

SELECTION & SPECIFICATION DATA

Generic Type	Fiber-reinforced Cementitious Mortar
Description	A spray-grade, economical, shrinkage-compensated, repair mortar, and surfacing compound that exhibits excellent bond strength to concrete. It is ideally suited for substrate resurfacing of deteriorated concrete and is typically topcoated with Carboline's lining systems. Various Lining systems are available. Each system provides excellent corrosion protection, especially to acid attack due to wet hydrogen sulfide environment found in wastewater.
Features	<ul style="list-style-type: none"> • Develops early strength rapidly • Spray-able and trowel-able • Chemical resistant-resistant to hydrogen sulfide attack down to 2.0 pH • Easily topcoated to provide additional chemical resistance or appearance • Fiber reinforced allows high-build repairs • Bonds well to damp concrete • Low rebound
Dry Film Thickness	<p>0.5 - 3.5 inches (13 - 89 mm) per coat</p> <p>*Typically limited to 3.5"</p> <p>May be applied to a minimum of ½" up to 3½" thick on vertical surfaces and up to 1½" thick in overhead locations.</p>
Typical Uses	Repair manholes, wet-wells, pipelines and other wastewater concrete structures.
Theoretical Coverage Rates	0.43 ft ³ (0.013m ³) per 50 lb. (22.7 kg) bag
VOC Values	As Supplied : 0 lbs/gal (0 g/l)
Limitations	Minimum surface and ambient temperature is 40 °F (4.4 °C)

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Concrete	Concrete shall be designed, placed, cured, and prepared per NACE No. 6/SSPC-SP 13, latest edition. Abrade to remove all laitance, loose concrete, etc. and to create surface profile in accordance with ICRI CSP 4-7 for the coating system.

PHYSICAL PROPERTIES

Test Method	System	Cure Time	Results
Compressive Strength	ASTM C109 (2" Cubes)	1 Day	4,000 psi (27.5 MPa)
Compressive Strength	ASTM C109 (2" Cubes)	28 Days	7,000 psi (48.2 MPa)
Compressive Strength	ASTM C109 (2" Cubes)	7 Days	7,000 psi (48.2 MPa)
Flexural Strength	ASTM C78	28 Days	1,000 psi (6.9 MPa)
Flexural Strength	ASTM C78	7 Days	75 psi (5.2 MPa)
Fresh Wet Density	ASTM C138		130lb./ft ³ (2,082 kg/m ³)
Rapid Chloride Permeability	ASTM C1202		330 coulombs
Slant Shear Bond Strength	ASTM C882 (No bonding agent)	28 Days	2,250 psi (15.5 MPa)
Slant Shear Bond Strength	ASTM C882 (No bonding agent)	7 Days	1,750 psi (12.0 MPa)
Splitting Tensile Strength	ASTM C496	28 Days	700 psi (4.8 MPa)
Splitting Tensile Strength	ASTM C496	7 Days	600 psi (4.1 MPa)

MIXING & THINNING

Mixing	Care should be taken to ensure that the Carbocrete 522 is thoroughly mixed. Mixing can be done by a standard, Jiffy-type mixer or one that is "mountable" on a carriage to aid in handling. Also a heavy-duty drill is acceptable using a slow speed (400-500 rpm). Add 0.75 gallon (2.84 L) of clean, potable water to a mortar mixer with rubber tipped blades. With mixer running slowly, add powder and mix for 3 minutes until a homogeneous mortar-like consistency is achieved. Depending on ambient temperature and the desired consistency, additional water may be added up to a maximum content of 0.9 gallons (3.4L) per 50 lb. bag of Carbocrete 522.
Pot Life	2 hours at 75 °F (24 °C) and less at higher temperatures. Pot life ends when the material thickens and becomes unusable.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application	Carbocrete 522 is formulated for spray application using a piston-type or rotary/stator pump with atomized gun set-up.
Trowel	Standard plasterers' hawk and trowel may be used.
Spray Gun	<ul style="list-style-type: none"> • Binks Model 7E2, 47 or 49 Fluid Tip, 3/8" or 1/2" Air Cap • Graco Model 204000, 167331 Fluid Tip, 160658 Air Cap • SpeeFlo Model 701, 3/8" (9 mm) Fluid Tip, 3/8" Air Cap • Plasterers, 3/8"-1/2" (9 mm) Fluid Tip
Material Hose	Minimum 1" (2.5 cm) I.D. hose with 300 psi minimum bursting pressure. For lengths over 50' (15 m), use 1 1/2" (3.8 cm) I.D. hose.
Compressor	Be certain that the air supply is a minimum 22 cfm at 100 psi (6.9 kPa) and higher when distances longer than 75' (22 m) are required.
Air Line	Use 1/2" (1.3 cm) I.D. line, with a minimum bursting pressure of 100 psi (6.9 kPa).

CLEANUP & SAFETY

Cleanup	Pump, mixer and hose should be cleaned with clean, potable water at least once every 8 hours at 70 °F (21 °C), and more often at higher temperatures. Wet overspray must be cleaned up with clean, fresh water. Cured overspray may require chipping and/or scraping to remove.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use.

PACKAGING, HANDLING & STORAGE

Shelf Life	Min. 12 months at 75 °F (24 °C)
Storage Temperature & Humidity	-20 °F (-29 °C) to 150 °F (66 °C) 0-90% relative humidity
Storage	Material should be kept dry, covered, and off the ground.
Shipping Weight (Approximate)	50 lbs (22.7 kg)

WARRANTY

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