**MasterEmaco® N 424**
Fast-setting cement-based repair mortar
FORMERLY EMACO® GP

**DESCRIPTION**
MasterEmaco N 424 is a general purpose, fast-setting, nonsag cement-based repair mortar for small repairs on vertical, horizontal, and overhead surfaces.

**PRODUCT HIGHLIGHTS**
- Non-sag consistency able to be placed in 1” (25 mm) thick lifts
- Fast setting
- Only requires the addition of potable water
- Can be mixed with MasterEmaco A 660 to increase high-performance properties

**APPLICATIONS**
- Interior and exterior
- Vertical and overhead
- Non-traffic-bearing horizontal
- Above and below grade
- Spalls or holes in concrete
- Deteriorated edges

**REINFORCING STEEL**
1. Remove all oxidation and scale from the exposed reinforcing steel in accordance with ICRI Technical Guideline No. 310.1R.
2. For additional protection from future corrosion, coat the prepared reinforcing steel with MasterProtect P 8100 AP.

**SURFACE PREPARATION**
1. Substrate must be structurally sound and fully cured (28 days).
2. Saw cut the perimeter of the area being repaired into a square with a minimum depth of ⅛” (6 mm).
3. The surface to be repaired must be clean, free of laitance and saturated surface-dry (SSD) following ICRI Guideline no. 310.2 to permit proper bond.

**HOW TO APPLY**
- Substrate must be structurally sound and fully cured (28 days).
- Saw cut the perimeter of the area being repaired into a square with a minimum depth of ⅛” (6 mm).
- The surface to be repaired must be clean, free of laitance and saturated surface-dry (SSD) following ICRI Guideline no. 310.2 to permit proper bond.

**STORAGE**
Store in unopened containers in a cool, clean, dry area

**SHELF LIFE**
12 months when properly stored

**VOC CONTENT**
0 g/L less water and exempt solvents

**PACKAGING**
- 50 lb (22.6 kg) polyethylene-lined bags
- 60 lb (27.2 kg) plastic pails

**YIELD**
- 0.45 ft³ per 50 lb bag
  - (0.013 m³ per 22.6 kg bag)
- 0.54 ft³ per 60 lb pail
  - (0.015 m³ per 27.2 kg pail)

**TECHNICAL DATA GUIDE**
Master Builders Solutions by BASF
www.master-builders-solutions.basf.us
MasterEmaco N 424 is a proprietary mix composed of cement, graded silica, calcium sulfate, fillers, and additives.

**Technical Data**

**Composition**

Initial set, min

Final set, min

Density, lb/ft³ (g/cm³)

Compressive strength, psi (MPa)

Flexural strength, psi (MPa)

Tensile strength, psi (MPa)

Modulus of elasticity, psi (MPa)

Freeze/thaw resistance, %

Scaling resistance, rating after 50 cycles

Water-vapor transmission, perms

Coefficient of thermal expansion, linear, in/in° F

Surface burning characteristics

Test results are averages obtained under laboratory conditions at 70° F (21° C) and 50% rh. Reasonable variations can be expected.
MIXING
1. Precondition material to 70° F ±5° (21° C ±3°) before mixing.
2. Product can be mixed with water only, or with a water and MasterEmaco A 660 mixture to enhance its properties. Prepare a mixture of 1 part MasterEmaco A 660 to 3 parts water. To improve bonding, MasterEmaco A 660 may be mixed 1 to 1 with water.
3. Add 3 quarts (2.8 L) of water or water and MasterEmaco A 660 mixture to a clean container. Gradually add powder while mixing at low speed to obtain a uniform, lump-free consistency. Mechanically mix with slow-speed drill and mixing paddle at 400–600 rpm or use an appropriately sized mortar mixer.
4. Mix for 2–3 minutes. Do not overmix. Add up to ¾ quart (0.7 L) of water or water and MasterEmaco A 660 mixture, only if needed for workability. Do not exceed 3.75 quarts (3.5 L) of liquid per 50 lb (22.6 kg) bag or 4.5 quarts (4.23 L) per 60 lb (27 kg) pail.
5. For applications exceeding the above recommendations, extend MasterEmaco N 424 with up to 15 lbs (6.8 kg) of washed, graded, surface saturated-dry (SSD) aggregate per 50 lb (22.6 kg) bag. When extended, up to 3.50 lb (22.6 kg) bags of MasterEmaco N 424 can be used at once.

APPLICATION
1. Dampen the surface with potable water; it must be saturated surface-dry (SSD) with no standing water.
2. With a gloved hand, scrub a small quantity of mixed material into the SSD substrate. Thoroughly key in and work the material throughout the cavity to promote bond. Do not apply more of the bond coat than can be covered with mortar before the bond coat dries.
3. Apply material in lifts of ¼–1" (3–25 mm). Avoid featheredging. For optimum mechanical bond on successive lifts, thoroughly score each lift and allow to reach initial set before the next layer is applied. Placement time is 10–15 minutes at 70° F (21° C) and 50% relative humidity.
4. Trowel, shave or shape material to the desired finish after initial set.
5. The recommended application range of MasterEmaco N 424 is from 40 to 90° F (4 to 32° C). Follow ACI 305 and 306 for hot or cold weather guidelines.

CURING
Cure with an approved water based curing compound compliant with ASTM C 309 or preferably ASTM C 315. If the repair area will receive a coating, wet curing is recommended.

CLEAN UP
Clean tools and equipment with clean water immediately after use. Cured material must be removed mechanically.

FOR BEST PERFORMANCE
- Maximum single lift recommendation is 1" (25 mm) on vertical surfaces and ½" (13 mm) overhead.
- Not intended for continuous contact with acid or sulfate-containing water. Very soft water will have an adverse effect on performance.
- Over-mixing can reduce density, strength, and durability.
- Do not bridge moving cracks or joints.
- Do not overwork material
- Do not add plasticizers, accelerators, retarders, or other additives.
- Bonding agents are recommended for large areas as well as permanently damp areas.
- Protect from freezing for 24 hours after application.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used; visit www.master-builders-solutions.basf.us to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL
Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.basf.us, e-mailing your request to basfsccs@basf.com or calling 1(800)433-9517. Use only as directed. For medical emergencies only, call ChemTrec® 1(800)424-9300.

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