



Since 1967

Technical Data Sheet

TOP SEAL™

HIGH PERFORMANCE WATERPROOFING COOL ROOF COATING 100% ACRYLIC POLYMER

PART 1: GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

BULL-BOND® TOP SEAL™ is a high performance waterproofing cool roof coating 100% acrylic polymer

1.2 BASIC USES:

- Waterproofing Cool Roof Coating

BULL-BOND® TOP SEAL™ is suitable for exterior conditions on horizontal and vertical surfaces for the previously mentioned application.

1.3 SUITABLE SUBSTRATES:

- Concrete
- Asphaltic Roofing Membranes
- Galvanized Steel and other Metal Surfaces
- Wood
- Polyurethane Spray Foam
- Cement Board

*The preferable substrates for TOP SEAL™ are: properly primed concrete, wood, cement board, galvanized steel and other metals. Good adhesion can be obtained over existing coatings, but the final adhesion of TOP SEAL™ will depend on the adhesion level of the previously applied material.

1.4 ADVANTAGES:

- Ultra-white finish lowers roof temperature
- Promotes cooling energy savings
- U.V. resistant
- Mildew, fungi and algae resistant
- Water-based Elastomeric membrane
- 2 in 1, Primer and Sealer
- Easy to clean (tools and equipment clean with water)
- Fast drying
- Light blue during application
- Cures white if exposed to sunlight
- Excellent coverage
- High durability
- Permanent flexibility
- Low VOC and non-toxic

1.5 LIMITATIONS:

- TOP SEAL™ may be applied over previous coatings in sound condition, but doing so will void the warranty.
- Do not apply when air or surface temperature exceeds 95°F (35°C).
- Do not apply to wet or damp surfaces.
- Do not apply when it may rain or dew may condense on the surface before the coating can dry.
- Do not apply when air or surface temperature is below 50°F (10°C) or expected to fall before coating can dry.

PART 2: TECHNICAL DATA

2.1 PRODUCT CHARACTERISTICS:

PRODUCT CHARACTERISTICS	
BULL-BOND® TOP SEAL™	
COMPOSITION	100% Acrylic Latex
COLORS	Ultra White
WEIGHT SOLIDS	66-68%
VOLUME SOLIDS	53-55%
DENSITY	12.10 lb/gal
VISCOSITY	100-115 KU at 70°F
pH	8.5-9.0
DRY TIME	To touch: 20 minutes To recoat: 8hrs
SHELF LIFE	12 months

2.2 COVERAGE

APPLICATION RATE AND FILM THICKNESS			
BULL-BOND® TOP SEAL™			
SUBSTRATE / ROOF SURFACE	RATE	WET MILS	DRY MILS
Concrete	65 ft ² /gallon/coat	25	13
Coated / Sealed Surface	80 ft ² /gallon/coat	20	10
Metal	130 ft ² /gallon/coat	12	6
Asphalt Membrane (Aluminum)	100 ft ² /gallon/coat	15	8
Asphalt Membrane (Granulated)	65 ft ² /gallon/coat	25	13
Urethane Spray Foam	65 ft ² /gallon/coat	25	13
Cement Board	85 ft ² /gallon/coat	19	10

*Actual coverage rates vary depending on surface texture and method of application.

PART 3: INSTRUCTIONS

3.1 ROOF INSPECTION AND VERIFICATION

3.1.1 General

A. Investigate whether or not old waterproofing treatments are fully adhered. Delamination, bubbles or detached areas require complete and immediate removal of the old material.

B. Verify that all mechanical equipment, air conditioners, tanks, antennas and other articles are securely placed. These objects should be raised without obstructing the roof water drainage.

C. Verify how the roof drainage system is functioning and whether it is working efficiently. Check the condition of the drains and make sure they have the correct elevation. Mark the lows spots on the roof, see if they have proper drainage to the roof drains and mark areas that remain with ponding water.

D. Ensure that all air intake and air conditioning vents are suitably protected or closed.

E. Make sure that all critical areas in the vicinity of the application area are adequately protected.

F. Check for trees releasing organic matter (branches, seeds, leaves, etc.) that obstruct and/or clog the roof drains. Take the necessary measures to eliminate these pollutants from the roof.

G. Ensure that the roof slope and all water ponding issues can be corrected without applying excessive weight on the roof and adversely affecting the total cost of the project.

