



CSI: 09 28 00
PRODUCT: Composite Backer Board
DIVISION: Finishes (09)
SECTION: Backing Boards and Underlayments (28)

Report Holder
Johns Manville
P.O. Box 5108
Denver, CO 80217

Manufacturing Locations
Johns Manville Cornwall Facility
3330 Marleau Avenue
Cornwall ON K6H6B5

1. SUBJECT

- 1.1 *1/4-in. GoBoard® Composite Backer Board*
- 1.2 *1/2-in. GoBoard® Composite Backer Board*
- 1.3 *5/8-in. GoBoard® Composite Backer Board*

2. SCOPE

NTA, Inc. has evaluated the above product(s) for compliance with the applicable sections of the following codes:

- 2.1 2009, 2012, 2015 International Building Code (IBC)
- 2.2 2009, 2012, 2015 International Residential Code (IRC)

NTA, Inc. has evaluated the above product(s) in accordance with:

- 2.3 NTA IM 035.3 SEP01 Composite Backer Board
- 2.4 NTA IM 036 Quality System Requirements

To obtain the most current NTA Listing Report, visit www.ntainc.com/report.

3. USES

- 3.1 **General.** *GoBoard®* may be used as an alternative non-structural substrate for field-applied ceramic tile or dimensional stone on interior floors, walls, and ceilings in wet and dry areas.
- 3.2 **Construction.** *1/4 and 1/2-in. GoBoard®* are considered Class B materials with a flame spread index not to exceed 75 and a smoke developed index not to exceed 450. *5/8-in. GoBoard®* is considered a Class A material with a flame spread index not to exceed 25 and a smoke developed index not to exceed 450.
- 3.3 **Backer.** *GoBoard®* used as a tile backer board provides equivalent performance to ANSI A118.9 cementitious backer units (CBU).
- 3.4 **Waterproof Membrane.** *GoBoard®* may be used as a waterproof membrane in interior wet areas and provides equivalent performance to ANSI A118.10.

4. DESCRIPTION

4.1 **General.** *GoBoard®*, as shown in Figures 1 through 4, is a composite backer board with a thickness of 1/4, 1/2, or 5/8-in.

4.2 **Materials.** *GoBoard®* has a polyisocyanurate foam core laminated with a glass mat facer on each side.

5. DESIGN

The scope of this report is limited to evaluation of *GoBoard®* as a tile backer board and waterproof membrane. Details related to incorporation of the product beyond that scope are the responsibility of the designer of record.

6. INSTALLATION

6.1 **General.** *GoBoard®* shall be fabricated, identified and erected in accordance with this report, the approved construction documents and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report shall govern. Approved construction documents shall be available at all times on the jobsite during installation.

6.2 **Fastening.** *GoBoard®* is to be fastened with 0.122-in. x 1-1/2-in. barbed shank roofing nails, 0.113-in. x 2-in. smooth shank nails, or #10 x 1-1/4-in. Backer-On Screws at a maximum spacing of 6-in. on-center.

6.3 **Joints.** A 1/8-in. gap is to be provided between *GoBoard®* edges at all joints.

6.3.1 To provide a waterproof barrier at fastener heads and panel joints two procedures are acceptable:

6.3.1.1 **Mortar.** At the joint the gap is filled with mortar and a 2-in. wide Cement Board FibaTape is applied parallel to and centered over the joint. Mortar is then applied over the joint and once cured two layers of a liquid water-proofing membrane, meeting ANSI A118.10, are applied over the mortar. The same procedure is used over fastener heads, except the Cement Board FibaTape is not required in these areas.

6.3.1.2 **Polyurethane.** At the joint the gap is filled with a Polyurethane Sealant meeting ASTM C920, Type S, Grade NS, Class 25 or better. The sealant is to be spread over a 1-in. area adjacent to the seam on each piece of *GoBoard®*. The same sealant is used to cover a 1-in. diameter area over all fastener heads.

6.4 **Walls.** *GoBoard®* may be installed on wall framing with a maximum spacing of 16-in. on-center. Vertical *GoBoard®* edges must be continuously supported.

6.5 **Ceilings.** *GoBoard®* may be installed on ceiling framing with a maximum spacing of 16-in. on-center.

6.6 **Floors.** *1/4 and 1/2-in. GoBoard®* may be installed as a backer for tile flooring. It must be fully supported by minimum 19/32-in. thick PS-1, Exposure 1 plywood with joists spaced a

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maximum of 16-in. on-center. A tiled floor assembly using *GoBoard*[®] and installed in accordance with manufacturer's instructions meets the requirements for a *Light Commercial Rating*, per the *TCNA Handbook*.

6.7 Thermal Barrier. *GoBoard*[®] that is tiled over and installed in accordance with this report and the manufacturer's instructions does not require a thermal barrier on the interior/tiled surface when installed in a floor, ceiling, or wall assembly.

6.8 Waterproof Barrier. When *GoBoard*[®] is installed in wet areas such as showers and baths it may also serve as the waterproof barrier.

7. CONDITIONS OF USE

7.1 *GoBoard*[®] as described in this report shall comply with the codes listed in Section 2 above, subject to the following conditions:

7.2 Manufacturer. *GoBoard*[®] must be fabricated at the facility listed in this report.

7.3 Interior Use Only. *GoBoard*[®] is rated for use on interior applications as identified in this report.

7.4 Non-Structural Use. *GoBoard*[®] has not been evaluated for structural use. Installation requires backer to be supported by a structural sheathing.

7.5 Construction Types. *GoBoard*[®] shall be considered a combustible building element when assessing construction type in accordance with IBC Chapter 6.

