



# WATERPROOFING

## Barricoat®-S

### Description

Barricoat-S is a water-based asphalt emulsion modified with a blend of synthetic polymers and special additives. Barricoat-S is dispensed in tandem with Barricure, a non-corrosive, chloride-free deliquescent salt solution. Barricoat-S and Barricure are applied through specialized co-spray equipment, which is provided by others and approved by CCW. During spray, Barricoat-S rapidly becomes firm, tack-free and water-resistant. Product air dries to its final cured state, which is a rubber-like, fully adhered membrane.

Barricoat-S is a waterproofing and vapor barrier membrane for use in below-grade foundation wall assemblies. Barricoat-S is for use on primarily-vertical surfaces and can be applied directly to concrete, concrete masonry, polystyrene foam insulation board and many other common building materials. Barricoat-S waterproofing and MiraDRAIN® drainage composite are combined for a complete, warranted foundation waterproofing system by CCW.

### Features and Benefits

- Fast, seamless installation
- Inexpensive, simple equipment
- Effectively coats rough and porous surfaces
- Safe, non-flammable and low odor
- Seals around fasteners
- Instant resistance to rain wash-off
- Can be applied year-round
- Can be applied to green concrete

### Installation

Concrete shall be cured in place for 3 days minimum. Verify that surfaces are free of visible surface moisture, loose materials, release oils and other contaminants. These shall be removed prior to application by power washing or other suitable method. Fill form tie holes, honeycomb and voids with non-shrink grout or CCW-703 V Liqueal™. Barricoat-R may be used to fill voids and irregularities that do not exceed ¼" depth. Grind fins and similar protrusions flush. On concrete masonry unit (CMU) construction, mortar joints shall be free of voids and struck flush and mortar droppings shall be removed from surfaces.

### Installing CCW-201 & CCW-703V Liqueal

Apply according to instructions on product data sheet. Allow sealant to cure fully before covering with Barricoat-R or MiraDRI 860/861 Strips.

### Installing Barricoat-R & DCH Reinforcing Fabric

Apply approximately 30 wet mils of Barricoat-R to the substrate with a brush or roller. Immediately set DCH Reinforcing Fabric into Barricoat-R, pressing the fabric into the liquid while smoothing wrinkles with a brush or drywall knife. Lap neighboring pieces of DCH Reinforcing Fabric 2" minimum, and apply Barricoat-R into laps. Immediately cover fabric with a 2nd coat of Barricoat-R, encapsulating it. When the substrate temperature is 32°F or lower, or the ambient temperature is below 50°F, spray the top coat of Barricoat-R with Barricure solution, dispensed either from the co-spray gun with Barricoat-S turned off, or from a garden sprayer. Allow the detail to dry firm before spraying over with Barricoat-S.

### Installation of MiraDRI 860/861 Strips

When the ambient or substrate temperature is below 40°F, use MiraDRI 861 Strips and follow the cold weather installation procedure indicated on the product data sheet. Prepare the surface with CCW-702 WB or CCW-702/702 LV, following the instructions on product data sheet. Apply CCW-715 to damp or green concrete surfaces. Apply the contact adhesive over enough area that it extends 1" minimum beyond the edge of the installed self-adhering flashing. Cut manageable-sized pieces of self-adhering flashing from the roll using sharp knife, making square, clean cuts. Lap neighboring pieces 5" minimum and sequence the installation to provide shingled laps. Press the self-adhering flashing firmly to the substrate with a hand roller tool, especially at edges and laps. Seal over laps and cuts and around penetrating hardware with LM-800XL Mastic.

### Detailing Cracks and Cold Joint

Fill and cover non-moving cracks less than ¼" with a detail coat of Barricoat-R. Cover cold joints and cracks ¼" wide and greater with minimum 6"-wide DCH Reinforcing Fabric encapsulated in Barricoat-R or with 6"-wide MiraDRI 860/861 Strips. In addition, fill cracks exceeding ¼" width with non-shrink grout or CCW-201 struck flush, and allow the fill to cure before application of the fabric or membrane strips.