3.1.2 Concrete Roof:

A. Concrete surfaces to receive the waterproofing system must have a minimum of 3,000 psi compressive strength. Inspect the concrete roof and make sure it is firm and safe, with a CSP profile of 1-4.

B. Check for cementitious repairs or patches that are not fully adhered (sound test with hammer or chain drag). Verify for spalling or pattern cracking. Loose materials or patches require complete and immediate removal.

3.1.3 Asphaltic Roofing Membrane:

A. Asphaltic membranes to receive the waterproofing system must be fully adhered to the original roof substrate. Delamination, bubbles, blisters and/or detached areas require immediate repair or removal down to a sound substrate. Investigate whether the existing roofing materials, including insulation, are deteriorated and/or saturated with water. Mark all problematic areas on the roof for future localized repairs before the application of the coating.

B. Verify whether the roof has moisture problems beneath the asphaltic membrane. If this is the case, these areas must be marked for later repair.

C. Check for liquid asphalt repairs or patches that are exposed and/or with pattern cracking. If this is the case, these materials require complete and immediate removal.

3.1.4 Metal Roof:

A. Make sure that the metal roof to receive the waterproofing system is firm and safe.

B. Inspect the roof metal panels for excessive rust and loss of integrity. If this is the case damaged, these panels need to be replaced. Make sure that all metal panels are sound and smooth before product installation. Metal panels with seam gaps greater than 1/16" must be stitched as tight as possible.

3.2 SURFACE PREPARATION

3.2.1 General

1. Wash the roof with a pressure washing machine of 3,000 to 4,000 psi.
2. To eradicate fungus, use regular bleach diluted with water at a ratio of 1:10 and rinse immediately to prevent absorption of chlorine into the concrete. Alternatively, you can wash with an industrial detergent.
*It is important to dilute the bleach with water and wash the roof immediately. Never leave roofs with chlorine solutions without rinsing.

3.2.2 Concrete Roof:

1. The roof surface should be structurally sound, solid, completely clean, dry and free of dust, mold, oil, grease, and foreign material, with a CSP profile 1-4.
2. Identify, measure and mark all cracks and joints on the roof with a marker (wax crayon or chalk). Check the thickness, length and type of crack to continue later with the appropriate repair.
3. Identify all the surface imperfections, defects and/or unevenness on the roof profile (exposed aggregate, excessive roughness, pits, holes, craters, etc.).
4. Verify if the roof has moisture problems or excessive porosity.

3.2.3 Asphaltic Roofing Membrane:

1. Scrape off all exposed excess liquid asphalt and other contaminants. Remove all loose stones in BUR systems until obtaining a solid substrate of asphalt and embedded stone.
2. For granulated asphaltic membranes, prepare a micro-topping mix with BULL-BOND® SABAKRETE™. Apply the polymeric micro-topping at a thickness of 1/16" to 1/8" across the entire roof surface including the parapet walls. Apply the mix using a squeegee, broom or slurry hand brush. Allow this cementitious layer to dry for 24 hours with air curing.

*In the case of other types of asphaltic membrane finishes it is mandatory to conduct a field adhesion test. Contact CONSPRO Corp. for technical assistance.

3.2.4 Metal Roof:

1. Replace all metal panels with excessive rust and loss of integrity. Tighten all loose fasteners and replace stripped fasteners with an oversized version of the same fastener. Maintain the original fastening pattern design.
2. Identify, measure and mark all the metal panel seams in the roof. Tightly fasten all metal panels with seam gaps greater than 1/8" with stitch screw fasteners to reduce this gap as much as possible.
3. Loose scale and rust must be mechanically removed.
4. On corroded surfaces apply an approved corrosion inhibitor and rust converter with a heavy-duty mop. Pressure wash the metal surface after this step.

