Modern Building Chemicals
الشركه الحديثة لكيماويات البناء

BOND-300 ACC (CONCENTRATED)

Pure Acrylic Polymer Latex Admixture and Bonding Agent.

DESCRIPTION:

- BOND-300ACC is an acrylic co-polymer emulsion solution that is non re-emulsifiable and 100% water resistant. This water-based latex is used as an admixture to greatly improve the properties of Portland cement based mixes. This polymer cement modification is suitable for bonding slurries over smooth surfaces to provide adhesion, concrete repair, concrete leveling, concrete resurfacing, renders, smoothing irregular and deteriorated profiles, plastering and underlayment. Some of the benefits of producing latex-modified cementitious mixes with BOND-300 ACC are superior substrate adhesion, an increase tensile and flexural strengths, improved abrasion resistance, extended durability, water reduction, enhanced workability and better flow.
- BOND-300 ACC is also used as a non-rewetable bonding agent and as a primer to provide an adhesive medium that prepares and seals concrete substrates for the application of cementitious mixes over existing concrete surfaces. This type of use is ideal for surfaces with frequent exposure to water and for exterior plastering applications.
- Meets ASTM C-1059 Type II and ASTM C-932.

FEATURES & BENFITES

- Promotes superior adhesion and bond strength
- Bonds new modified concrete to existing concrete surfaces
- Improves compressive strength
- Improves tensile strength
- Improves flexural strength
- Improves abrasion resistance
- Excellent water resistance
- Non re-emulsifiable polymer
- Water reducer
- Increases durability and wethearability
- Enhanced workability
- Concentrated – dilutes with water
- Water-based
- Compatible with most water-reducers and plasticizers (PAC/PC and PCE)

FIELDS OF APPLICATION

- As a cement modifying latex polymer admixture that increases performance of:
  - Bonding Slurries
  - Repair Mortars
  - Patching Mixes
  - Resurfacing Mortars
  - Toppings
  - Concrete Mixes
  - Water-Tight Plasters
  - Micro-Toppings
  - Underlayment
- Water resistant bonding agent
- Pore sealing primer prior to the installation of self-leveling underlayment or cementitious toppings.

BOND-300 ACC is suitable for interior, exterior and submerged conditions on vertical and horizontal surfaces for the previously mentioned applications.

SURFACE PREPARATION:

- All substrates must be structurally sound, thoroughly clean and free of oil, wax, grease, dust, asphalt, existing patching materials or any other contaminant that might act as a bond breaker.
- Remove any loose material, deteriorated concrete, paint, sealer, mold or water-soluble materials. Clean the surface with a high pressure water hose.
- Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond

can be achieved; if water beads, surface contaminants are present, and loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure.

- Smooth concrete surfaces must be mechanically abraded to ensure a good bond. Preparation work can be done by high pressure water blast, scabbler, or other appropriate mechanical methods.
- Ambient temperature, surfaces and materials should be below 90°F. It is recommended to install the material during the freshest moments of the day, be it during the morning or afternoon. It is also recommended to use cold mixing water to reduce heat in the cementitious mix.

DILUTION RATIO TABLE	
MIX	**RATIO**
Bonding Slurries	Bond-300ACC (2 : 1) water
Large Overlays and Toppings	Bond-300ACC (1 : 2) water
Micro-Toppings and Resurfacing Mortars	Bond-300ACC (1 : 3) water
Repair Mortars, Patching Mixes	Bond-300ACC (1 : 4) water
Concrete Mixes, Plasters and Underlayments	Bond-300ACC (1 : 7) water

MIXING :

- As a Cement Modifying Admixture:

1- Always premix the BOND-300 ACC concentrate to ensure any material that may have settled during extended storage is well-dispersed. Once the concentrate is homogenous, proceed with portioning for dilution.

2- Dilute BOND-300 ACC according to the desired application as designated on the dilution ratio table to create properly proportioned ad-mixtures.

**With an increase in latex content and an increase in application thickness more precautions have to be taken to ensure proper curing.*

3- Mixing in a pail:

- First pour 3/4 of the required amount of the liquid component of the mix (dilution of Bond 300ACC) on the mixing pail.
- Slowly add the cementitious mix (cement/sand/aggregates) to the poured liquids, while mixing with a heavy-duty electric drill and mixing paddle at 800 rpm.
- Next add the remaining 1/4 of liquid component to achieve the desired consistency of the mix.
- Thoroughly mix for 2 minutes to a lump free, homogenous consistency.
- Let it rest for 1 minute and then mix for an additional minute. It is import-ant to prepare enough material for the complete application thus avoiding the formation of cold joints.

- **Concrete mixer:**

1- Stop mixing paddles and pour 3/4 of the required amount of the liquid component of the mix (dilution of Bond 300ACC)to the mixer.

