



DATA SHEET NO. 8136-070

MEADOW-CRETE FNP® EXTENDED

One-Component, Pre-Extended, Flowable, Form & Pour Structural Repair Mortar

DESCRIPTION

MEADOW-CRETE FNP EXTENDED is a one-component, pre-extended, shrinkage-compensated repair mortar for structural repairs and reinstatement of concrete elements. The product can be formed and poured or formed and pumped, utilizing a suitable concrete pump. MEADOW-CRETE FNP EXTENDED contains 9.5 mm (3/8") nominal size aggregate and is suitable for applications requiring cathodic protection, impressed systems, or sacrificial anode applications.

USES

MEADOW-CRETE FNP EXTENDED is ideal for reinstatement or repair of beams, columns, and balcony edges or for partial or full depth horizontal placement. The product is suitable for industrial, transportation, residential, and civil engineering applications.

FEATURES/BENEFITS

- Can be poured or pumped.
- Low permeability/Protects embedded reinforcing steel.
- Suitable for cathodic protection systems.
- Shrinkage compensated/Added dynamic stability.
- Highly engineered/Non-segregating.
- No added slag, chlorides, or microsilica.

PACKAGING AND YIELD

31.8 kg (70 lb.) bag yields 0.016 m³ (0.58 ft.³)

Yields listed above are based on 3.3 L (7 pints) of water per bag and will vary based on substrate profile, aggregate, variations in mix water amounts and waste. Field trials should be performed to determine yields based on jobsite conditions.

SHELF LIFE

18 months from date of manufacture when stored indoors on pallets in a dry, cool area. Do not store product outside.

TECHNICAL DATA

The following data was determined using the maximum water-to-powder ratio of 3.3 L (7 pints) per bag at 23.5° C.

Set Time per ASTM C191	
Initial	4 hours
Final	6 hours
Consistency	Minimum 127 mm (5") slump
Compressive Strength per ASTM C 109	
@ 1 day	13.8 MPa (2000 psi)
@ 7 days	27.6 MPa (4000 psi)
@ 28 days	34.5 MPa (5000 psi)
Bond Strength per ASTM C882	
@ 28 days	11.7 MPa (1700 psi)
Length Change per ASTM C157	
Drying Shrinkage @ 28 days	0.034% (340 µ strain)
Flexural Strength per ASTM C348	
@ 28 days	4.48 MPa (650 psi)
Aggregate Size	9.5 mm (3/8") nominal
Freeze-Thaw Resistance per ASTM C666 (Procedure A)	
At 300 Cycles	90% Relative Dynamic Modulus

Surface Preparation ... Perform surface preparation in accordance with International Concrete Repair Institute (ICRI) Technical Guidelines #310.2-1997: Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays. Mechanically roughen or high pressure water-jet the existing concrete substrate to a minimum concrete surface profile (CSP) of CSP-7 or higher, depending on substrate condition. Remove all unsound concrete and provide a profiled, porous surface. The substrate must be structurally sound, dust-free, and free of grease, oil, dirt, curing compounds, release agents, or any other surface or penetrated contaminants that will adversely affect bond. Sanding, grinding, or wire-brushing are not approved surface preparation methods. Saw cut perimeter of repair zone to a depth of 19 mm (3/4"). Completely expose all reinforcing steel, ensuring a minimum clearance of 25.4 mm (1") behind reinforcing steel. Perform reinforcing steel preparation in accordance with ICRI Technical Guidelines #03730. Pre-soak repair zone for a minimum four hours prior to application of MEADOW-CRETE FNP EXTENDED. Substrate must be saturated, surface dry (SSD) and free of standing water.

W. R. MEADOWS® OF CANADA

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Mixing ... Mix only complete bags. Using a mortar- or concrete-type mixer designed for products containing a coarse aggregate, pour 2.83 L (6 pints) water per bag. Slowly add MEADOW-CRETE FNP EXTENDED while mixing. Adjust mix consistency using up to 0.47 L (1 pint) additional water. Mix for 3 - 5 minutes or until homogenous and lump-free. Do not over mix. Do not re-temper.

