

Single Use Wet Curing Blanket for DOT Applications

Superior Hydration

When concrete strength is everything, UltraCure™ is the wet curing method chosen by top professionals to provide thorough hydration, less discoloration and a more evenly cured slab. Unlike other single-use blankets which tend to dry out after 3-4 days, UltraCure™ DOT (Natural Cellulose Fabric) provides constant hydration and maintains a 100% relative humidity condition on the slab for the entire 14 day curing period.

Wet Curing

- Increases concrete strength and durability
- Reduces permeability of concrete
- Improves abrasion resistance
- Reduces cracking, crazing, dusting and efflorescence
- Helps prevent plastic shrinkage cracking
- Higher volume stability

The Technology

• **UltraCure DOT – (Outdoor / 7-14 Day)** features super absorbent fibers that effectively trap water and serve as a hydrating reservoir for the slab as it cures. UltraCure DOT also features a perforated white reflective poly backing which provides constant visual reinforcement that the slab remains wet for the entire curing period. With proper installation, UltraCure DOT provides constant hydration and maintains a 100% relative humidity condition on the slab for the entire 14 day curing period.

“After proper placement and finishing of suitable quality concrete, curing is the single most important factor in achieving a high quality slab”.
— ACI 302 R1-04

Why UltraCure Works

UltraCure™ blankets feature natural cellulose, super absorbent, non-staining fibers that effectively trap water, provide thorough hydration, less discoloration and a more evenly cured slab. UltraCure DOT also features a white reflective poly backing which provides constant visual reinforcement that the slab remains wet for the entire curing period. The superior water retention ability of UltraCure DOT allows the blanket to absorb up to 55 gallons of curing water per 800 sq. ft. roll, providing the critical moisture required for the long term wet curing of concrete surfaces.

User Friendly

- Lightweight: each roll weights approx. 50 pounds
- Roll outs flat and stays flatter than many other wet cure methods which reduces trapped air and discoloration.
- Rolls come with fabric side out, making it easy to install
- No Taping the seams

Cost Effective

Using UltraCure DOT also helps reduce material costs, installation labor, re-wetting time and costs, totally eliminates the need of costly storage and transportation of traditional wet cure methods.



Single Use Wet Curing Blanket

UltraCure DOT™
 Disposable Wet Cure Blanket
 Material Specifications Submittal

Material Specification:

UltraCure DOT™ moisture-retaining coverings by McTech Group, Inc. are natural colored cellulose fabrics with a perforated reflective vapor barrier applied to one side to help provide minimize concrete overheating, maintain moisture levels and provide protection against UV degradation. Also available in non-perforated for vertical applications. Both non-staining fabrics have a tensile strength meeting ASTM D-882 and a minimum retention capacity of 6.5(g). Material shall meet or exceed ASTM C171-03, ASTM C171-97a and AASHTO M171-00, standard specifications for sheet materials for curing concrete slabs or pavement.

Application:

Place UltraCure DOT™ wet cure covering in widest practical width as soon as concrete has hardened sufficiently to prevent surface damage. Edges and ends shall be lapped 4"- 6". Install UltraCure DOT™ moisture containing wet cure covering material as per manufacturer's written instructions as soon as practical and while the surface of the concrete is still moist. After installing the blanket on the slab surface, wet top surface of curing blanket with 1/8" to 1/4" inch of water to cover entire surface area of blanket. Monitor surface temperature of concrete and continue to apply curing water to the top of the curing blanket until concrete surface is within 15 degrees of ambient temperature. No portion of this product shall be re-used once it has been put into use on a slab on grade or other concrete application.

Maintain UltraCure DOT™ in place on concrete for a period of not less than seven (7) days and up to (14) days after placement. Continuous inspection for the purpose of maintaining 100 % curing blanket contact with surface to be cured is recommended using appropriate restraints placed to keep the material in place for outside use where wind could be an issue. Periodic monitoring of moisture retention in the curing blanket is recommended and additional water should be applied if required.

*Please refer to detailed installation instructions of varied methods for local or State applications.