2- Start the mixer at slow speed and the cementitious mix (cement/sand/ aggregates) of the mix design. During the mixing process, adjust the quantity of the remaining liquid component to ensure a plastic consistency. Thoroughly mix to a lump free, homogenous consistency.

3- Do not over mix. Over mixing can cause excessive air entrapment.

4- Do not add more liquid than recommended, or the system will not per-form as desired.
5- It is important to prepare enough material for the complete application thus avoiding the formation of cold joints. Do not mix more material than can be applied within a workable period.

- **As a Bonding Agent:**

For bonding agent applications use the diluted BOND 300ACC (2:1)water

- **As a Pore Sealing Primer:**

1- For concrete pore sealing primer applications before the application of self-leveling underlayment use a dilution of 1 Part BOND 300ACC to 7 parts water (1:7). Porous concrete may require additional coats (at the same dilution rate) to avoid surface defects in the self leveling underlayment application.
2- Stir using a low-speed mixer (at 300 to 500 rpm) and a "jiffy" mixing paddle. Do not over mix at high speeds, which could cause the product to foam.

APPLICATION:

- **As a Cement Modifying Admixture**:

1- Before the application of the cementitious mix, apply a scrub-coat of a bonding slurry mix of BOND 300 ACC onto a saturated surface-dry(SSD) and properly prepared concrete surface.
2- While the scrub-coat of the bonding slurry mix is still wet, apply the cementitious mix to the required thickness using a margin trowel or the required tool for the given application. Work the cementitious mix into the bonding slurry to promote a mechanical adhesion to the substrate. Do not apply over a dry or partially dry bonding slurry because it will act as a bond breaker.

*With an increase in latex content and an increase in application thickness more precautions have to be taken to ensure proper curing.

- As a Bonding Agent:

1- Apply one coat of diluted BOND 300ACC 2: 1 WATER using a roller or brush evenly working it into the concrete substrate. Additional coats may be required over extremely porous concrete. Apply a thin even coat over all the substrate to be worked on.
2- Apply the cementitious mix while the bonding agent film is still wet/tacky.

*Do not allow the bonding agent to dry. The cementitious mix must be ap-plied while the primer is still wet/tacky to avoid bond breakage. If the bonding agent dries, immediately apply more product directly over the dried area to re-saturate the concrete.

- As a Pore Sealing Primer:

1- Make sure concrete substrate and ambient room temperatures are be-tween 50°F and 95°F (10°C and 35°C) before application. Temperatures must be maintained within this range for at least 72 hours after the installation of primer and finished material.
2- Apply one coat of a dilution of 1 Part BOND300ACC to 7parts water (1:7) on the concrete substrate, evenly working it into the substrate with a push broom or brush. Do not use roller to apply. Additional coats may be required over extremely porous concrete. Apply a thin even coat over all the substrate to be

worked on. Apply up to three coats if the concrete has excessive porosity.

3- Prior to installing the cementitious mix, brush or vacuum off puddles and excess primer. Let it cure for 10-20 minutes on exterior applications, for 3hours on interior applications or until the film is tacky and transparent. Lower substrate temperatures and/or humid conditions could extend the drying time before application of leveler.

*Do not allow the bonding agent/primer to dry. The cementitious mix must be applied while the primer is still tacky to avoid bond breakage. If the primer dries, immediately apply more primer directly over the dried area to re-saturate the concrete.

CURING:

- Protect from excessive heat and wind during the first 24 to 72 hours of curing. Alternatively use damp burlap, polyethylene sheeting or water-based curing compound with the purpose of retaining moisture. Excessive heat and/or wind could cause premature surface drying and result in cracking. Do not use solvent-based curing compounds.
- Cure cementitious mixes modified with BOND300ACC for at least 5 to 7days before total water immersion or 3 to 5 days before application of waterproofing coatings.

TECHNICAL DATA	
Appearance	Milky white liquid
Density @ 25 °c	1.01±0.02 gm./cm³
Viscosity @ 25 °c	500 ±50 cp
PH @ 25 °c	7-9
Solid content	50 ±2%
Cement compatibility	good
Polymer type	Styrene acrylic

CLEAN UP INSTRUCTIONS:

- All tools should be cleaned immediately after use because hardened **BOND 300ACC** modified cement compositions have excellent adhesion and are therefore difficult to remove. If this important precaution is overlooked, solvents such as white spirit, solvent naphtha or preferably toluene can be useful in removing hardened latex modified mortar

PACKAGING:

4L ,20 L &200L

SHELF LIFE / STORAGE:

- 12 months since the production date when stored on pallets in dry cold conditions and in original undamaged packages.

ENVIRONMENTAL & SAFETY PRECAUTIONS:

- Care should be taken when handling, that applicators wear PVC or similar gloves and safety goggles.
- For a full MSDS on this product, contact to MBC.