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03 01 00
Maintenance
of Concrete

Technical Data Guide

MasterEmaco® A 660 MasterEmaco® A 660 C

Water-based acrylic bonding and modifying admixture

FORMERLY ACRYL® 60 AND ACRYL® 60 CONCENTRATE

PACKAGING

MasterEmaco® A 660
1-quart (0.9 L) bottles
1-gallon (3.8 L) bottles
5-gallon (18.9 L) pails
55-gallon (208 L) drums

MasterEmaco® A 660 C
330-gallon (1,249 L) totes
(Made to Order)

YIELD

Varies according to application.
See Mixing Ratio table on page 3.

STORAGE

Transport and store in unopened
containers between 40° and 100° F
(4° and 38° C). Protect from freezing.

SHELF LIFE

Quart, 1-gallon and 5-gallon
containers: 18 months when properly
stored.

55-gallon drums and 330-gallon totes:
12 months when properly stored.

VOC CONTENT

1 g/L, less water and exempt solvents

DESCRIPTION

MasterEmaco® A 660 is an acrylic-polymer emulsion which enhances the adhesion, physical properties and durability of Portland cement mortars, plasters, stucco, and concrete mixes. MasterEmaco® A 660 C is a concentrated form of the product supplied in convenient 330-gallon totes.

PRODUCT HIGHLIGHTS

- Acrylic polymer significantly improves adhesion, cohesion, tensile, compressive, and flexural strengths of cement-based materials
- Excellent chemical and UV resistance promotes long-lasting repairs
- Improves freeze/thaw stability of Portland cement-based materials for durability in cold climates
- Retains stability when exposed to water for long term performance of repairs

APPLICATIONS

- Interior and exterior
- Above or below grade
- Horizontal, vertical and overhead surfaces
- Improve adhesion and durability of cement-based mixes
- As gauging liquid for BASF waterproofing and repair products, such as MasterSeal® 581

SUBSTRATES

- Concrete

INDUSTRIES/SECTORS

- Commercial
- Residential
- Building Restoration
- Infrastructure

HOW TO APPLY

SURFACE PREPARATION

1. Follow surface preparation recommendations for repair material to be used.
2. The area to be patched or coated should be in a saturated surface-dry (SSD) condition, with no standing water on surface.
3. For additional surface preparation guidelines, refer to the instructions for the BASF repair mortar or coating being used.

MIXING

NOTE: When using MasterEmaco® A 660 C, first dilute the concentrate 1:1.5 with potable water (1 gallon (3.8 L) of MasterEmaco® 660 C to 1.5 gallons (5.7 L) of potable water) to arrive at the concentration of standard MasterEmaco® A 660. Then proceed as follows:

1. 1 part of MasterEmaco A 660 is typically mixed with 3 parts of potable water. Where increased physical and chemical resistance are required, increase the MasterEmaco A 660 water ratio to 1:2 or 1:1 (see Mixing Ratio table on page 3).
2. Mechanically mix at low speed to avoid trapping air. Do not overmix or mix at a high speed.

APPLICATION

SAND/CEMENT MORTAR

1. Thoroughly mix all cement and sand first. The sand must be clean, free of clay, and dry.
2. Make up mixing liquid from a 1:3 or 1:2 MasterEmaco A 660/water mix, depending on requirements.
3. Slowly add the mixing liquid to the cement/sand mixture and mix with a slow-speed mixer for 1-2 minutes to avoid trapping air.
4. After preparing, cleaning, and pre-dampening the surface, brush-apply a scrub coat (not diluted) of the MasterEmaco A 660-modified cement/sand. Scrub vigorously into the surface to displace any air pockets.
5. While the scrub coat is still wet or tacky, fill the repair area with the modified cement/sand mix, being careful not to over-trowel. The trowel should be cleaned frequently, kept wet, and used with minimal pressure.
6. Maximum time for placement should not exceed 20 minutes. Higher air and surface temperatures or the use of fast-setting repair materials will decrease working and placement time.

CURING

1. When rapid drying is expected due to high temperatures, rapid air movement, or wind, it is recommended that the surface be covered with wet burlap to retain moisture.
2. For normal use, allow a 24-hour curing period.
3. For heavy wheeled traffic, allow a 4-day curing period.

CLEAN UP

Clean all tools and equipment immediately with water. Cured material may be removed by mechanical means.

FOR BEST PERFORMANCE

- Do not use MasterEmaco A 660 when the substrate or ambient temperature is below 40° F (4° C) or when the temperature is expected to fall below 40° F (4° C) within 24 hours. High relative humidity, excessive moisture, and low temperatures will retard the curing of mixes modified with MasterEmaco A 660.
- Caution is required when using MasterEmaco A 660 in a mix that already has air entrained; consult Technical Support for its proper use.
- Do not overmix or aerate mixes.
- Use with proper ventilation.
- Do not use MasterEmaco A 660 as a surface-applied external bonding agent or as a primer.
- Do not subject cement-based mixes modified with MasterEmaco A 660 to water immersion for a minimum of 24 hours at 73° F (23° C).
- Not recommended for exposure to soft water or immersion where contact with water-treatment chemicals is present without a protective top coat.
- Caution should be used when a solvent-based material is being used over a base system that contains MasterEmaco A 660.
- 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; call Customer Service to verify the most current version.
- 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.

Technical Data

Composition

MasterEmaco® A 660 is an acrylic-polymer emulsion.

Typical Properties

PROPERTY	VALUE
Density, lbs/gal (kg/L), Lab Method	8.65 (1.04)
Solids Content, by volume, %, Lab Method	28
Maximum Water Dilution, Parts MasterEmaco A 660 to H ₂ O, Lab Method	1:3

Test Data

The following properties are for sand/cement mortar samples:

PROPERTY	RESULTS		TEST METHODS
	With Water	With 1-to-1 MasterEmaco A 660 and Water	
Compressive Strength, psi (MPa) 28 days	3,800 (26.2)	4,500 (31)	ASTM C 109
Tensile Strength, psi (MPa) 28 days	225 (1.5)	350 (2.4)	ASTM C 190
Flexural Strength, psi (MPa) 28 days	1,000 (6.9)	1,800 (12.4)	ASTM C 348
Freeze/Thaw Durability	11 at 98 cycles	102 at 300 cycles	Method A

Test results are averages obtained under laboratory conditions at 70° F (21° C) and 50% rh. Reasonable variations can be expected.

Mixing Ratios

APPLICATION	RATIOS
To improve the adhesion properties of pointing mortars and to reduce cracking in cement plaster	Use 1-part MasterEmaco A 660 to 3-parts water
For large overlays or topping	Use 2-parts MasterEmaco A 660 to 1-part water
For bonding cement plaster no thicker than 1/4–3/8" (6–10 mm)	Use 1-part MasterEmaco A 660 to 3-parts water

NOTE: The above ratios are for normal conditions. Where bonding is more critical, increase the MasterEmaco® A 660 content of the mixing liquid. A TEST PATCH IS ALWAYS RECOMMENDED.

For detailed application instructions for Thoro® products, see specific product data sheets.

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 buildingsystems.basf.com, e-mailing your request to basfbcst@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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