



Since 1967

# Technical Data Sheet

## SABAKRETE™

### SYNTHETIC RUBBER LATEX ADMIXTURE & BONDING ADHESIVE

#### PART 1: GENERAL INFORMATION

##### 1.1 PRODUCT DESCRIPTION

BULL-BOND® SABAKRETE™ is a liquid solution of synthetic rubber that is non re-emulsifiable and highly water resistant. This premium water-based latex is added to cementitious mixes and/or used as a bonding adhesive to achieve permanent adhesion to concrete surfaces and to greatly improve the properties of Portland cement based mixes. The polymer cement modification with SABAKRETE™ is ideal for concrete roof leveling, creating auxiliary slopes for proper drainage, resurfacing, bonding slurries, structural concrete repair, water-tight plastering of submerged concrete surfaces, thin-layer toppings, thin-set mortars, screeds, renders and to repair irregular, deteriorated and delaminated concrete. The benefits obtained by using SABAKRETE™ as an admix include a major increase in bond strength, outstanding water resistance, fast curing, vibration resistance, very low water permeability, higher tensile and flexural strengths, improved abrasion resistance, extreme durability in harsh environments, resistance to radical thermal fluctuations and chemical resistance. SABAKRETE™ can also be used as a non-rewettable bonding adhesive 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 general exterior applications. SABAKRETE™ is a concentrated product and must be diluted with water before use. Meets ASTM C-1059 Type II, ASTM C-932 and ANSI A-118.4.

##### 1.2 BASIC USES:

- Applications:
  - >> Cement modifying latex polymer admixture that increases performance of:
    - Bonding Slurries
    - Scratch Coats
    - Repair Mortars
    - Patching Mixes
    - Resurfacing Mortars
    - Thin-Layer Toppings
    - Thin-Set Mortars
    - Screeds
    - Renders
    - Water-Tight Plasters
  - >>Waterproof bonding agent
- Common Practices:
  - Concrete roof leveling and auxiliary sloping for proper drainage
  - Repair of irregular, deteriorated and delaminated concrete surfaces
  - As an adhesive medium to bond toppings, overlays and patches - to old concrete
  - Water-tight plastering of exterior walls, basements, tunnels, water - storage tanks, pools and fountains
  - Protect steel reinforced concrete built in/or adjacent to salt water

merged conditions on vertical and horizontal surfaces for the previously mentioned applications.

##### 1.3 SUITABLE SUBSTRATES:

- Concrete
  - Smooth
  - Porous
- Masonry (CMU Blocks and Bricks)
- Cement Board
- Plaster
- Expanded Polystyrene (EPS) Foam
- Steel and Galvanized Metals
- Gravel Embedded Tar
- Asphalt/Bitumen Residuals

##### 1.4 ADVANTAGES:

- Promotes superior adhesion and bond strength
- Bonds new modified concrete to existing concrete surfaces
- Improves tensile strength
- Improves flexural strength
- Improves abrasion resistance
- Excellent water resistance
- Non re-emulsifiable polymer
- Water reducer
- Increases durability, service life and weatherability
- Fast curing
- Reduces water permeability
- Corrosion protection
- Chemical resistance
- Concentrated – dilutes with water
- Water-based
- Non-toxic

##### 1.5 LIMITATIONS:

- Excessive sun exposure should be avoided during application and for a minimum of 1 hour immediately after application.
- Avoid walking on installed surface for at least 24 hours after installation, depending upon temperature and humidity conditions.
- Never install over non-dimensionally stable materials.
- Over watering can cause mixture to segregate resulting in uneven surface strengths. Surfaces with reduced strength must be removed mechanically.
- The minimum dosage rate for SABAKRETE™ to improve the properties of cementitious mixes is with a polymer/cement ratio of 8% (0.08).
- SABAKRETE™ is non re-emulsifiable, if used as a bonding agent the application of the cementitious overlay must be done before the product is cured to avoid bond breakage.
- Product testing was performed with Portland cement Type 1. Compatibility with fast setting cements must be verified before use.