Forming ... Support formwork as to ensure a tight seal with repair zone. Consult professional engineer regarding structural support and shoring requirements. Formwork should be rigid, structurally stable, sealed, and coated with a suitable release agent, such as DUOGARD® from W. R. MEADOWS. Forming should be accomplished in accordance with American Concrete Institute (ACI) 347-88. Proper vent and drainage ports should be installed as required to ensure no entrapment of air voids.

Placement ... Pour or pump properly mixed product immediately following mixing to ensure adequate flow. Pumping should be accomplished in accordance with ACI 304-R-85. Do not re-temper or over-work product. Follow ACI 305-R89: Standard on Hot Weather Concreting or ACI 306-R88: Standard on Cold Weather Concreting when applicable. In large applications [greater than 203.2 mm (8") in depth], follow pertinent ACI recommendations for concrete placement.

Ensure that pump type is designed to handle a minimum size 9.5 mm (3/8") angular coarse aggregate. Ensure pump is equipped with a suitable Rock Valve™ or S-Valve or similar style pump designed to process coarse aggregate. Mortar or standard-type grout pumps should not be used to pump MEADOW-CRETE FNP EXTENDED.

Curing ... Cure in accordance with ACI 308. Cure MEADOW-CRETE FNP EXTENDED immediately following removal of forms prior to a seven-day cure time using a curing compound such as 1100-CLEAR or 1220-WHITE from W. R. MEADOWS. Curing compounds may discolour and may require complete removal prior to topcoating, painting, sealing, waterproofing, or similar application.

PRECAUTIONS

Contains Portland cement and crystalline silica (sand), which are suspected carcinogens. Skin and eye irritant. Dust may cause respiratory tract irritation. Follow OSHA safety regulations when handling. Avoid inhalation of dust. Avoid direct contact with this product. Utilize chemical resistant gloves and safety glasses to minimize direct contact. May cause serious delayed lung injury (silicosis). If contact occurs, wash affected areas with mild soap and water. For eye contact, flush with water for a minimum 15 minutes and contact a physician immediately. Keep product out of reach of children. For industrial use only. Not for consumption. Refer to Safety Data Sheet for complete health and safety information.

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WARRANTY: W. R. Meadows of Canada warrants that, at the time and place we make shipment, our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM OF TRADE OR OTHERWISE. As the exclusive remedy for breach of this Warranty, we will replace defective materials, provided, however, that the buyer examine the materials when received and promptly notify us in writing of any defect before the materials are used or incorporated into a structure. Three (3) months after W. R. Meadows of Canada has shipped the materials, all our Warranty and other duties with respect to the quality of the materials delivered shall conclusively be presumed to have been satisfied, all liability therefore terminates and no action for breach of any such duties may thereafter be commenced. W. R. Meadows of Canada shall in no event be liable for consequential damages. Unless otherwise agreed to in writing, no warranty is made with respect to materials not manufactured by W. R. Meadows of Canada. We cannot warrant or in any way guarantee any particular method of use or application or the performance of materials under any particular condition. Neither this Warranty nor our liability may be extended or amended by our salesmen, distributors or representatives, or by our distributor's representatives, or by any sales information or drawings.

MEADOW-CRETE FNP EXTENDED is recommended for concrete repairs only. Do not use as an underlayment, topping, or overlay. Do not apply below 4° C or when rain is imminent. Protect from freezing for a minimum of 48 hours. Do not bridge moving cracks. Extend existing control and expansion joints through MEADOW-CRETE FNP EXTENDED. Do not add any admixtures. Exceeding liquid requirements shall result in reduced physical properties. Realize that set time will decrease as the product, air, substrate, and mixing liquid temperature increases and will increase as the temperature decreases. Repair areas should be saw cut and slightly undercut to a minimum depth of a 19 mm (3/4"). Do not featheredge. Protect from conditions that may cause early water loss: wind, low humidity, high temperature, direct sunlight. Early water loss is transpired in thin applications. Failure to follow ACI concreting and industry standard practices will result in decreased material performance.

MASTERFORMAT NUMBER AND TITLE

03 01 30.71 - Rehabilitation of Cast-in-Place Concrete

LEED INFORMATION

May help contribute to LEED credits:

- MRc9: Construction and Demolition Waste Management

For most current data sheet, further LEED information, and SDS, visit www.wrmeadows.com.

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