

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Fibre-reinforced Cementitious Mortar
<b>Description</b>	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.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Develops early strength rapidly</li> <li>• Spray-able and trowel-able</li> <li>• Chemical resistance - resistant to hydrogen sulfide attack down to pH = 2.0</li> <li>• Easily topcoated to provide additional chemical resistance or improve appearance</li> <li>• Fibre reinforced allows high-build repairs</li> <li>• Bonds well to damp concrete</li> <li>• Low rebound</li> </ul>
<b>Dry Film Thickness</b>	<p>13 - 89 mm (0.5 - 3.5 inches) per coat</p> <p><b>Typically limited to 90 mm</b> May be applied to a minimum of 12 mm up to 90 mm thick on vertical surfaces and up to 38 mm (1½") thick in overhead locations.</p>
<b>Typical Uses</b>	Repair manholes, wet-wells, pipelines and other wastewater concrete structures.
<b>Theoretical Coverage Rates</b>	0.013m <sup>3</sup> per 22.7 kg (50 lb) bag
<b>VOC Values</b>	<b>As Supplied</b> : Zero
<b>Limitations</b>	Minimum surface and ambient temperature is 5°C

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Surfaces must be clean. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
<b>Concrete</b>	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.

# Carbocrete 522

## PRODUCT DATA SHEET



### PERFORMANCE DATA

Test Method	System	Results
ASTM C109 (2" cubes)	Compressive Strength 28 Days	9,000 (62 MPa)
ASTM C109 (2" cubes)	Compressive Strength 1 Day	4,000 psi (27.5 MPa)
ASTM C109 (2" cubes)	Compressive Strength 7 Days	7,000 psi (48.2 MPa)
ASTM C1202	Rapid Chloride Permeability	330 coulombs
ASTM C138	Fresh Wet Density	130lb./ft <sup>3</sup> (2,082 kg/m <sup>3</sup> )
ASTM C496	Splitting Tensile Strength 28 Days	700 psi (4.8 MPa)
ASTM C496	Splitting Tensile Strength 7 Days	600 psi (4.1 MPa)
ASTM C78	Flexural Strength 7 Days	750 psi (5.2 MPa)
ASTM C78	Flexural Strength 28 Days	1,000 psi (6.9 MPa)
ASTM C882 (No bonding agent)	Slant Shear Bond Strength 28 Days	2,250 psi (15.5 MPa)
ASTM C882 (No bonding agent)	Slant Shear Bond Strength 7 Days	1,750 psi (12 MPa)

### MIXING & THINNING

<b>Mixing</b>	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 2.84 litres 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 3.4 litres per (22.7 kg) 50 lb. bag of Carbocrete 522.
<b>Pot Life</b>	2 hours at 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.

<b>Spray Application</b>	Carbocrete 522 is formulated for spray application using a piston-type or rotary/stator pump with atomized gun set-up.
<b>Trowel</b>	Standard plasterers' hawk and trowel may be used.
<b>Spray Gun</b>	<ul style="list-style-type: none"><li>• Graco Model 204000, 167331 Fluid Tip, 160658 Air Cap</li><li>• SpeeFlo Model 701, 3/8" (9.5 mm) Fluid Tip, 3/8" Air Cap</li><li>• Plasterers, 3/8"-1/2" (9.5-12.5 mm) Fluid Tip</li></ul>
<b>Material Hose</b>	Minimum 25 mm (1") I.D. hose with 300 psi minimum bursting pressure. For lengths over 15 metres (50'), use 38 mm (1 1/2") I.D. hose.

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- Compressor** | Be certain that the air supply is a minimum 625 lts/minute (22 cfm) at 6.9 kPa (100 psi) and higher when distances longer than 22 metres (75') are required.
- Air Line** | Use 12.5 mm (½") I.D. line, with a minimum bursting pressure of 6.9 kPa (100 psi).

## CLEANUP & SAFETY

- Cleanup** | Pump, mixer and hose should be cleaned with clean, potable water at least once every 8 hours at 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 24 °C
- Shipping Weight (Approximate)** | 22.7 kg (50 lbs)
- Storage Temperature & Humidity** | -29 °C to 66 °C  
0-90% relative humidity
- Storage** | Material should be kept dry, covered, and off the ground.

## WARRANTY

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