

MasterEmaco® S 6000

Rapid-setting methacrylate repair material

FORMERLY DEGADECK® POLYMER CONCRETE

PACKAGING

MasterEmaco S 6000

PART A: 4.5 gal (17 kg) pail or
54 gal (190 kg) drum

PART B: 37 lb (16.7 kg) bags

MasterTop SRS 51P

Primer Resin

4.5 gallon (17 L) pail

47.5 gallon (180 L) drum

MasterTop SRS 100HD

Powder Hardener for MasterTop SRS 51P

2.5 lb bottle

50 lb box

YIELD

MasterEmaco S 6000 Unit

Part A: 0.5 gal (1.9 l)

Part B: One 37 lb (16.7 kg) bag

0.33 ft³ per neat unit (See Mixing
Section for aggregate extensions)

MasterTop SRS 51P

All coverage rates are approximate.

Coverage rates will vary with the
desired texture and porosity of
substrate. Typically, a batch of
MasterTop SRS 51P will achieve a
coverage rate of 100 ft² per gal.

STORAGE

Store in unopened containers in
cool, clean, dry conditions out of
direct sunlight. Maximum storage
temperature is 86 °F (30 °C).

SHELF LIFE

2 years when properly stored.

DESCRIPTION

MasterEmaco S 6000 is a solvent free, 100% reactive methacrylate liquid component and a specially blended filler component, which includes MasterTop SRS 100HD. MasterEmaco S 6000 can be extended up to 100% with select aggregates for deeper repairs. Typical cure time is one hour at temperatures ranging from 14 to 104 °F (–10 to 40 °C).

PRODUCT HIGHLIGHTS

- Fast curing allows fast return of traffic flow on highway and bridge projects
- MasterEmaco S 6000 can be applied at a large range of temperatures, 14 to 104 °F (–10 to 40 °C), for extended application season
- Extendable with aggregate for variable depth placement consistencies
- Two-component for ease of installation
- High strength and excellent bonding capabilities to a variety of concrete substrates
- Durable to withstand freeze-thaw damage
- UV resistance protects product performance from sun exposure

SUBSTRATES

- Concrete

APPLICATIONS

- Exterior
- Horizontal & formed vertical
- Bridge decks
- Parking structures
- Runways
- Civil engineering applications
- Anchor bolts
- Potholes
- Joint nosing repairs
- Bearing pads
- Spalled concrete repairs

HOW TO APPLY

SURFACE PREPARATION

1. Concrete surfaces must be dry and free of dust, dirt, oil, wax, curing compounds, efflorescence, laitance, and all other bondbreaking materials. The recommended method of preparation is shotblasting or gritblasting.
2. Use routine methods like sandblasting, chipping, and wire brushing. Obtain a minimum CSP of 5 as described by ICRI Guideline no. 310.2R. Do not use a method of surface preparation that will fracture the concrete. Verify the absence of microcracking or bruising in accordance with ICRI 310.2R

STEEL PRIMING

MasterTop SRS 51P

1. Prepare the surface in accordance with SSPC-SP10 or NACE 2-Near-White Blasting Cleaning.
2. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods. For complete instructions, refer to joint Surface Preparation Standard SSPC-SP10/NACE 2.
3. For application on steel MasterTop SRS 102AP and MasterTop SRS 101AC must be used. Contact Technical Services for dosage rates and other details.

