



VERSION 20.0

# THERMAL MOISTURE & PROTECTION

DIVISION 070000

# **PRODUCT NAME**

Insul-Tarp® Under-Slab Insulation

## MANUFACTURER

#### **ISI BUILDING PRODUCTS**

401 Truck Haven Road East Peoria, IL 61611 866.698.6562 / www.isibp.com

## PRODUCT DESCRIPTION

#### **BASIC USE**

Insul-Tarp under-slab insulation and vapor barrier is designed to provide a thermal break and moisture barrier between the slab and grade. When used with radiant heated slab applications, Insul-Tarp will increase the performance of the system by redirecting heat back into the slab. Insul-Tarp can also reduce condensation, mold and degradation by controlling water vapor migration.

#### **COMPOSITION & MATERIALS**

Insul-Tarp is a multi-layer blanket insulation manufactured using cross-woven polyethylene, high-density closed-cell foam, high-density polyethylene bubble layer and two reflective aluminum layers. Layers combine to provide consistent thermal and moisture protection.

#### SIZE

Standard Sizes: 6' x 25', 12' x 25', 6' x 50', 12' x 50'

#### WEIGHT

Approximately 12.5 lbs per 150 ft<sup>2</sup>

## **TECHNICAL DATA**

### APPLICABLE STANDARDS

**ASTM C 518-02** Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

**ASTM E 96** Standard Test Methods for Water Vapor Transmission of Materials

**ASTM E 1643** Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs

**ASTM D 412-98** Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension

**ASTM D 3575** Standard Test Methods for Flexible Cellular Materials Made From Olefin Polymers

#### INSTALLATION

#### **PLACEMENT**

Level and tamp or roll granular base as specified by your architectural or structural drawings.

Unroll Insul-Tarp with the longest dimension parallel with the direction of the pour. Insul-Tarp should be installed with the black outer layer facing down.

Lap Insul-Tarp over the footings and seal to the vertical foundation walls with appropriate tape. Seal around pipes, support columns or other penetrations by cutting an 'X' in the Insul-Tarp and sliding it over the obstruction. Doing so will create a monolithic membrane between the surface of the slab and moisture sources below and at the slab perimeter.

Holes or openings through Insul-Tarp should be effectively sealed with appropriate tape to maintain the integrity of the vapor barrier. Overlap joints a minimum of four inches. Seal overlap together with appropriate tape.

#### **PROTECTION**

When installing reinforcing steel and utilities in addition to the placement of concrete, take precaution to protect Insul-Tarp. Carelessness during installation can damage the most puncture-resistant insulation/vapor barrier. Provide for additional protection in high-traffic areas.

Place standard reinforcing bar supports on Insul-Tarp. The cross-woven structure of Insul-Tarp will help guard against possible punctures caused by reinforcing bar supports.

Avoid driving stakes through Insul-Tarp. If this cannot be avoided, each individual hole must be repaired.

If a cushion or blotter layer is required in the design between the insulation/vapor barrier and the slab, additional care should be taken, especially if sharp crushed rock is used. Washed rock will provide less chance of damage during placement.

These are general installation instructions. Instructions on architectural or structural drawings should be reviewed and followed. Detailed installation instructions can be obtained by calling the manufacturer at 866.698.6562 or visiting www.isibp.com.

# WARRANTY

Warranty information can be obtained by calling the manufacturer at 866.698.6562 or visiting www.isibp.com.

## MAINTENANCE

Requires no maintenance once installed.

# **TECHNICAL SERVICES**

Technical information and detailed test results can be obtained by calling the manufacturer at 866.698.6562.

# FILING SYSTEMS

Additional information can be obtained by calling the manufacturer at 866.698.6562 or visiting www.isibp.com.

| PROPERTIES TEST PROCEDURE (INDEPENDENT TEST FACILITY) | TEST METHOD APPLICABLE STANDARDS | RESULTS IP UNITS               |
|---|----------------------------------|--------------------------------|
| WEIGHT PER 150 FT <sup>2</sup>                        | N/A                              | 12.5 lbs                       |
| TENSILE STRENGTH & ELONGATION (BUBBLE PACK)           | ASTM D 412-98                    | 136 psi                        |
| TENSILE STRENGTH (CROSS-WOVEN POLYETHYLENE)           | ASTM D 751 (GRAB)                | 45 lbf/in                      |
| COMPRESSION SET                                       | ASTM D 3575-00                   | 4.3%                           |
| COMPRESSION SET                                       | ASTM D 3575-10-16                | 3.2%                           |
| BURSTING STRENGTH (BUBBLE PACK)                       | ASTM D 751-00 (BALL BURST)       | 95.1 lbf                       |
| BURSTING STRENGTH (BUBBLE PACK)                       | ASTM D 751-73 (MULLEN)           | 90 psi                         |
| TEAR STRENGTH (CROSS-WOVEN POLYETHYLENE)              | ASTM D 1922 (TONGUE TEAR)        | 28 lbs (WARP), 33 lbs (FILL)   |
| USE TEMPERATURE                                       | N/A                              | -60° F — 180° F                |
| WATER VAPOR PERMEANCE                                 | ASTM E 96                        | .002 perms CLASS A             |
| * MATERIAL R-VALUE                                    | ASTM C 518-04                    | 5.9 hr-ft <sup>2</sup> -°F/btu |
| ** SYSTEM R-VALUE                                     | ASTM C 518-02                    | 6.8 hr-ft <sup>2</sup> -°F/btu |

<sup>\*</sup>Material R-Value: above shows the R-Value of Insul-Tarp (¾" material only) at a 75° mean temperature regulated by Federal Guidelines 16 CFR 460.5.

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<sup>\*\*</sup>System R-Value: tested in a concrete slab configuration consisting of a 4" Concrete Slab, ¾" Insul-Tarp Insulation (½" compressed), 2" Gravel and 1" Sand. The total slab configuration was approximately 8". The information below shows the R-Value at a 75° mean temperature.