BULL-BOND® SABAKRETE™ is suitable for interior, exterior and sub-

## PART 2: TECHNICAL DATA

### 2.1 PRODUCT CHARACTERISTICS:

PRODUCT CHARACTERISTICS	
<b>BULLBOND® SABAKRETE™</b>	
COMPOSITION	Synthetic Rubber Latex
COLOR	Milky White, dries Clear
WEIGHT SOLIDS	47%
DENSITY	8.4 lb/gal
pH	8.5-9.0
SHELF LIFE	12 months

### 2.2 SUGGESTED MIXES:

BONDING SLURRY MIX		
DILUTION PROPORTION	COMPONENT	QUANTITY
1	SABAKRETE™	1 gal
1	Water	1 gal
	Cement	2 gal ~ 19 lb
<b>MIX APPLICATION RATE</b>		
		100 ft <sup>2</sup> / gal

MICRO-TOPPING MIX		
DILUTION PROPORTION	COMPONENT	QUANTITY
1	SABAKRETE™	0.5 gal
1	Water	0.5 gal
	Cement	1 gal ~ 9.5 lb
	Fine Sand	1.5 gal ~ 20 lb
<b>APPLICATION THICKNESS RANGE</b>		<b>MIX YIELD</b>
1/32" - 1/8"		0.30 ft <sup>3</sup> / mix

GENERAL REPAIR MIX		
DILUTION PROPORTION	COMPONENT	QUANTITY
1	SABAKRETE™	0.25 gal
3	Water	0.75 gal
	Cement	1.25 gal ~ 11 lb
	Sand	2 gal ~ 25 lb
<b>APPLICATION THICKNESS RANGE</b>		<b>MIX YIELD</b>
1/8" - 1"		0.37 ft <sup>3</sup> / mix

TOPPING MIX		
DILUTION PROPORTION	COMPONENT	QUANTITY
1	SABAKRETE™	1 gal
4	Water	4 gal
	Cement	1.5 bag ~ 70 lb
	Sand	150 lb
	Gravel 3/8"	30 lb
<b>APPLICATION THICKNESS RANGE</b>		<b>MIX YIELD</b>
1/2" - 2"		2.5 ft <sup>3</sup> / mix

READY-MIXED MORTAR		
DILUTION PROPORTION	COMPONENT	QUANTITY
1	SABAKRETE™	0.5 gal
1	Water	0.5 gal
	Ready-Mixed Mortar	50 lb
<b>APPLICATION THICKNESS RANGE</b>		<b>MIX YIELD</b>
1/8" - 1"		0.50 ft <sup>3</sup> / mix

DILUTION RATIO TABLE		
MIX	APPLICATION THICKNESS RANGE	RATIO
Bonding Slurries and Micro-Toppings	1/32" - 1/8"	1 part SABAKRETE™ to 1 part water (1:1)
Repair Mortars and Patching Mixes	1/8" - 1"	1 part SABAKRETE™ to 3 parts water (1:3)
Toppings	1/2" - 2"	1 part SABAKRETE™ to 4 parts water (4:1)

## 2.3 MIX YIELDS

General Repair Mix					
Thickness Range	1/8"	1/4"	1/2"	3/4"	1"
Coverage per Gallon	36 (ft) <sup>2</sup>	18 (ft) <sup>2</sup>	9 (ft) <sup>2</sup>	6 (ft) <sup>2</sup>	4.5 (ft) <sup>2</sup>
Coverage per Pail	180 (ft) <sup>2</sup>	90 (ft) <sup>2</sup>	45 (ft) <sup>2</sup>	30 (ft) <sup>2</sup>	22.5 (ft) <sup>2</sup>
Yield	0.37 ft <sup>3</sup>				

Ready-Mixed Mortar					
Thickness Range	1/8"	1/4"	1/2"	3/4"	1"
Coverage per Gallon	48 (ft) <sup>2</sup>	24 (ft) <sup>2</sup>	12 (ft) <sup>2</sup>	8 (ft) <sup>2</sup>	6 (ft) <sup>2</sup>
Coverage per Pail	240 (ft) <sup>2</sup>	120 (ft) <sup>2</sup>	60 (ft) <sup>2</sup>	40 (ft) <sup>2</sup>	30 (ft) <sup>2</sup>
Yield	0.50 ft <sup>3</sup>				

