TILE BOND™ Roof Tile Adhesive

1. PRODUCT NAME
TILE BOND™ Roof Tile Adhesive

2. MANUFACTURER
The Dow Chemical Company
Dow Building Solutions
200 Larkin Center
1605 Joseph Drive
Midland, MI 48674
1-866-583-BLUE (2583)
tilebond.com or dowadhesives.com

3. PRODUCT DESCRIPTION
Packaged in a self-contained disposable can or canister, TILE BOND™ is a portable one-component polyurethane foam roof tile adhesive for attaching concrete and clay roof tiles. It is quicker and easier to install compared to traditional attachment methods such as screws, mortar, wire ties and clips. Minimal expanding TILE BOND™ also provides greater attachment strength while minimizing nail penetrations and reducing roof weight loads. With its easy-to-use dispensing equipment, TILE BOND™ can be quickly and efficiently dispensed in a highly consistent manner, eliminating the need for expensive equipment and ratio monitoring.

Basic Use
TILE BOND™ Roof Tile Adhesive is designed for use with low/flat, medium, high and two-piece barrel profiles of roof tile when applied to a preapproved underlayment. It is an excellent choice for all new, reroof and specialty applications, including hip and ridge, rake and valley, and field and eave installations.

Sizes
• 28 oz. can with reusable straw
• 23 lb. canister with gun/hose assembly
• 23 lb. canister only

4. TECHNICAL DATA
Applicable Standards
TILE BOND™ Roof Tile Adhesive meets the following ASTM standards:
• E84 – Foam adhesives, see Underwriters Laboratories, Inc. (UL) Classified, file R18231
• ASTM E108 – UL file R18231
• D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics
• D1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
• D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
• E96 – Standard Test Methods for Water Vapor Transmission of Materials
• D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics

Code Compliance
TILE BOND™ Roof Tile Adhesive complies with the following codes:
• Florida Building Code FL #717
• South Florida Building Code, Broward County, 2002 Edition
• Miami-Dade NOA No: 16-0222.01

Environmental Data
TILE BOND™ Roof Tile Adhesive (tank or aerosol) has a volatile organic compound (VOC) content of 1.0 wt % (13 g/L). The VOC content was determined according to the California Air Resources Board and the South Coast and Ventura Air Quality Management Districts Rule 1168 Adhesives and Sealants (amended Jan. 7, 2005) and the Ozone Transport Commission Model Rule for Adhesives and Sealants (effective Jan. 1, 2009).
TILE BOND™ Roof Tile Adhesive has zero ozone-depletion potential.

Fire Protection
TILE BOND™ Roof Tile Adhesive should be stored away from heat sources. It is a combustible product and may present a fire hazard if exposed to an open flame or heat.

Theoretical Yields*
• High-profile tile: 3–5 squares
• Medium-profile tile: 5–7 squares
• Low-profile tile: 7–9 squares

Expiration Date: 08/23/2021
• Texas DOI RC 28
• UL R18231

Contact your Dow Sales Representative or local authorities for state and local building code requirements and related acceptances.

TABLE 1: TYPICAL PHYSICAL PROPERTIES(1) OF TILE BOND™ ROOF TILE ADHESIVE

<table>
<thead>
<tr>
<th>Property and Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive Strength,(2) ASTM D1621, psi, min.</td>
<td>14.3</td>
</tr>
<tr>
<td>Water Absorption, ASTM D2842, % by volume, max.</td>
<td>2.2</td>
</tr>
<tr>
<td>Water Vapor Permeance,(3) ASTM E96, perm, max.</td>
<td>3</td>
</tr>
<tr>
<td>Tensile Strength, ASTM D1623, psi @ 180°F, 65% RH for 120 days, concrete to concrete</td>
<td>31.2</td>
</tr>
<tr>
<td>Density, ASTM D1622, lb/ft³</td>
<td>1.8</td>
</tr>
<tr>
<td>Closed Cell Content, ASTM D2856, %</td>
<td>86.3</td>
</tr>
<tr>
<td>Shelf Life, months</td>
<td>12</td>
</tr>
<tr>
<td>Working/Open: Set tile within adhesive pad within 4 minutes of dispensing adhesive,(4)</td>
<td>4 minutes</td>
</tr>
</tbody>
</table>

* Theoretical yields may differ from actual usage, and environmental conditions may vary the actual in-place yields.