3.3 SEALING CRACKS, JOINTS AND SEAMS:

3.3.1 Concrete Roof:

- I. Crack repair with a thickness of 20 mils or more:
 - a. All cracks must be routed at 1/4" wide by 1/4" deep with an angle grinder, using a diamond or carbide cutting blade.
 - b. Eliminate all dust on opened cracks using a vacuum cleaner or other dry cleaning method.
 - c. Apply a PU crack sealant inside the opened crack, filling it entirely; immediately use a spatula to press the excess sealant material towards the crack, leaving a band of 1"-2" wide over the crack.
 - d. Allow the PU sealant to cure for 24 hours or until 100% cured.
- II. Repair visible hairline cracks thinner than 20 mils:
 - Option a. Follow above procedure, see Crack Repair I.
 - Option b. Using a spatula, apply a 2" wide band of the PU crack sealant with a minimum thickness of 30 mils.
 - Option c. Saturate the thin crack with BULL-BOND® Primer Plus™ or with a dilution of BULL-BOND® Elasto Acryl™ with water at a ratio of 1:1.

3.3.2 Asphaltic Roofing Membrane:

1. Apply a reinforcement detail coat along all seams, interfaces, termination points and joints. This consists of applying a 9" wide coat of BULL-BOND® Primer Plus™. Let it dry completely, then apply a 9" wide coat of BULL-BOND® TOP SEAL™ with a brush or roller at 60 ft²/gallon (300 ft²/pail) and

immediately embed the 6" roll of roof fabric over the wet detail coat of TOP SEAL™. Stretch the fabric, eliminating all wrinkles and air voids; do this until completely saturated. Apply a subsequent 9" wide detail coat of TOP SEAL™ at 100 ft²/gallon (500 ft²/pail), making sure that the roof fabric is completely saturated at the reinforced areas. Apply Materials with a brush multiple applications could be required to saturate the crack.

3.3.3 Metal Roof:

1. Apply joint/seam sealant along all horizontal and vertical metal panel seams and interfaces filling them entirely. Immediately after, use a spatula to smooth out the sealant material and press down any excess material towards the seam/joint leaving a band 1"-2" wide.
2. Allow the sealant to cure for 24 hours or until 100% cured.

*All cracks, joints, seams and interfaces present on the roof must be completely repaired before applying the BULL-BOND® TOP SEAL™ coating.

3.4 CORRECTING DRAINAGE, WATER PONDING AREAS, SURFACE IMPERFECTIONS AND CONCRETE DUSTING:

1. Make sure that the roof drainage system is functioning properly.
 - a. Add drains where necessary and when feasible.
 - b. Lower concrete elevation between drains and low points to obtain efficient drainage when feasible.
 - c. Make channels between drains and low points when feasible. If a drainage channel is created with a chipping hammer or chisel, always give a smooth finish to the concrete surface using a repair mortar with BULL-BOND® SABAKRETE™.
 - d. Lower the elevation of any drain if necessary.
2. Correct any area where ponding water remains. Eliminate all water ponding using a repair mortar mix with BULL-BOND® SABAKRETE™ or BULL-BOND® PRO-LEVEL™. Allow all water ponding repairs cure for at least 3 days.
*Read the application instructions of BULL-BOND® SABAKRETE™ repair mortar mix for water ponding or BULL-BOND® PRO LEVEL™ available on our website: www.bullbond.com.
3. Correct all surface imperfections, defects and/or unevenness on the roof surface profile (exposed aggregate, excessive roughness, pits, holes, craters) using a BULL-BOND® General Repair 2500 or Micro-Topping mix with BULL-BOND® SABAKRETE™.
4. Correct any concrete dusting and/or loose granules by resurfacing the roof using a Micro-topping mix with BULL-BOND® SABAKRETE™, leaving a 1/32"-1/8" cementitious coating using a squeegee or brush.
5. Roof drainage, all surface imperfections and areas of ponding water must be fully corrected before applying the BULL-BOND® TOP SEAL™ coating. Proper installation requires a proper slope and absolutely no water ponding issues. Ensure that all the concrete roof surfaces meet a CSP profile of 1-4.

* Before proceeding with the application of the BULL-BOND® TOP SEAL™ coating, ensure that there is a proper slope and absolutely no water ponding. Make sure that the substrate and all repairs are clean, firm, dry, cured, and fully adhered.

