

SELECTION & SPECIFICATION DATA

Generic Type	Thermoplastic fiber reinforced microsilica repair mortar
Description	Carbocrete 4020 is a high-strength, microsilica modified repair mortar designed to repair and resurface deteriorated concrete surfaces exposed to severe and aggressive environments. Ideal for vertical, horizontal, and overhead applications, the dense design matrix provides low permeability, restores structural integrity, and can withstand environments with a pH of 3 or higher.
Features	<ul style="list-style-type: none"> • Non-shrink • High-Build • High Bond Strength • Good Flexural Strength • Excellent Freeze-Thaw Resistance • Low Permeability • Resists External Hydrostatic Pressure
Typical Uses	Repair manholes, wet-wells, pipelines, culverts, trenches, sumps, and brick/concrete structures that have experienced deterioration from exposure to aggressive environments.
Color	Gray Newly applied material may be darker than existing concrete.
Primer	Self-priming on properly prepared new and existing concrete, brick, or steel surfaces.
Application Thickness	1/4" - 4" or more (6.3 to 100 mm or more) lifts for vertical, overhead, and horizontal surfaces
Theoretical Coverage Rates	One 50lbs bag (.45kg) of Carbocrete 4020 will cover approximately 8ft ² (.75m ²) when applied at an average depth of 1/2" (13mm). Yield- .42 Cu/ft when mixed
VOC Value(s)	<1 g/L
Limitations	Good water misting or plastic sheeting practices should be used whenever low humidity, direct sunlight, or high winds are expected during the first 24 hours after installation. This will ensure complete hydrolysis and limit laitance formation at the surface.
Topcoats	Carbocrete 4020 may be top-coated with several different epoxy and polyurethane lining materials. Depending on intended the service, topcoating may not be required. Contact Technical Service for recommendations based on specific environments.

SUBSTRATES & SURFACE PREPARATION

Concrete	<p>Concrete shall be prepared per NACE No. 6/SSPC-SP 13. The substrate must be structurally sound and free of loose or deteriorated concrete.</p> <p>The PH of the concrete substrate must a minimum of 8.5 prior to application.</p> <p>Mechanically abrade the surface to achieve a surface profile in accordance with ICRI Technical Guideline No. 310.2r to a CSP 3 or greater.</p> <p>The substrate must be saturated surface dry (SSD) prior to application.</p>
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MIXING & THINNING

Mixing	A heavy-duty drill or paddle-type mortar mixer is recommended for large jobs. Add .6 to .9 gallons or 92-115 fluid ounces (2.7-3.4 L) of clean, potable water into a clean mixing vessel, then slowly add all 50 lbs. of Carbocrete 4020. Mix only until no dry clumps remain. Do not exceed 1 gallon of water per bag.
Pot Life	<ul style="list-style-type: none">• ~40 minutes at 75°F• Working time will be extended at lower temperatures and shortened when higher.• Do not mix more material than can be applied within 30 minutes.• Do not add more water to extend pot life, as more water will weaken the finished mortar.

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.

Pump	Depending on job requirements and desired production rates, various piston, systolic, and rotor/stator pumps may be used. Carbocrete 4020 can also be applied to round structures using centrifugal application, also known as spin casting, equipment for vertical applications. Application thicknesses up to 2" in a single lift, or more when applied in multiple lifts. Contact Technical Service for equipment recommendations based on specific environments.
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APPLICATION PROCEDURES

Trowel	Saturate all surfaces thoroughly with clean water and allow them to reach the saturated surface dry (SSD) condition just before applying Carbocrete 4020. Mortar Lifts: Apply in 1/4" to 4" (3 to 100 mm) lifts for vertical and overhead applications. Trowel the product into place and allow it to set up before applying the next lift. A subsequent lift or lifts may be required to create surface uniformity. If additional lifts are required after the initial one, the surface of the placed mortar must be scored before it is fully set up.
Finishing	Finish the Carbocrete 4020 to the desired texture. Do not add additional water to the surface during the finishing operation. Once it has reached the minimum cure, Carbocrete 4020 must be prepared to remove laitance and create the profile recommended by the accompanying coating's product data sheet.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	65°F (18°C)	45°F (7°C)	45°F (7°C)	0%
Maximum	85°F (29°C)	90°F (32°C)	90°F (32°C)	95%

CURING SCHEDULE

Curing Details	<ul style="list-style-type: none">• Initial Set Time: ~1 hour• Final Set Time: ~24 hours
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CLEANUP & SAFETY

Cleanup	Clean tools and equipment with water before the material hardens. Read and follow all caution statements on this product data sheet and on the SDS for this product.
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PACKAGING, HANDLING & STORAGE

Packaging	50 lbs (22.68 kg) unit
Shelf Life	12 months in original, unopened package
	Store in a dry space. Keep from freezing.
Shipping Weight (Approximate)	Approx. 50 lbs (22.6 kg)

WARRANTY

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