(1) Not to be considered sales specifications.
(2) Vertical compressive strength is measured at 10% deformation or at yield, whichever occurs first.
(3) Based on “1” thickness.
(4) High temperature and humidity will accelerate the curing process.
source that exceeds temperatures above 240°F (116°C). For more information, consult the (Material) Safety Data Sheet ((M)SDS) or call Dow at 1-866-583-BLUE (2583) or contact your local building inspector.

5. INSTALLATION & STORAGE
TILE BOND™ Roof Tile Adhesive is a minimal-expanding foam that is quick and easy to dispense. See TILE BOND™ operating instructions; Florida Roofing, Sheet Metal and Air Conditioning Contractors Association, Inc. (FRSA)/Tile Roofing Institute (TRI) Concrete and Clay Roof Tile Installation Manual; or contact a local Dow representative for more specific instructions. Local regulations may require manufacturer-approved installer training certification.

All one component foams are moisture cured. Low humidity and cooler temperatures will extend the cure time. However, final adhesion properties are unaffected.

Store TILE BOND™ adhesive between 40°–80°F (4.4°–26.7°C) to ensure adhesive quality, maximum yield and shelf life. Do not exceed 120°F (48.9°C).

Store partially used TILE BOND™ adhesive upright with the hose attached and pressurized. The cylinder valve must be in the off position.

Safety and Conditions of Use
• Read all instructions and (M)SDS carefully before use.
• TILE BOND™ Roof Tile Adhesive contains isocyanate blowing agent. Do not breathe vapor or mist. Use in well-ventilated areas or wear proper respiratory protection.

Cover all skin. Isocyanate is irritating to the eyes, skin and respiratory system, and may cause sensitization by inhalation or skin contact.
• This product is intended for outdoor use where natural ventilation occurs and respiratory protection is not expected to be required. Care should be taken to avoid workers being sprayed with product downwind.
• TILE BOND™ Roof Tile Adhesive is very sticky and will adhere to most surfaces and skin. Do not get foam on skin. Wear gloves and goggles or safety glasses. Cured foam must be mechanically removed or allowed to wear off in time.
• The contents are under pressure.
• Restartability – Per instruction manual cylinder can be easily shut off, stored and restarted numerous times to ensure full use of product.

6. AVAILABILITY
TILE BOND™ Roof Tile Adhesive is distributed through an extensive network of Dow Building Solutions distributors. For more information, call 1-866-583-BLUE (2583).

7. WARRANTY
Not applicable.

8. MAINTENANCE
When installed in accordance with Dow installation recommendations, TILE BOND™ Roof Tile Adhesive is a permanent adhesive requiring no maintenance.

9. DISPOSAL
All pressure must be released from cylinder before disposal. Disposal of residue of TILE BOND™ adhesive must be done with adequate ventilation. NEVER PUNCTURE OR INCINERATE CYLINDER. Always cover all skin, wear gloves and goggles when disposing of cylinders.
2. Remove dispensing hose from cylinder.
3. Hold tank upside down over waste container with valve facing away from you and any others in the area.
4. Slowly open valve on the cylinder.
5. Set cylinder into waste container and allow residual pressure and chemical to escape.
6. Cover waste container with loosely fitting covers and allow contents to set for several days.
7. Dispose of in accordance with federal, state and local environmental regulations.

NOTE: If no waste container is available, the cylinder of TILE BOND™ adhesive can be inverted in its original carton using the method described above and allowed to empty.

10. TECHNICAL SERVICES
Dow can provide technical information to help address questions when using TILE BOND™ Roof Tile Adhesive. Technical personnel are available to assist with any roof tile project. For technical assistance, call 1-866-583-BLUE (2583).

11. FILING SYSTEMS
• tilebond.com
• dowadhesives.com

In the U.S.
The Dow Chemical Company
Dow Building Solutions
200 Larkin Center, 1605 Joseph Drive
Midland, MI 48674

For Technical Information:
1-866-583-BLUE (2583)
tilebond.com

For Sales Information:
1-800-232-2436
dowadhesives.com

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CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet (M(SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

TILE BOND™ adhesive products contain isocyanate blowing agent. Read the label and (M)SDS carefully before use. Cover all skin. Wear long sleeves, gloves, and goggles or safety glasses. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.

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