PRODUCT DATA

QUALITY | SERVICE | INTEGRITY
W. R. MEADOWS®
A Family Company Since 1926

DATA SHEET NO. 3900-384

MEADOW-CRETE® GPS

One-Component, Polymer Modified Versatile Repair Mortar

DESCRIPTION

One-component, trowel applied or pneumatically applied (wet process), corrosion-inhibitor enhanced, polymer-modified, shrinkage-compensated, fiber reinforced, micro silica enhanced, cementitious repair mortar for horizontal, vertical and overhead applications.

USES

The product is ideal for patches from 6.4 mm (¼") to deep horizontal, vertical and overhead repairs and resurfacing of concrete, either small or large areas, interior or exterior application. MEADOW-CRETE GPS is suitable for industrial and civil engineering applications.

FEATURES/BENEFITS

- Fiber Reinforced / Increased Tensile & Flexural Strengths
- Polymer Modified / Enhanced Bond
- Micro Silica Enhanced / Low Permeability / Protects Embedded Reinforcing Steel
- Shrinkage Compensated / Added Dynamic Stability
- Highly Engineered / Low Rebound
- Creamy Consistency / Easily Finished
- Excellent Freeze-Thaw Resistance / Long Term Stability
- Wet Spray Process / Low In-Place Cost
- Migrating-Corrosion-Inhibitor Enhanced / Protects Localized and Adjacent Reinforcing Steel

SHELF LIFE

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

YIELD

22.7 kg (50 lb.) bag yields: 0.012 m³ (0.44 ft.³)
Yields listed above are based on 3.30 litres (3.5 U.S. quarts of water per 22.7 kg (50 lb.) bag and will vary based on substrate profile, aggregate, variations in mix water amounts and waste/rebound. Field trails should be performed to determine yields based on job-site conditions.

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

www.wrmeadows.com

TECHNICAL DATA

The following physical properties were determined using the maximum water to powder ratio of 3.54 L (3.75 U.S. quarts) per 22.7 kg (50 lb.) bag at 24°C (75°F)

Set Time per ASTM C 191

Initial	4 hours
Final	6 hours
Working Time	2 hours
Flow per ASTM C 928[1]	56%

Compressive Strength per ASTM C 109[1]

@ 1 day	17 MPa (2,500 psi)
@ 7 days	41 MPa (6,000 psi)
@ 28 days	46.5 MPa (6,750 psi)

Bond Strength per ASTM C 882[1 2]

@ 1 day	5 MPa (700 psi)
@ 28 days	17.5 MPa (2,550 psi)

Modulus of Elasticity per ASTM C 469[1]
16.8 GPa (2.44 x 10^6 psi)

Length Change per ASTM C 157[1]
Drying Shrinkage -0.083% (830 µ strain)

Flexural Strength per ASTM 348[1]

@ 1 day	4.5 MPa (675 psi)
@ 28 days	10 MPa (1,450 psi)

Freeze-Thaw Resistance per ASTM C 666 (Procedure A) [1]
At 300 Cycles 112% RDM[3]

All Technical Data is typical information, but may vary due to testing methods, conditions and procedures.

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

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FOR BEST PERFORMANCE:

- MEADOW-CRETE GPS is recommended for concrete repairs only.
- Not intended to be used as a self-levelling underlayment or topping, GPS is designed as a trowel down repair mortar.
- Do not apply below 4°C (40°F) or above 32°C (90°F) 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 GPS.
- For large areas with no control, expansion on construction joints, refer to ACI guidelines.
- Do not exceed a length-to-width ratio of 2 to 1 for the repair area.
- 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 6 mm (1/4"). Do not featheredge.
- Protect from conditions that may cause early water loss; windy, low humidity, high temperature and direct sunlight. Early water loss is amplified 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 6.4 mm (¼") to avoid featheredging.

Completely expose all reinforcing steel, ensuring a minimum clearance of 19 mm (¾") 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 GPS to a saturated, surface dry (SSD) condition and free of standing water.

HAND APPLICATION

Prime SSD substrate with a slurry coat (2 parts MEADOW-CRETE GPS powder to 1 part water). For enhanced bonding, use ACRY-LOK from W. R. MEADOWS instead of water. Allow slurry coat to become tacky prior to application of MEADOW-CRETE GPS.

MIXING

Mix only complete bags. Using a mortar type mixer, pour 3.30 - 3.54 litres (3.5-3.75 U.S. quarts) per 22.7 kg (50 lb.) bag in mixer. Slowly add MEADOW-CRETE GPS. Mix for 3 - 5 minutes or until homogeneous and lump-free. Do not over mix.

EXTENSION

Horizontal applications greater than 50.8 mm (2") should be extended with 5.68 kg (12.5 lbs.) of 19 mm (3/8") pea gravel. Applications greater than 101.6 mm (4") must be extended with 11.36 kg (25 lbs.) of 19 mm (3/8") pea gravel. The extender aggregate must be added to the mixer prior to the addition of MEADOW-CRETE GPS.

MACHINE PLACEMENT

Use low-pressure, wet spray equipment. Follow industry standard nozzle procedures for removal of rebound, spray angle, compaction behind reinforcing steel and appropriate reinforcing steel cover, etc. Cut surface face to desired configuration. Finish with a wood or steel or sponge float. Do not re-temper or over-work. Follow ACI 305-R89 "Standard on Hot Weather Concreting" or ACI 306-R88 "Standard on Cold Weather Concreting", when applicable.

HAND PLACEMENT

Compact MEADOW-CRETE GPS into properly prepared SSD substrate prior to bulk placement. Finish surface with a wood or steel trowel or sponge float. MEADOW-CRETE GPS may be applied up to 76.2 mm (3") horizontally and vertically and 50.8 mm (2") overhead, dependent on patch size and configuration. Do not re-temper or over-work. Follow ACI 305-R89 "standard on Hot Weather Concreting" or ACI 306-R88 "Standard on Cold Weather Concreting", when applicable.

CURING

Cure MEADOW-CRETE GPS immediately following application using a suitable water-based curing compound from W. R. MEADOWS, or in accordance with ACI 308. W.R. MEADOWS recommends 1220 White or 1100 Clear for curing (Do not use solvent-based curing compounds). When conditions exist for rapid early water loss, the use of EVAPRE, an evaporation retarder from W. R. MEADOWS is also recommended,

STANDARDS

Approved by the Ministére des Transports du Québec

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.

SPECIFICATION

Section 03 01 30.71

FOR BEST PERFORMANCE, ENSURE MOST RECENT TECHNICAL DATA SHEET IS BEING USED … VISIT OUR WEBSITE AT: www.wrmeadows.com

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