MIXING PRIMER

MasterTop SRS 51P

1. Mix enough material for a 5 to 10 minute application, with a slow speed drill and jiffy style mixing blade.
2. Mix 1 gallon (or multiples of one gallon – maximum of 5 gallons) with Master Top SRS 100HD per mixing chart below

MasterTop SRS 51P (1 GAL)	
Temperature °F (°C)	MasterTop SRS 100HD VOLUME OUNCES
40 (4.4)	13
45 (7.2)	12.5
50 (10.0)	11.5
55 (12.7)	10
60 (15.5)	9
65 (18.3)	8
70 (21.1)	7
75 (23.8)	6
80 (26.6)	5.5
85 (29.4)	5
90 (32.2)	4.5

NOTE: For temperatures below 40 °F (4.4 °C), please consult with BASF Technical Support

PRIMER APPLICATION

1. Immediately after mixing MasterTop SRS 51P with MasterTop SRS 100HD, pour primer onto concrete surface and distribute with heavy nap, solvent-grade roller, brush or squeegee at approximately 100 ft² / gallon leaving a uniform glaze on the surface.
2. Avoid puddling. Re-prime any areas indicating high surface absorption of the primer.
3. Allow to cure, approximately 1 hour. MasterTop SRS 51P must be fully cured prior to placing MasterEmaco S 6000.

SURFACE PREPARATION

MasterEmaco S 6000

1. The concrete surface must be dry with a maximum 5% moisture content. Damp and wet surfaces may be dried with artificial heat if the concrete will remain dry when the heat source is removed (i.e., the concrete must not be saturated with moisture).
2. Conduct adhesion tests with the polymer system to ensure proper preparation and good bond strength. Adhesion tests should exhibit failure in the concrete, not at the interface. Concrete failure must be greater than 200 psi (1.4 MPa).
3. Patch perimeter must be sawcut to 1/4" as materials cannot be feather-edged.
4. MasterEmaco S 6000 requires the use of MasterTop SRS 51P

MIXING MORTAR

MasterEmaco S 6000

1. Mix MasterEmaco S 6000 in 5 gallon pails with a mixing blade or in concrete drum mixers. Measure out no more than 1/2 gallon of Part A per 37 lb bag of Part B.
2. Add Part A to container followed by Part B and mix thoroughly for 30–60 seconds to obtain a mortar consistency. When extending, add aggregate as required (contact BASF Technical Service for proper aggregate extension technique).
3. MasterEmaco S 6000 can be used in any thickness over 1/2" (12.7 mm) when extended with selected washed and dried aggregate. Aggregate is added after Part A and Part B are blended.

MORTAR APPLICATION

1. Finish the patch or repair using standard concrete finishing methods. For larger, deeper and vertical repairs, polyethylene or plastic laminate-lined forms may be required.
2. For small, shallow repairs, use a trowel to spread and smooth the MasterEmaco S 6000. Keep the trowel flat and do NOT overwork the mortar, as improper surface cure will result. The product completely cures and is traffic ready within one hour.
3. The minimum application thickness for MasterEmaco S 6000 is 1/8" (3.18 mm). Applications over 1/2" (12.7 mm) thick must be extended. Washed and dried pea gravel or coarse aggregate is used to extend the mortar mix. The largest aggregate size should not exceed 1/3 the depth of the patch (contact BASF Technical Service for proper aggregate extension technique). Never use any extender aggregate less than 1/16" (1.6 mm) with MasterEmaco S 6000.

ANCHOR BOLTS

Holes must be primed prior to addition of polymer mortar. Bolts must be rust-free and preferably galvanized. Other types of metal plating should be tested for compatibility with MasterTop SRS 51P and MasterEmaco S 6000 prior to use.

JOINT HEADERS

MasterEmaco S 6000 is well-suited for header repairs to armored joints, strip joint systems and other similar applications. For retrofit of existing headers, remove all existing header material and any damaged and spalled concrete. Edges should be sawcut to 1/4" (6.4 mm). All surfaces must be properly primed and allowed to cure prior to accepting the polymer concrete. For new construction, the concrete should be cut back 4–8" from the joint and 2–4" depth depending on design requirements.

CLEAN UP

Clean tools as needed with inhibited MMA, acetone, ethyl acetate or similar solvents.