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### Detailing Inside & Outside Corners

Cover with minimum 6"-wide DCH Reinforcing Fabric encapsulated in Barricoat-R or 6"-wide MiraDRI 860/861 Strips.

### Detailing Foundation-to-Footing Transition

Apply 12"-wide DCH Reinforcing Fabric encapsulated in Barricoat-R. Alternate method: fill the angle with a ¾" tooled bead of CCW-201, then cover with 12" MiraDRI 860/861 Strips.

### Detailing Pipe/Conduit Penetrations

Fill the rough gap around the penetration with non-shrink grout or CCW-201. Wrap pipe or conduit with MiraDRI 860/861 Strips, or DCH Reinforcing Fabric encapsulated in Barricoat-R. Reinforcement shall bear 3" minimum onto the wall and 3" minimum onto the pipe or conduit. Consult CCW shop drawings for more detail.

### Detailing Expansion Joints, Control Joints and Transitions

Fill expansion joints with a tooled bead of CCW-201 over backer rod. Cover the joint or transition with two, 30-wet-mil coats of Barriseal-R or with MiraDRI 860/861 Strips. Treatment shall bear 4" minimum onto each side of joint. Consult CCW shop drawings for more detail.

### Spraying Barricoat-S

Obtain full, safe access to the area and mask adjacent surfaces to protect from overspray. Verify that the product is within shelf life, as indicated on the product label. Inspect freeze indicator on the drum or tote to verify if it has been broken from exposure to freezing temperatures. Open drums or totes bearing broken freeze indicators and inspect material for sludge, particles or separation. Contact CCW Technical Service for more information on product inspection. Load Barricoat-S and Barricure into the spray system and start up according to the instructions given in the CCW Spray Equipment Brochure. Spray the wall surfaces, holding the gun approximately 20" to 24" from the surface. Keep the gun pointed square to the surface while spraying the surfaces from the bottom, upward. Apply a maximum of 90 mils wet thickness per coat. Total membrane thickness after full cure shall measure a minimum of 60 mils. Note that coating thickness measured shortly after spray will only shrink about 10% by volume, since Barricure has already pulled much of the water from the Barricoat-S by the time thickness can be measured.

Therefore, minimum thickness measured shortly after spray should read a minimum of 70 mils with a comb type wet mil gauge, or 66 mils with a pin gauge. Spray full thickness over cold joint details and corner details. Provide complete coverage over surfaces, so that there are no voids, pinholes or similar passages through membrane. Allow the membrane to dry completely before subjecting it to inspection for water leakage and adhesion testing. Drying time varies with substrate, ambient temperature and humidity. Membrane is dry when it appears black and rubber-like, and feels dry when pressed. Install MiraDRAIN drainage composite, Protection Board V or insulation board by others over the Barricoat-S membrane before backfill.

### Spraying of Barricoat-S in Cold Weather

If the ambient or substrate temperature is 32°F or lower, incorporate these modifications to the standard procedure: Spray Barricoat-S in two coats at 35–40 wet mils each, allowing drying between coats. Keep drums of Barricoat-S and the spray equipment in an area maintained at or above 50°F, and keep the hose and gun reeled in except during spray.

### Spraying of Barricoat-S on Aerated Concrete, Green Concrete, or Concrete Containing Additives that Cause Gassing

If Barricoat-S tends to blister shortly after spray on the concrete substrate, incorporate these modifications to the standard procedure: Spray the surface with approximately 10 mils wet of Barricoat-S, with the Barricure stream shut off. Allow this "primer coat" of Barricoat-S to dry firm, then apply Barricoat-S co-sprayed with Barricure according to the standard procedure or the cold weather procedure.

### Repairing Damaged Membrane

Remove damaged and loosely adhered material. Clean weathered or dirty surfaces with a clean rag wet with xylene or toluene. Allow any solvent to dry and cover damaged area with three, 30-wet-mil coats of Barricoat-R or a minimum 70-wet-mil coat of Barricoat-S.

