PRODUCT DATA

CSI Code: 03930

W. R. MEADOWS SEALTIGHT

NO. 379

JULY 2004
(Supersedes November 2002)

MEADOW-CRETE® FNP

One Component, Flowable, Form & Pour Structural Repair Mortar

DESCRIPTION

One component, flowable, shrinkage-compensated, corrosion inhibitor enhanced, repair mortar for structural applications. MEADOW-CRETE FNP can be formed and poured or formed and pumped, utilizing a suitable grout pump. It has a low permeability, protects embedded reinforcing steel and provides a lower in-cast placement.

USES

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

FEATURES AND BENEFITS

- Migrating corrosion inhibitor enhanced / Protects localized and adjacent reinforcing steel
- Very flowable / Can be poured or pumped
- May be extended / Lower in-cost placement
- Low permeability / Protects embedded reinforcing steel
- Shrinkage compensated / Added dynamic stability
- Highly engineered / Non segregating, re-dispersible

PACKAGING AND YIELD

50 lb. (22.7 kg) bag yields 0.40 cu. ft. (11.32 L)

The yield listed above is based on 3.25 quarts (3.07 liters) of water per 50 lb. (22.7 kg.) bag and will vary based on substrate profile, aggregate, variations in mix water amounts and waste/rebound. Field trials should be performed to determine yields based on job-site conditions.

SHELF LIFE

12 months when stored on pallets in a dry, cool area.

ADDITIONAL RESTORATION PRODUCTS FROM W. R. MEADOWS CAN BE FOUND BY VISITING OUR WEBSITE:

www.wrmeadows.com

TECHNICAL DATA*

The following data was determined using the maximum water to powder ratio of 3.25 quarts (3.07 L) per 50 lb. bag at 75˚F (23.5˚C).

Set Time per ASTM C 191	
Initial	4 hours
Final	6 hours
Working Time	30 mins.
Flow	
Per ASTM C 191[1]	Flowable
Compressive Strength	
Per ASTM C 109[1]	
@ 1 day	2,250 psi (15.5 MPa)
@ 7 days	7,500 psi (52 MPa)
@ 28 days	8,000 psi (55 MPa)
Bond Strength	
Per ASTM C 882[12]	
@ 1 day	650 psi (4.5 MPa)
@ 28 days	3400 psi (27 MPa)
Modulus of Elasticity	
Per ASTM C 469[1]	4.13 x 10^6 psi (28.5 GPa)
Length Change	
Per ASTM C 157[1]	
Drying Shrinkage @ 28 days	-0.040% (400 µstrain)
Length Change	
Per ASTM C 157[1] (Modified)	
Specimens stored at 73+/-3˚F & 50 +/-4% RH, continuously.	
Drying Shrinkage @ 28 days	-0.091% (910 µstrain)
Flexural Strength	
Per ASTM 348[1]	
@1 day	650 psi (4.5 MPa)
@28 days	1,850 psi (13 MPa)
Freeze-Thaw Resistance	
Per ASTM C 666 (Procedure A)[1]	
At 300 Cycles	97% RDM[3]

*All technical data is typical information, but may vary due to testing methods, conditions and operators.

[1]Independent reports are available upon request.
[2]Modified – No bonding agent used. Pre-dampening of properly prepared substrate.
[3]RDM-Relative Dynamic Modulus

CONTINUED ON REVERSE SIDE...

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FOR BEST PERFORMANCE:

- MEADOW-CRETE FNP is recommended for concrete repairs only.
- Not intended to be used as a self-leveling underlayment or topping; FNP is designed as a trowel down repair mortar.
- Do not apply below 40˚F (4˚C) or above 90˚F (32˚C) or when rain is imminent.
- Protect from freezing for a minimum of 24 hours.
- Do not bridge moving cracks. Extend existing control and expansion joints through MEADOW-CRETE FNP.
- For large areas with no control, expansion or construction joints, refer to ACI Guidelines.
- 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 1/2" (12 mm). Do not featheredge.
- Protect from conditions that may cause early water loss; windy, low humidity, high temperature and direct sunlight. Early water loss is exasperated in thin applications.
- Realize that the use of extender aggregate will alter physical properties.
- Failure to follow industry standard practices may result in decreased material performance.
- Proper application is the responsibility of the user. Field visits by W. R. MEADOWS personnel are for the purpose of making technical recommendations only, and are not to supervise or provide quality control on the job-site.

SURFACE PREPARATION

Perform surface preparation in accordance with ICRI Technical Guidelines No. 03730. Mechanically abrade existing substrate to remove all unsound concrete, but do not use excessive force, which may cause micro-fracturing. Substrate must be structurally sound and free of any contaminants that will adversely affect bond. Prepared surface must be dust-free and have a sufficient profile to ensure adequate mechanical lock. Saw cut perimeter of repair zone to a depth of 1/2" (12mm) to avoid featheredging.

Completely expose all reinforcing steel, ensuring a minimum clearance of 3/4" behind reinforcing steel. Perform reinforcing steel preparation in accordance with ICRI Technical Guidelines No. 03730.

Pre-soak repair zone prior to application of MEADOW-CRETE FNP to a saturated surface dry (SSD) condition and free of standing water.

MIXING

Mix only complete bags. Using a mortar type mixer, pour 3 quarts (2.84 liters) per 50 lb. (22.7 kg) bag. Slowly add MEADOW-CRETE FNP while mixing. Adjust mix consistency using up to an additional 0.50 Quarts (0.47 L) of water, as required. Mix for 3-5 minutes or until homogenous and lump-free. Do not over mix.

FORMING

Support formwork as to ensure a tight seal with repair zone. 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 ACI 347-88. Proper vent & drainage ports should be installed as required to ensure no entrapment of air voids. Pre-soak repair zone for 24 hrs, prior to placement to a saturated surface dry (SSD) condition.

PLACEMENT

Pour or pump properly mixed product immediately following proper 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.

CURING

Cure MEADOW-CRETE FNP immediately following application using a suitable curing compound from W. R. MEADOWS, or in accordance with ACI 308. W. R. MEADOWS recommends 2250-WHITE or 1130-CLEAR for curing. When conditions exist for rapid early water loss, the use of EVAPRE™, an evaporation retarder from W. R. MEADOWS, is also recommended.

SAFETY AND TOXICITY

Avoid inhalation of dust. Avoid direct contact with this product. Utilize gloves and safety glasses to minimize direct contact. If contact occurs, wash affected areas with mild soap and water. Keep product out of reach of children. For industrial use only. Refer to Material Safety Data Sheet for complete health and safety information.

FOR BEST PERFORMANCE, VERIFY MOST RECENT TECHNICAL DATA SHEET IS BEING USED BY VISITING OUR WEBSITE: www.wrmeadows.com

LIMITED WARRANTY

"W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order." Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.