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Strongcrete FD *Rapid Setting Concrete*

DESCRIPTION

Strongcrete FD is a polymer modified, rapid setting, rapid hardening, full depth concrete repair material that exhibits excellent flexural properties, shear bond strength and compressive strength. **Strongcrete FD** is a blend of portland cement, selected aggregates and proprietary admixtures. **Strongcrete FD** offers superior resistance to freeze/thaw conditions, de-icing salts, petroleum products and other chemicals prevalent on concrete roadways. In addition, **Strongcrete FD** will not rust or corrode reinforcing steel under moist, humid conditions.

USES

Strongcrete FD is ideal for a wide variety of concrete repairs:

- Highways
- Bridge decks
- Pavements
- Airport runways
- Warehouse floors
- Industrial plants

BENEFITS

- Resilient: Withstands freeze/thaw cycles and corrosive elements
- Rapid Set: High early strength, open to traffic in as little as 1 hour
- Performance: Excellent compressive strengths
- Consistent: Strict Quality Control testing and standards

STANDARDS

Strongcrete FD meets and exceeds the requirements of ASTM C928 R3.

SURFACE PREPARATION

All surfaces in contact with **Strongcrete FD** shall be free of dirt, oil, grease, laitance and other contaminants that may act as bondbreakers. All unsound concrete should be removed to ensure a good bond. Saw cut the perimeter of the area being patched into a square with a minimum depth of 1". Smooth, dense surfaces need to be mechanically abraded to provide necessary bonding requirements. Mechanically prepare the substrate to a minimum CSP 5 following ICRI Guideline 310.2R to allow proper bonding. ACI recommends the area to be patched should be saturated for 24 hours before placement. Remove any standing water. Surface should be saturated surface dry (SSD). For best results, scrub some of the mixed components into the prepared surface. Do not allow scrub coat to fully dry before placement. Always apply a test patch. Maintain contact areas between 40°F (4°C) and 90°F (32°C) prior to repair and during initial curing period.

APPLICATION THICKNESS

1" - 8"

COVERAGE/YIELD

57 lbs (25.9 kg) will fill approximately 0.50 ft³ (0.014 m³) when 3.25 quarts mixing water is used.

MIXING

For best results, use a mechanical mixer with rotating blades or use a heavy duty 1/2" (15 mm) (or larger) low-speed, corded drill and mixing paddle #6 per ICRI Technical Guideline 320.5. Pre-wet mixer and empty excess water. Place 3.25 quarts of cool, clean potable water in mixer, then add dry material. Mix on low RPM for a total of 3 to 5 minutes until a homogeneous mixture is achieved. Mix only enough material that can be placed within working time. Do not blend excess water as this will cause bleeding and segregation. Do not use any other admixtures or additives.

PLACING

Strongcrete FD should be placed upon completion of mixing. Place material consistently, avoiding any air entrapment. Pour material into prepared sawcut area, ensuring that all pores and voids are filled. Force material against edge of repair, working away from center. Screed or float to the level of the surrounding concrete, then trowel, brush or broom to the desired finish.

FINISHING & CURING

Follow standard ACI curing practices. Exposed surfaces should be cured with a membrane forming compound.

STORAGE

Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS

In addition to limitations already mentioned, please note the following. Do not apply when the surface or ambient temperature is below 40°F (4°C) or expected to fall below 40°F (4°C) within 48 hours. Do not apply over surfaces that are frozen or contain frost. Do not apply over any active faults or cracks in the substrate without addressing any movement that may occur. Allow concrete to fully cure for 28 days before use of this product. Setting time will speed up in hot weather and slow in cold weather. For hot and cold weather applications, contact your Janell representative.



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PHYSICAL PROPERTIES

All Physical Property testing performed in laboratory conditions of 73.5 ± 3.5°F (23 ± 2°C) and a relative humidity no less than 50% unless otherwise determined by the test method or specification. All results represent **Strongcrete FD** with 3.25 quarts water unless listed otherwise. Tests are conducted under standardized conditions for comparative purposes, and results may not be representative of performance under field conditions.

Property and Test Method	Results				
Compressive Strength ASTM C39	2 Hours	3 Hours	1 Day	7 Days	28 Days
	2,750 psi (18.96 MPa)	3,100 psi (21.36 MPa)	5,100 psi (35.16 MPa)	5,500 psi (37.92 MPa)	6,500 psi (44.81 MPa)
Rate of Set ASTM C266	Working Time		Initial	Final	
	:12		:25	:45	
Flexural Strength ASTM C78				28 Days	
				1,000 psi (6.89 MPa)	
Wet Density ASTM C138	141 lb/ft ³ (2,258 kg/m ³)				
Slump ASTM C143	Time		Slump		
	5 Minutes		9.0"		
Length Change ASTM C157	28 Days Air		28 Days Water		
	(-)0.04%		(+)0.02%		
Modulus of Elasticity ASTM C469	4.19 x 10 ⁶ @ 28 days (28.89 GPa)				
Splitting Tensile Strength ASTM C496	28 Days 700 psi (4.82 MPa)				
Freeze/Thaw Resistance ASTM C666	F/T Cycles		Durability		
	300		96%		
Scaling Resistance ASTM C672	Cycles		Condition of Surface		
	25		1		
Bond Strength ASTM C882	1 Day		7 Days		
	2,500 psi (17.23 MPa)		3,000 psi (20.68 MPa)		
Chloride Ion Resistance ASTM C1202	Age	Penetrability	Electrical Resistivity		
	28 Days	<500 coulombs	(ohm.cm) 2,800		
Coefficient of Thermal Expansion CRD C39	5.6 x 10 ⁻⁶ in/in°F (10.08 x 10 ⁻⁶ cm/cm°C)				

DANGER

This product contains Crystalline Silica (CAS# 14808-60-7) and Portland Cement (CAS# 65997-15-1). Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. Keep away from children. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.

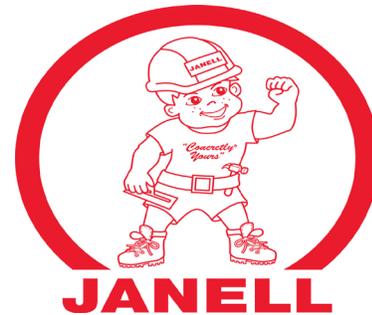
WARNING: Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

FIRST AID

If swallowed: Immediately call a poison center/doctor. Rinse mouth. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

MANUFACTURER/TECHNICAL SERVICE

Exclusively manufactured for Janell Inc. by **US SPEC of Denver, CO**. Contact your Janell representative for the most current product information. Always read and follow the warnings and instructions on the most current technical data sheets.



Cincinnati, OH: 513-489-9111 Dayton, OH: 937-866-9111
Norwood, OH: 513-651-9111 Columbus, OH: 614-224-9111
Erlanger, KY: 859-341-9111 Lexington, KY: 859-254-9111

LIMITED WARRANTY: The manufacturer warrants that this product is free from defects in material and workmanship, and will perform per the manufacturer product literature in effect at the time of purchase. This warranty is for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applies only if the product is used, in strict accord with the manufacturer published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at the manufacturer's option. **CONSEQUENTIAL, SPECIAL, AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY.** All claims under this warranty must be submitted to the manufacturer by calling 303-778-7227. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.