Topping Mix				
Thickness Range	1/2"	1"	1 1/2"	2"
Coverage per Gallon	60 (ft) <sup>2</sup>	30 (ft) <sup>2</sup>	20 (ft) <sup>2</sup>	15 (ft) <sup>2</sup>
Coverage per Pail	300 (ft) <sup>2</sup>	150 (ft) <sup>2</sup>	100 (ft) <sup>2</sup>	75 (ft) <sup>2</sup>
Yield	2.5 ft <sup>3</sup>			

Micro-Topping Mix		
Thickness Range	1/32"	1/8"
Coverage per Gallon	115 (ft) <sup>2</sup>	29 (ft) <sup>2</sup>
Coverage per Pail	575 (ft) <sup>2</sup>	145 (ft) <sup>2</sup>
Yield	0.30 ft <sup>3</sup>	

Bonding Slurry Mix	
Thickness Range	1/32"
Coverage per Gallon	100 (ft) <sup>2</sup>
Coverage per Pail	500 (ft) <sup>2</sup>

## PART 3: INSTRUCTIONS

### 3.1 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, delaminations, deteriorated concrete, paint, sealer, mold, release agents or water-soluble materials. Clean the surface with high pressure water blasting.
- 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. Stubborn 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. Surface preparation work can be done by grinding, scabbler, or other appropriate mechanical methods to obtain a CSP profile of 1-4.
- Saturate surface with clean water and remove all standing water. Substrate should be saturated surface dry (SSD) before applying SABAKRETE™.
- 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.

### 3.2 MIXING

3.2.1 As a Cement Modifying Admixture:

1. Always premix the SABAKRETE™ 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 SABAKRETE™ according to the desired application as designated on the dilution ratio table or mix table (section 2.3) to create properly proportioned admixtures.

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

Mixing in a pail:

1. First pour 3/4 of the required amount of the liquid component of the mix (dilution of SABAKRETE™) on the mixing pail.

2. 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.
3. Next add the remaining 1/4 of liquid component to achieve the desired consistency of the mix.
4. Thoroughly mix for 2 minutes to a lump free, homogenous consistency.
5. Let it rest for 1 minute and then mix for an additional minute. It is important to prepare enough material for the complete application to avoid the formation of cold joints or pour joints.

Concrete mixer:

1. Stop mixing paddles and pour 3/4 of the required amount of the liquid component of the mix (dilution of SABAKRETE™) 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 perform 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.

3.2.2 As a Bonding Agent:

For bonding agent applications use neat (concentrated) SABAKRETE™.

### 3.3 APPLICATION

3.3.1 As a Cement Modifying Admixture:

1. Before the application of the cementitious mix, it is recommended to apply a scrub-coat of the Bonding Slurry Mix of SABAKRETE™ 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.*

3.3.2 As a Bonding Agent:

1. Apply one coat of neat (concentrated) SABAKRETE™ at 200-300 ft<sup>2</sup>/gallon 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 apply cementitious mixes over a dry or partially dry bonding agent coat because it could act as a bond breaker.

*\*Do not allow the bonding agent to dry. The cementitious mix must be applied 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.*

### 3.4 CURING

1. 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 mud cracking. Do not use solvent-based curing compounds.
2. Air cure cementitious mixes modified with SABAKRETE™ for at least 5 to 7 days before total water immersion. Wait 3 to 5 days before the application of waterproofing coatings over SABAKRETE™ modified cementitious surfaces.

### 3.5 CLEANUP

Immediately wash hands and tools promptly with water before material hardens. Cured material must be mechanically removed.

### PART 4: PRECAUTIONS

Avoid breathing product vapors or mist. Use only with adequate ventilation. Can cause eye, nose and throat irritation. Could be harmful if swallowed. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on product label and SDS.

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