Physical Properties – UltraCure DOT™

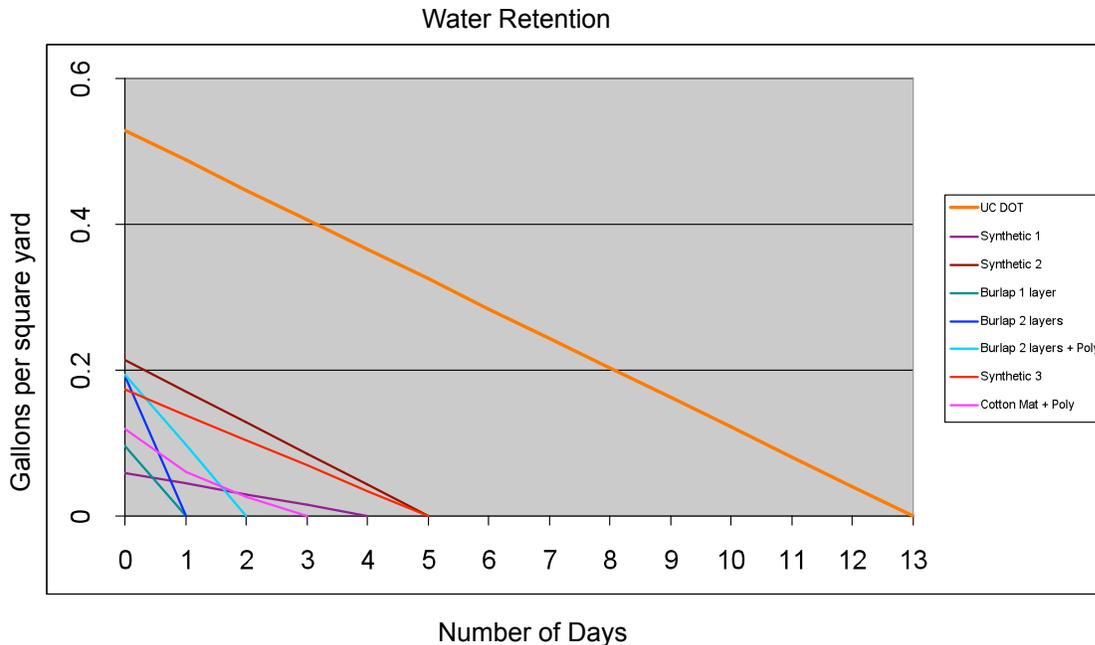
Property	Value	Test Method
Caliper	1.7 mm	ASTM D – 5199
Tensile	TD – 3733 psi MD – 2872 psi	ASTM D - 882
Elongation	TD – 90% MD – 110%	ASTM D - 882
Absorption	800%	WSP 10.1
Dart	300g	ASTM D -1709
Reflectance	>70%	ASTM E - 1447

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The information provided herein is based upon data believed to be reliable. All testing is performed with ASTM standards and procedures. All values are typical and nominal and do not represent either minimum or maximum performance of the product. Although the information is accurate to the best of our knowledge and belief, no representation of warranty or guarantee, express or implied, or merchantability, fitness or otherwise, is made as to product application for a particular use. ©2009, McTech Group, Inc. All rights reserved.

Single Use Wet Curing Blanket

The Ultimate Wet Cure Fabric for DOT Applications.



Why UltraCure DOT™ for DOT Applications.

- Stronger cured concrete at a more economical overall cost
- Increased cured concrete strength
- Improved concrete freeze/thaw resistance
- Less voids = water tightness
- Higher volume stability
- Greater blanket wind resistance
- Reduced water consumption for curing
- Near elimination of water runoff into environment
- Greener – LEED's points & recyclable
- Reduced labor costs to maintain surface wetness

Lightweight: each roll weights approx. 50 lbs.

Rolls out more evenly & flatter than traditional methods.

Less Material Overlap: 4-6".

Superior Absorption: each roll holds up to 55 gallons of water.

Wrinkles & air bubbles squeegee out

Concrete remains moist up to 14 days.

Installation

Step 1



Surface Preparation

After finishing operations are completed, when avoiding premature drying or cracking is a concern, spray or fog water around the area to be wet cured. Care should be exercised as to not mar the surface of the fresh concrete when adequate curing water is applied. Blanket application should always follow local or state prescribed methods for installation. Care needs to be taken to avoid thermal shock or excessively steep thermal gradient while using cold curing water.

Installation

Overnight soaking of the concrete curing blanket is permissible, if required by local procedures, although not necessary to achieve full moisture retention.

Roll out or place the UltraCure DOT™ curing blanket on the wet concrete surface absorbent side down. Roll out the UltraCure DOT™ blanket in a straight line while continuously feeding water to the leading edge to assure saturation. Should the roll become out of line, cut the blanket straight across, overlap the edges and continue installation. If conditions prevent saturation of the blanket as it is rolled out, continue saturation by:

A.) Applying water through the top perforations until blanket is fully saturated.

B.) As an option to saturating the blanket from the top side, and after concrete has hardened sufficiently, place a water hose under the blanket at the high point of the pour and continue wetting until blanket is fully saturated.

Installation



Alternate Wetting Option:

Another option for wetting the blanket is to use a wetting trough with the walk bridge. The UltraCure DOT roll is presoaked in the trough, then the blanket is pulled out evenly across the concrete surface and installed. The walk bridge then moves down and the next area is covered in the same manor.