3.5 WATERPROOFING DETAILING AND TRANSITIONS:

1. Apply a PU joint sealant around any penetration or protrusion on the roof including all screws (bolts), pipes, rods, drains, roof mounted equipment and skylight installations.
2. Apply the joint sealant along all interfaces of the parapet walls, including horizontal (between roof and parapet) and vertical (between parapet and parapet).
3. Let sealants cure for at least 24 hours or until 100% cured.
4. Apply a seam reinforcement detail coat along all cracks, joints, seams and interfaces, applying a 9" wide coat of the adequate primer for the given surface at 250 ft²/gallon (1250 ft²/pail) followed by a 9" wide coat of BULL-BOND® TOP SEAL™ with a brush or roller at 65 ft²/gallon (325 ft²/pail) and immediately place a 6" roll of roof fabric over the wet detail coat of BULL-BOND® TOP SEAL™. Once in place incorporate the roof fabric into the wet coat with a brush or squeegee stretching the fabric, eliminating all wrinkles and air voids. Apply a subsequent detail coat of BULL-BOND® TOP SEAL™ to the reinforced seam at 65 ft²/gallon (325 ft²/pail) making sure that the roof fabric is completely saturated.

3.6 PRIMING

3.6.1 Concrete Roof and Asphaltic Roofing Membrane:

1. Apply one coat of BULL-BOND® Primer Plus™, or a dilution of BULL-BOND® Elasto Acryl™ with water at a ratio of 1:1, to the entire roof surface at 240 ft²/gallon (1200 ft²/pail). If necessary, spread any product build-up (puddles) with a brush or broom. Let dry at least 2 hours.
2. Apply a second coat BULL-BOND® Primer Plus™ or undiluted (neat) BULL-BOND® Elasto Acryl™ to the entire roof surface at 240 ft²/gallon (1200 ft²/pail). If necessary, spread any product build-up (puddles) with a brush or broom.
3. Let dry at least 2 hours. Apply subsequent BULL-BOND® TOP SEAL™ coating within 48 hours.

**If the waterproofing project is over a bare concrete roof surface, adequate priming is strongly recommended to seal the concrete porosity. Priming is compulsory for warranty purposes.*

3.6.2 Metal Roof:

1. Apply one coat of BULL-BOND® RED OXIDE PRIMER™ to the entire roof surface at 250 ft²/gallon (1250 ft²/pail). If it is necessary, spread any product build-up (puddles) with a brush or broom. Let dry at least 2 hours.

3.7 APPLICATION

1. Use product when ambient, material and roof surface temperature are below 95°F and over 50°F. Do not use product if precipitation or heavy dew is expected. Use with adequate ventilation.
2. Perform a proper adhesion test before committing to full product application. Contact CONSPRO.Corp for technical assistance in this matter if necessary.
3. Refer to the APPLICATION RATE AND FILM THICKNESS table above to obtain the required coverage rate for each roof surface.
4. Mix product thoroughly before application. Three (3) minute paddle mixing is mandatory.
5. Apply a first coat of BULL-BOND® TOP SEAL™ using a roller (3/4" nap), good quality nylon bristle brush or airless sprayer, following the required application rate and film thickness per coat for the given roof surface.
 - a. If rolled, back roll the first coat to fill any pinholes in the surface.
 - b. If sprayed, use an airless pump at 3,000 to 3,200 psi with a 3/8" or 1/4" airless hose using a 0.025"-0.031" spray tip.
6. Allow to dry at least 8-12 hours before recoating.
7. Apply a second coat of BULL-BOND® TOP SEAL™, following the same procedure as above (5), in a perpendicular direction to the previous coat. Allow to dry.
8. Apply more coats if necessary to achieve required DFT.
9. All coats must produce a minimum total dry film thickness of 25 mils to comply with the waterproofing warranty requirements.

**Choose a sunny day to apply the fluid-applied waterproofing coating. It is not advisable to start the waterproofing product application after 3:00 pm.*

3.8 CLEANING

Clean all equipment with warm soapy water immediately after use. For airless spray equipment store with mineral spirits.

PART 4: PRECAUTIONS

Avoid breathing product vapors or mist. Use only with adequate ventilation. Can cause eye, nose and throat irritation. Harmful if swallowed. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on product label and SDS. No recommended for constant immersion.

PART 5: WARRANTY / GUARANTEE

CONSPRO CORP. warrants, subject to the terms and limitations hereof, that the Bull-Bond® TOP SEAL™ will seal the roof treated against water infiltration for a period of 7 years from the date of purchase when applied in accordance with all application procedures outlined in the product's technical data sheets. Purchaser must complete the warranty registration form to apply and obtain the TOP SEAL™ performance warranty certificate. Failure to follow all currently

published installation instructions or application of TOP SEAL™ with a DFT of less than 25 mils will render the warranty null and void. If any material is found defective or not usable, CONSPRO CORP. will promptly replace the defective material to the purchaser or refund the purchase price.