### Installing MiraDRAIN over Barricoat-S

Allow Barricoat-S membrane to dry completely. Spray CAV-GRIP™ adhesive over the surface of Barricoat-S, and press MiraDRAIN in place. Install MiraDRAIN, MiraDRAIN HC and HC connectors in accordance with MiraDRAIN Installation Guide.

### Installing Protection Board V or Foam Plastic Board Insulation by Others over Barricoat-S

Allow Barricoat-S membrane to dry completely. Attach insulation to surface of membrane with CAV-GRIP or approved insulation adhesive by others. Where CAV-GRIP is used, spray adhesive over surface of Barricoat-S, and press insulation in place.

### Installing Insulation Board & MiraDRAIN over Barricoat-S

CCW recommends installation of insulation over the Barricoat-S followed by installation of MiraDRAIN drainage composite over the insulation. Bond the insulation to Barricoat-S according to the aforementioned procedure. Bond MiraDRAIN to the surface of the insulation by spraying CAV-GRIP to back side of MiraDRAIN, and pressing MiraDRAIN to the surface of the insulation.

### Dampproofing

Barricoat-S may be used as damproofing on walls and foundations. When used as a damproofing Barricoat-S is applied at 45 mils wet ensuring that all Barricoat-S limitations, substrate preparation, and application techniques outlined in this document are followed. Total thickness after full cure shall measure a minimum of 30 mils.

### Limitations

- Protect from freezing during delivery, storage and handling.
- Not intended for permanent exposure. Cover within 30 days of application.
- Not compatible with silicone, coal tar, polysulfide or plasticized PVC.
- Do not apply solvent-based products over Barricoat-S.
- Do not use in plaza deck, planter, pond liner or other horizontal waterproofing applications.
- Do not use as a negative-side waterproofing membrane.

### Storage

Store product and accessories in area protected from direct sunlight and precipitation, and away from open flames, sparks or welding. Store flammable materials in accordance with federal, state and local regulations. Store drums and totes of Barricoat-S in an area maintained between 50°F and 90°F.

### Packaging

Barricoat-S and Barricure are purchased separately. Note that Barricure is a REQUIRED system component. Consumption of Barricure is approximately one pail for every 3 drums of Barricoat-S.

Product Name	Description	Available Items
Barricoat-S	Spray-applied waterproofing membrane	P/N 304918 – 55-gallon drum filled with 50 gallons of product
Barricure	Chloride-free curing agent for Barriseal-S	P/N 309736 – 5-gallon pail

### Typical Properties

Property	Method	Results
Color	—	Un-cured: Dark brown Cured: Black
Volatile Organic Content	—	<20 g/l
Shelf Life	—	9 months
Percent Solids (weight)	—	63%
Cured Film Thickness	—	60 mils, minimum
Theoretical Coverage	—	16 sq ft/g
Application Temperature	—	Minimum 20°F, ambient and substrate
Service Temperature	—	-20°F to 149°F
UV Exposure	—	30 days maximum
Resilience	ASTM D5329	98% (recovery)
Low-Temp Flexibility	ASTM D1970	No cracking at -20°F, bent over 1" mandrel
Low-Temp Crack Bridging	ASTM C836	Pass
Extensibility over Crack after Heat Aging	ASTM C836	Pass
Peel Adhesion (lb/in)	ASTM D903	HDPE Film 12.2 Concrete 14.1 CMU 14.1 DensGlass® Gold 13.1
Elongation	ASTM D412	1,000%
Water Vapor Permeance	ASTM E96	0.02 Perm

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### Limited Warranty

Carlisle Coatings & Waterproofing Incorporated (Carlisle) warrants this product to be free of defects in workmanship and materials only at the time of shipment from our factory. If any Carlisle materials prove to contain manufacturing defects that substantially affect their performance, Carlisle will, at its option, replace the materials or refund its purchase price. This limited warranty is the only warranty extended by Carlisle with respect to its materials. There are no other warranties, including the implied warranties of merchantability and fitness for a particular purpose. Carlisle specifically disclaims liability for any incidental, consequential, or other damages, including but not limited to, loss of profits or damages to a structure or its contents, arising under any theory of law whatsoever. The dollar value of Carlisle's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the Carlisle material in question.