This option allows the contractor to pre-wet the rolls and apply the curing blanket with less chance of marring the surface of the concrete. Troughs can be 4 feet (up to 8 feet) wide.

HPC Deck or Columns

It is recommended that fogging or misting of the surface be undertaken immediately for HPC deck or columns, and that the UltraCure DOT blanket be installed after adequate surface moisture is present.

Recommended Installation Equipment:

1. Curing water supply should be obtained from a hydrant or water truck. Water should not be cooler than 25 degrees (F) cooler than the concrete surface to avoid thermal shock.
2. A 2" adjustable nozzle hose or larger should be used. Smaller volume hoses will not wet curing blanket fast enough or effeciently.
3. Soaker hoses are recommended during high evaporation periods (high winds, low humidity etc.)

Installation

Step 3:



Step 4:



Edges and Ends:

At exposed edges and ends, lap blanket over curbs and existing pavements to prevent moisture migration beyond the curing area. Blanket application should follow local or state prescribed methods for installation.

Overlap 4" to 6"

After first roll has been placed, line up the next roll and overlap the edges of the first roll by 4"-6" and continue installation.

Repeat Steps 2 through 4

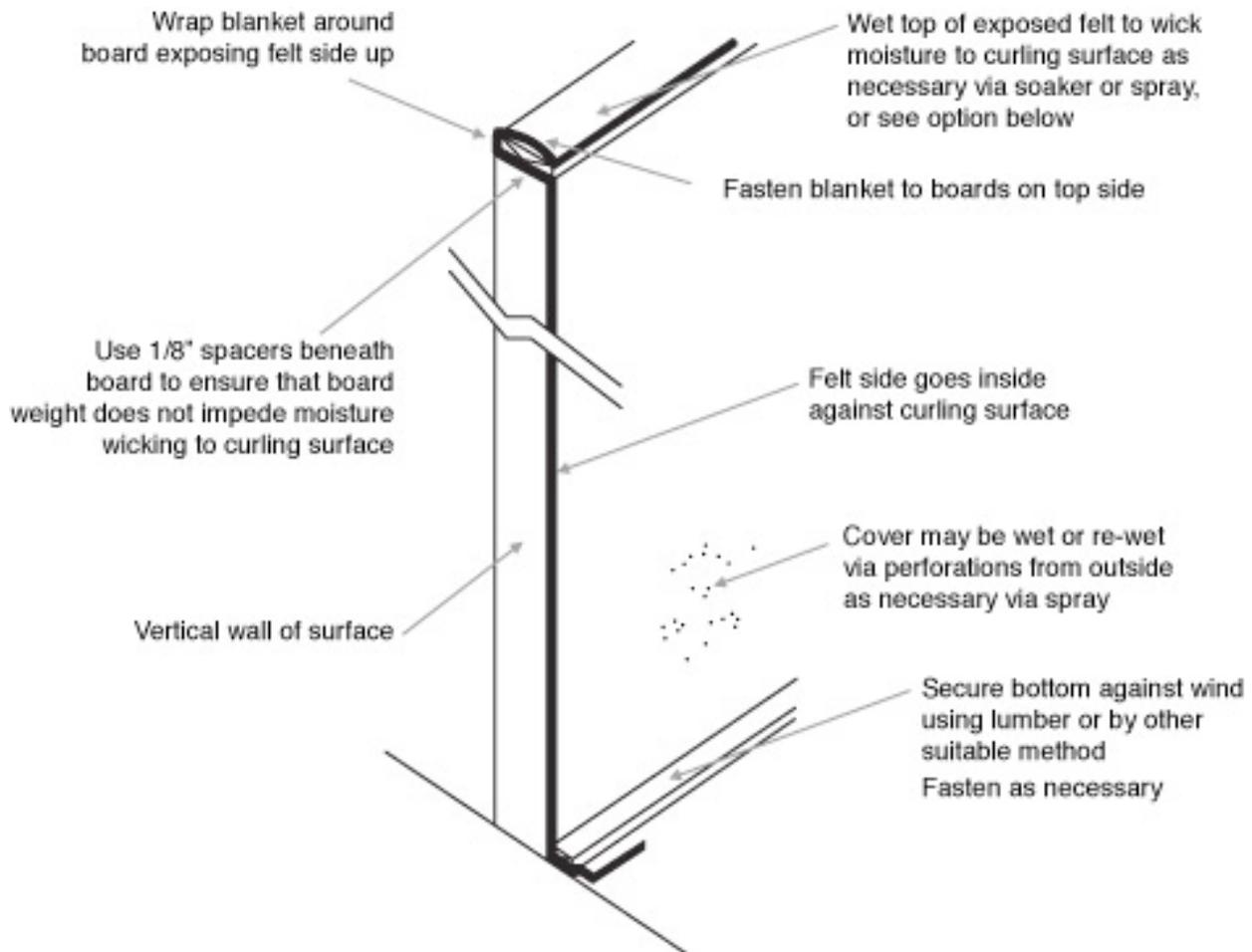
Repeat steps two through four until entire surface to be wet cured is covered with saturated curing blankets. Monitor moisture retention in blankets periodically for wetness. If high wind conditions are possible during the curing cycle, take precautions to secure blankets.