FOR BEST PERFORMANCE

- MasterTop SRS 51P is not intended for use at application temperatures over 90 °F (32 °C)
- MasterEmaco S 6000: Non-cementitious, water-free composite material in which fine and coarse aggregates are bound together in a dense matrix with a polymer binder. Polymer concretes are used for repairing spalled, eroded and deteriorated concrete surfaces. They are specified in environments that demand rapid cure, low maintenance and high functional performance.
- Do not recoat while material is still hot to touch.
- Do not “slick off” material with straight MMA or solvents. This will interfere with the curing process.
- Material must be re-primed prior to over-coating with other MasterEmaco S 6000
- MasterEmaco S 6000 is not intended for use over bituminous-based substrates.
- Do not overwork the product. It will interfere with the curing process.
- Elevated temperatures will accelerate cure time.
- MasterTop SRS 100HD is already pre-blended into MasterEmaco S 6000 Part B.
- MasterEmaco S 6000 resins cure via an addition polymerization mechanism using the MasterTop SRS 100HD. Free radicals are formed and used to convert the liquid resin into a three-dimensional polymer network. This reaction proceeds easily below 50 °F (10 °C). Also, during the reaction, all hardener is consumed and the polymer is fully formed within a one-hour period. There is no potential for an excess of unreacted components or extended cure that is typical of other systems. When used correctly, cure is thorough and consistent.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used; visit master-builders-solutions.basf.us to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Technical Data

Composition

MasterEmaco S 6000 Part B is a non-cementitious, water-free composite material in which fine and coarse aggregates are bound together in a dense matrix with a polymer binder.

MasterEmaco S 6000 Part A is a reactive binder based on Methacrylate monomers used with Part B to form a polymer concrete.

Compliances

- MasterEmaco S 6000 is classified under DOT regulations as Resin Solution, UN 1866, Class 3, PG II.
- Master Builders Solutions resins are manufactured to ISO 9001 standards.

Typical Properties

COMPONENT	RESULTS	
	PART A	PART B
Appearance	Liquid	Grey powder
Specific gravity, g/cm³	0.93	—
Bulk density, approx, lb/ft³ (kg/m³)	—	78.5 (1.26)
Viscosity, cP (MPa-sec)	1	—
Flash point, °F (°C)	48 (9)	—

Test Data

PROPERTY	RESULTS	TEST METHOD
Compressive strength, psi (MPa)	7,000 (48.2)	ASTM C 579
Tensile strength, psi (MPa)	1,150 (7.9)	ASTM C 307
Flexural strength, psi (MPa)	5,900 (40.7)	ASTM C 580
Compressive modulus of elasticity, psi (MPa)	0.6 × 10 ⁶ (4.1 × 10 ³)	ASTM C 469
Coefficient of thermal expansion, /°F (/°C)	38 × 10 ⁻⁶ (68 × 10 ⁻⁶)	ASTM C 531
Linear shrinkage, %	0.08	ASTM C 531
Water absorption, % / 24 hrs	0.09	ASTM D 570

Aggregate Extension

REPAIR THICKNESS IN (MM)	EXTENSION % BY WEIGHT	AGGREGATE GRAIN SIZE	LBS OF AGGREGATE	SQUARE FEET	CUBIC FEET
1/8 (3.2)	—	—	—	29.3	0.30
1/4 (6.4)	—	—	—	14.6	0.30
1/2 (12.7)	10	1/16" to 1/8"	4	7.9	0.33
3/4 (19)	25	1/16" to 1/8"	10	5.9	0.37
1 (25.4)	50	3/16" to 3/8"	20	5.4	0.45
1 1/2 (38)	75	3/16" to 3/8"	30	4.2	0.52
2 (50.8)	100	1/4" to 3/4"	40	3.5	0.59

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Material Safety Data Sheets and product label information for this product prior to use. The MSDS can be obtained by visiting buildingsystems.basf.com, e-mailing your request to basfbcsct@basf.com or calling 1(800)433-9517. Use only as directed.

**For medical emergencies only,
call ChemTrec® 1(800)424-9300.**

LIMITED WARRANTY NOTICE

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.