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# FLEX-CON ®

## ACRYLIC LATEX BONDING ADMIXTURE

**FLEX-CON** is a water dispersion of an architectural grade acrylic latex specifically designed for modifying portland cement compositions. Mortar modified with FLEX-CON has improved physical strength, and superior adhesion to old concrete, masonry, brick, and many other surfaces.

### PRIMARY APPLICATIONS

- Admixture for toppings, patches and leveling courses
- Thin sets, terrazzo, stucco and bond coats
- Repairs utilizing spray or fill coats
- General reconstruction work
- Repairs to precast structural members
- Architectural panels, bridge decks and highway repairs

### FEATURES / BENEFITS

- Easy to use
- Improves bond strength
- Increases durability under freeze/thaw cycling
- Reduces cracking through increased mortar flexural strength
- Increases mortar wear resistance under rubber wheeled traffic
- Increases mortar tensile strength
- Repair mortar offers greater impact resistance

### SPECIFICATIONS / COMPLIANCES

- FLEX-CON meets ASTM C1059-91, Standard Specification for latex agents for bonding fresh to hardened concrete, Type II.
- FLEX-CON classified by The American Concrete Institute as a non-reemulsifiable bonding admixture.

### PACKAGING

FLEX-CON is packaged in 55 gal (208 liter) drums, 5 gal (19 liter) pails and cases of six 1 gal (3.8 liter) units.

### TECHNICAL INFORMATION

**Typical Engineering Data**

**Physical Properties of Flex-Con**

| | |
|---|---|
| Solids Content: | 24% |
| Weight per gallon: | 8.4 lb (3.8 kg) |
| Shelf Life: | 1 year |

**Typical Results of Flex-Con Modified Repair Mortar**

**Compressive Strength** ASTM C-109
2" (50 mm) cubes

| | |
|---|---|
| 3 days | 3,000 psi (21 MPa) |
| 7 days | 4.000 psi (28 MPa) |
| 28 days | 5,000 psi (34 MPa) |

**Flexural Strength** ASTM C-348

| | |
|---|---|
| 28 days | 1,300 psi (9 MPa) |

**Bond Strength** ASTM C-1042

| | |
|---|---|
| 14 days | 1,200 psi (8 MPa) |

**Appearance**-FLEX-CON is a free flowing white liquid. When used as an admixture, the color of the mortar or concrete may initially appear somewhat darker than plain concrete due to moisture retention. The color will lighten up over time as the concrete dries out.

**Material Requirements**
**Mix Type**

| Coverage* | Cement | Sand | Flex-Con |
|---|---|---|---|
| Cement Bond Coat 600-800 $ft^2$ (56-74 $m^2$) | 94 lb (43 kg) | ------- ------- | 7-8 gal (26-30 liter) |
| Repair Mortar 110-120 $ft^2$ at 1/2" (10-11 $m^2$ at 13 mm) | 94 lb (43 kg) | 300 lb (136 kg) | 5-6 gal (19-23 liter) |

* Projected coverage is an estimate only, and is highly dependent upon sub-base texture.

## DIRECTIONS FOR USE

**Surface Preparation**-If using this product in a cement bond coat, the base concrete must be a minimum of 3 days old.

The concrete must be clean and rough. All oil, dirt, debris, paint and unsound concrete must be removed. The surface must be prepared mechanically using a scabbler, bushhammer, shotblast or scarifier which will give a surface profile of a minimum 1/8" (3 mm) and expose the large aggregate of the concrete.

NOTE: Acid etching is not acceptable.

The final step in cleaning should be the complete removal of all residue with a vacuum cleaner or pressure washing. Allow the concrete surface to begin drying. Do not place cement bond coat on standing water.

All concrete must possess an open surface texture with all curing compounds and sealers removed.

All areas should be pre-wetted to reduce moisture loss. Do not place bond coat on standing water.

**Bonding**-For bonding traffic bearing toppings with this product, The Euclid Chemical Company strongly recommends using a bond coat rather than using this product as a primer by itself.

After the surface has been prepared, prime all areas with a bond coat (see above mix design) before the topping is applied. Follow mixing and placing instructions listed below. Place the topping on the bond coat before it dries out.

**Mixing**-Small quantities may be mixed with a drill and "jiffy" mixer. Use a paddle type mortar mixer for large jobs. All materials should be in the proper temperature range of 40$^{O}$F (5$^{O}$C) - 90$^{O}$F (32$^{O}$C). Add the appropriate amount of FLEX-CON for the batch size and then add the dry material. Mix a minimum of 3 minutes. The mixed product should be quickly transported to the repair area and placed immediately.

**Placement**- Discharge material from mixer and place onto floor.

Bond Coat Application-Spread the bond coat with a stiff bristle broom until the suggested coverage rate is achieved.

Topping Application-For patching, spread with a trowel, come-a-long, or square tipped shovel to a thickness that matches the surrounding concrete. Finish by hand trowelling. On large floor areas, use screed strips as guides in combination with vibratory screeding to level. Compact and finish by hand or machine trowel.

**Finishing**-Finish the repair mortar to the desired texture. Typical texture is a broom or sponge float finish though mortars made with FLEX-CON can be steel trowelled. Do not add additional water to the surface during the finishing operation. If additional liquid is required, use EUCOBAR finishing aid.

**Curing-**All cement products must be adequately cured. Proper curing procedures are important to ensure the durability and quality of the repair or overlayment. To prevent surface cracking, a moist cure should be maintained for 24 hours followed by use of a curing compound such as DIAMOND CLEAR VOX or AQUA-CURE VOX. NOTE: Do not use a solvent-based curing compound on latex modified mortars.

## CLEAN-UP

Clean tools and equipment with water before the material hardens.

## PRECAUTIONS / LIMITATIONS

- Do not use material at temperatures below 40$^{O}$F (5$^{O}$C).
- No heavy traffic until the repair has cured.
- Protect from freezing.
- Do not use in ready mix concrete.
- For thin topping mixes or large overlays, use SBR LATEX.
- May not be suitable for use on its own as a bonding agent, use in a slurry with portland cement or consult The Euclid Chemical Company.
- Use of this product in conjunction with air entrained cement/concrete or with other admixtures may significantly increase total entrained air content. Testing is strongly advised.

Form Flex-Con-5.01