):	2-3 days (depending on chemical conditions during use)
Minimum Setting Temperature (material temp at time of mixing = 70-77°F (21-25 C)):	40 - 45°F (5 - 7 C)
Mix Ratio, Resin: Hardener by weight (by volume):	4.8:1 (~3.5:1)
Viscosity (mixed):	<10,000 cps

CURED

Color:	Gray, Black (other colors on request)
Tensile Elongation (ASTM D-638) - 28 days @ 77°F (25 C):	100% (@ 60 mil thickness)
Recovery after Elongation	95%
Tensile Strength (ASTM C-307) - 28 days @ 77°F (25 C):	1,900 psi (13.1 Mpa)
Bond Strength (ASTM C-321) - 28 days @ 77°F (25 C):	Greater than strength of concrete
Water Absorption (ASTM C-413):	<0.25 %/wt
Temp Resistance - continuous (depending on chemistry):	140-160°F (60-70 C):
Temp Resistance - infrequent, occasional steam:	200-220°F (93-104 C):
Resistance to Mineral Acids:	Very Good - Excellent
Resistance to Alkalis:	Excellent
Resistance to Oxidizers:	Fair - Good
Resistance to Dilute Organic Acids:	Fair - Good
Resistance to Non-polar Solvents (e.g., mineral spirits):	Good - Excellent
Resistance to Polar Solvents (e.g., MEK):	Poor - Fair

PACKAGING & STORAGE

Blome EC-5521MT S is supplied as a two-component material, packaged in pre-measured, short-filled, one gallon units (~0.9 gallons when combined for easy mixing). Larger 3-gallon units are available upon request. 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 EC-5521MT S will have a minimum shelf life of 12 months. Refer to date of manufacture printed on the label.

SPECIFICATION GUIDE

Coat all surfaces with a two-component flexible epoxy novolac coating meeting the generic formulation and performance characteristics of Blome EC-5521MT S as manufactured by Blome International, O'Fallon, MO (800) 886-3455. Utilize the correct version of Blome EC-5521MT S for the ambient temperatures and usage. Install in accordance with the latest Blome EC-5521MT S data sheet and good industry practice.

APPLICATION GUIDELINES

For use as a Membrane/Lining system in areas susceptible to movement.

ENVIRONMENTAL CONDITIONS

Apply only when air and surface temperatures are between 40 and 95°F and surface is at least 5°F above dew point. Do not use Blome EC-5521MT S at temperatures below 40°F. Substrate may be damp but remove any standing or excess water prior to installation. Ensure Blome EC-5521MT S components are at a minimum of 70°F prior to mixing and application.

WORKING TIME

The working time for Blome EC-5521MT S is 40-45 minutes at 77°F. Ensure that surfaces are ready for installation of the coating before mixing. *We recommend mixing full kits.*

MIXING/APPLICATION INFORMATION – MEMBRANE/LINING SYSTEM

SURFACE PREPARATION -GENERAL

Surfaces must be free of visible moisture, dust, dirt, grease, oil, chemicals, and contaminants immediately prior to applying each coat of either primer or EC-5521MT S.

SURFACE PREPARATION OF STEEL

1. Immersion – 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. Stripe coat all welds just prior to applying coating.
3. Non -Immersion - Abrasive blast steel surfaces to a near white metal finish with 2 to 4 mil anchor profile. (Ref. SSPC-SP-10)

SURFACE PREPARATION OF CONCRETE

New concrete must cure a minimum of 28 days or achieve a minimum compressive strength of 3000 psi prior to coating. Concrete surfaces should be abrasive blasted to provide a sound surface with a texture similar to medium grit sandpaper. Surfaces must be free of visible moisture.

MASKING

Mask surfaces that are not to be coated. EC-5521MT S is difficult to remove, once cured.

PRIMING

Priming is not required when applying EC-5521MT S to freshly prepared steel surfaces. For concrete, mix and apply Primer 75 by brush, roller, or spray. Apply at 6-8 mils. Do not allow primer to puddle. Coverage rate should be 150-175 square feet per gallon. Allow primer to cure tack free before proceeding with application of EC-5521MT S.

APPLICATION EQUIPMENT

EC-5521MT S may be applied using a spray rig (conventional), brush or roller. Consult Blome International for specific equipment details.

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

EC-5521MT S should not be thinned for any reason.

1. Blend Part A component to a uniform consistency in its individual container, using a Jiffy type mixer, prior to adding Part B
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 70°F to 80°F for hot potting. The pot life of the mixture will be approximately 45 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 desired thickness may be applied to horizontals in a single coat.
5. Vertical Surfaces - Minimum of 20 mils and up to 30 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 EC-5521MT S to cure until firm before applying subsequent coats.
 - b. After the surface cures firm to the touch (~12 hours), but less than 48 hours, inspect for surface blush. If present, blush must be washed with soap and water, rinsed and dried before re-coating.
 - c. Surfaces cured beyond 48 hours must be lightly sanded or abrasive blasted (remove all dust/loose particles before continuing).
8. If work is interrupted, or at the end of the day, terminate the coating in a straight line.

APPLICATION OF REINFORCED SYSTEMS

1. EC-5521MT S 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 24-30 mil base coat of EC-5521MT S 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-5521MT S to thoroughly saturate the fabric. Use flat trowels to remove air pockets trapped in fabric. Overlap seams two inches.
8. Allow to cure 24 hours before applying brick/tile lining system.
9. Allow to cure 36 hours before placing in service.

COVERAGE

One short-filled gallon of mixed EC-5521MT S will cover approximately 50 sq. ft. at 30 mils WFT/DFT thickness.

CLEAN-UP

Hand tools and equipment may be cleaned with xylene or MEK after use. Cured material may be difficult to remove.

CAUTION

Blome EC-5521MT S may cause eye/skin burns or severe irritation and possible allergic skin reaction. Avoid contact. Consult Blome Safety Data Sheets for each component before using this 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 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.

Revised – April 20, 2022