CONSPRO CORP.'S LIABILITY

CONSPRO CORP.'s liability is strictly limited to refund the purchase price or to replace the defective material with an equal or similar product.

WARRANTY REGISTRATION

For this warranty to be valid, the building owner must complete and remit a warranty application form, located at bullbond.com/proonewarranty, within sixty (60) days of the purchase date. If warranty application is not received by CONSPRO CORP. within sixty (60) days of purchase, user waives all rights under the warranty and will not be entitled to warranty claims of any sort.

NOTIFICATION OF CLAIM

All defective product claims must be received in writing within 30 days of the discovery of the fault. No claims will be considered without such written notice, without a valid warranty certificate, or after the specified claims time interval. CONSPRO CORP. will promptly investigate all properly reported claims. Our investigator will prepare a written/oral report describing the nature of the problem and an explanation for the reported difficulties. An authorized officer of CONSPRO CORP. will handle all complaints and resolve any pending problems after this point.

LIMITED WARRANTY RENEWAL

This warranty is renewable at the option of the Building Owner. To qualify for warranty renewal, Building Owner must contact CONSPRO CORP. and request a roof inspection no later than 180 days prior to the expiration of the warranty term. A representative of CONSPRO CORP. will inspect the Product installation and condition and will recommend the recoats and/or repairs necessary for warranty renewal. Once the actions outlined in CONSPRO CORP.'s recommendation are completed, Building Owner may request the renewal of the warranty. This warranty may be renewed throughout the lifetime of the building. Failure to contact CONSPRO CORP. to request the required inspection or requesting a renewal outside the warranty term voids the renewable aspect of the warranty option. Warranty is only renewable as long as renewals have occurred sequentially throughout the lifetime of the product and property.

WARRANTY EXCLUSIONS

Warranty is invalidated by faulty or poor workmanship not in accordance with written product installation instructions, product installation guidelines and applicable industry standards. CONSPRO CORP. is not responsible for normal wear and tear resulting from regular usage or for warranty claims involving product abuse or misuse. Warranty does not cover damage or defects resulting from:

1. Natural disasters, vermin or acts of God,
2. Misuse, abuse or negligence,
3. Lack of maintenance,
4. Standing or pooling water,
5. Fire, faulty construction or design, inadequate drainage or other failure of the structure,
6. Failure of the building roof substrate,
7. Defects, blisters or delamination in the materials, substrate, coating or systems to which the product is applied,
8. Impact of foreign objects, or
9. Discoloration or damage that is solely cosmetic.

Any use of BULL-BOND® Products for purposes other than those specifically described by the product label, published instructions and/or technical data sheet shall render this warranty null and void. CONSPRO CORP. will not be liable for product usage recommendations by salespersons or employees that are contrary to published instructions and/or technical data sheet. The user is responsible for examining all published instructions and technical data sheets and shall determine the suitability of the product for his intended use before

application and/or use. The user assumes all liabilities and risks whatsoever in connection the use and application of the product.

NON-ASSIGNABILITY

This warranty is not transferable nor assignable by contract or operation of law either directly or indirectly.

LIMITATION OF DAMAGES; MEDIATION; JURISDICTION; CHOICE OF LAW

This warranty is made in lieu of any and all other warranties, expressed or implied, including the warranties of merchantability and or fitness for use, which are hereby disclaimed. It is understood and agreed that buyer's sole remedy and therefore seller's liability whether in contract, tort, under any warranty in negligence, or otherwise, is limited to the return of the purchase price. The product warranty does not cover consequential and/or special damages or labor costs of any sort. Any and all problems, controversies, disputes or claims arising or regarding the use, warranty, recommendations, effectiveness, durability or others involving this product will be resolved only by arbitration in the Commonwealth of Puerto Rico per applicable Puerto Rico arbitration rules and proceedings in effect at the time the claim is known.

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Check our website for the latest version of the Technical Data Sheet



State Road PR-175 Km. 0.2
Rio Cañas
Industrial Park Lot #35
Caguas, PR 00725
Tel: 787-653-4900

Fax: 787-653-4949
email: info@conspro.com
www.bullbond.com
www.conspro.com