Blanket Removal

Remove the UltraCure DOT curing blankets after the specified curing period.

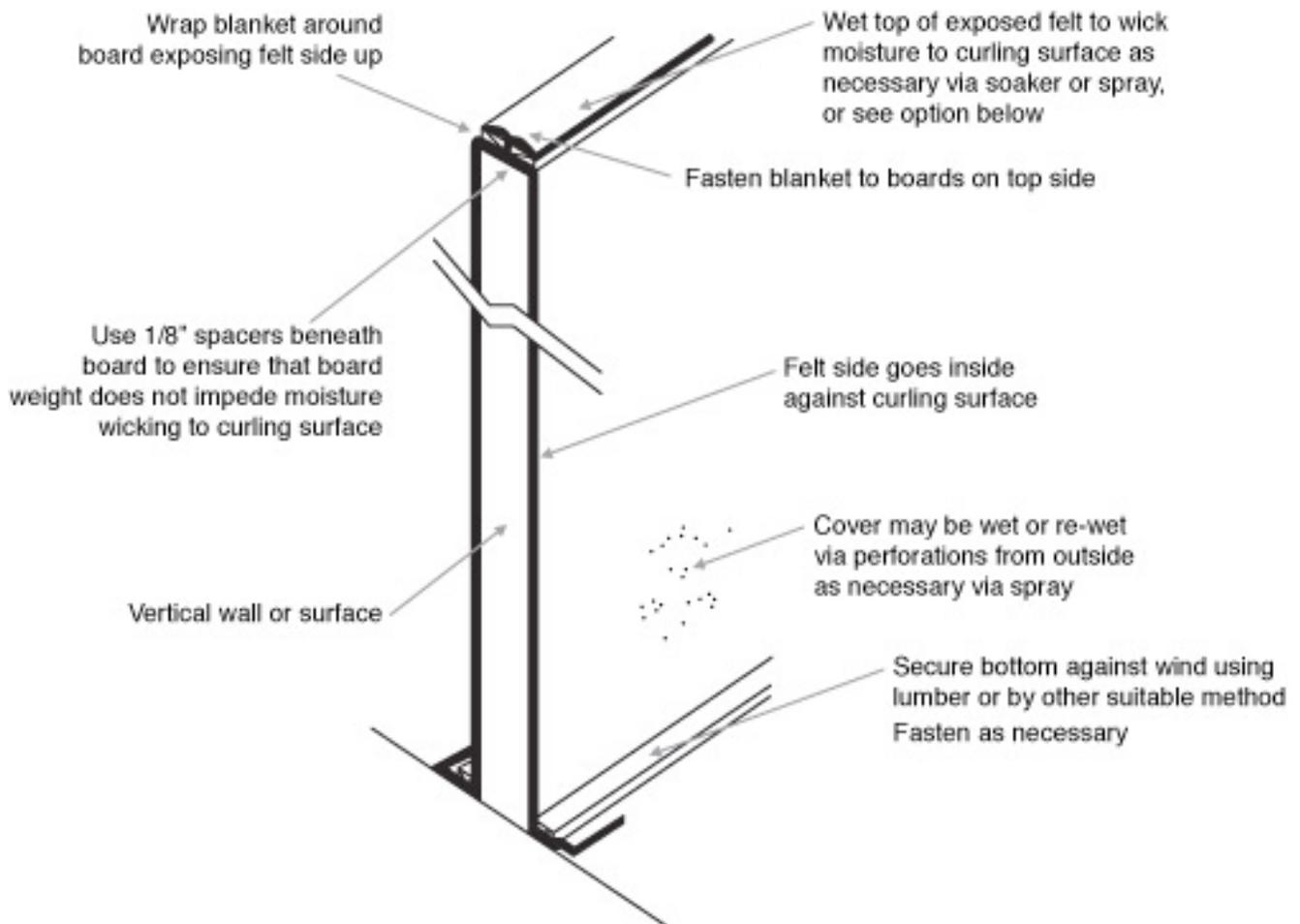
Installation

Vertical Applications: One Sided Wall



Installation

Vertical Applications: Two Sided Wall



Installation

Vertical Applications:
Jersey Wall