7.6 Fire Rated Assembly. *GoBoard*[®] evaluated as part of a fire rated assembly is beyond the scope of this report.

7.7 Air Barrier. *GoBoard*[®] evaluated for use as an air barrier is beyond the scope of this report.

7.8 Walls and Ceiling. The maximum veneer load *GoBoard*[®] can support for the intended application must be determined by a registered Design Professional.

7.9 Floors. When used on floors 1/4 or 1/2-in. *GoBoard*[®] must be applied over a rated subfloor.

7.10 Not for Use on Floors. 5/8-in. *GoBoard*[®] has not been rated for use as a backer for floor tile.

7.11 Protection from Termites and Decay. *GoBoard*[®] shall not be located within 6-in. from exposed earth.

8. EVIDENCE SUBMITTED

NTA, Inc. has examined the following evidence to evaluate this product:

8.1 Review of plant quality assurance manual in accordance with NTA IM 036 and NTA IM 035.3.

8.2 Qualification test data in accordance with NTA IM 035.3, SEP 01.

8.3 Periodic quality assurance audits of the production facility in accordance with IM036 and IM035.3.

8.4 Periodic verification testing in accordance with NTA, Inc. NTA IM 035.3.

Evaluation evidence and data are on file with NTA, Inc. NTA, Inc. is accredited by the International Accreditation Service (IAS) as follows:

ISO 17020 Inspection Agency (AA-682)
ISO 17025 Testing Laboratory (TL-259)
ISO 17065 Product Certification Agency (PCA-102)

The scope of accreditation related to testing, inspection or product certification pertain only to the test methods and/or standard referenced therein. Design parameters and the application of building code requirements, such as special inspection, have not been reviewed by IAS and are not covered in the accreditation. Product evaluations are performed under the direct supervision of Professional Engineers licensed in all jurisdictions within the United States as required by the building code and state engineering board rules.

9. FINDINGS

All products referenced herein are manufactured under an in-plant Quality Assurance program to ensure that the production quality meets or exceeds the requirements of the codes noted herein and the criteria as established by NTA, Inc. Furthermore, product must comply with the conditions of this report.

This report is subject to annual review.

10. IDENTIFICATION

Each eligible product shall be permanently marked to provide the following information:

10.1 The NTA, Inc. Listing mark, shown below.

10.2 NTA's Listing No. JNM090413-16

10.3 Manufacturer Name

10.4 Product Identification

10.5 Production Date, Code, or Batch/Lot Number



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Table 1: Design Values

Orientation	Fastener	Allowable Weight ^a (lb/ft ²)
Ceiling	0.113-in. x 2-in. Smooth Shank Nail (0.266-in. Head Diameter)	9
	0.122-in. x 1-1/2-in. Barbed Shank Roofing Nail (0.383-in. Head Diameter)	15
	#10 x 1-1/4-in. Backer-On Screw	12
Wall	#10 x 1-1/4-in. Backer-On Screw	16

^a Fasteners attaching go board are to be spaced a maximum of 6-in. oc with a maximum framing spacing of 16-in. oc

Table 2: Test Values

Property	Product		
	1/4-in. GoBoard®	1/2-in. GoBoard®	5/8-in. GoBoard®
ASTM C947, Average Flexural Yield Strength	Dry: 701 psi Wet: 479 psi	Dry: 650 psi Wet: 300 psi	Dry: 535 psi Wet: 220 psi
ASTM D2394 Concentrated Load, Avg. Compressive Stress at 0.05-in. Deformation	NR	NR	240 psi
ASTM D1037, Section 21: Falling Ball, Average Drop Height Producing Failure	NR	Dry: 30-in. Soaked: 27-in.	Dry: 31 Soaked: 34
ASTM E84: Surface Burning	Class B Material		Class A Material
Average ANSI A118.1 Shear Bond Strength (7 day dry conditioning)	Greater than or equal to 50 psi		
Average ANSI A118.1 Shear Bond Strength (7 day dry plus 7 day water soaked conditioning)	Greater than or equal to 50 psi		
Average ANSI A118.1 Shear Bond Strength (28 day dry conditioning)	Greater than or equal to 50 psi		
Average ANSI A118.1 Shear Bond Strength (84 day dry conditioning)	Greater than or equal to 50 psi		
Average ANSI A118.1 Shear Bond Strength (7 day dry plus 100 day water soaked conditioning)	Greater than or equal to 50 psi		
ASTM C666, Procedure B, 25 Cycles of Freezing and Thawing	No defects observed		
ASTM G21: Resistance to Fungi	No Growth		
ASTM G22: Resistance to Bacteria	No Growth		

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Table 2: Test Values (Continued)

Property	Product		
	1/4-in. GoBoard®	1/2-in. GoBoard®	5/8-in. GoBoard®
NFPA 286, Interior Finish Fire Test (Tested with tile installed over GoBoard)	NR	At 40kW flames did not reach the ceiling 160 kW exposure: Flames did not extend to outer extremities of sample; no flashover 180 kW peak rate of heat release 68 m ³ total smoke release	At 40kW flames did not reach the ceiling 160 kW exposure: Flames did not extend to outer extremities of sample; no flashover 197 kW peak rate of heat release 54 m ³ total smoke release
ASTM C627, Robinson Floor Test on Tile Installation System	Light Commercial		--
ASTM D1037, Section 24, Average Linear Variation Due to Moisture	Less than or Equal to 0.07%		
ASTM D1204, Average Linear Variation Due to Temperature	Less than or equal to 0.7%		
ASTM C297, Average Tensile Strength	Greater than or equal to 35 psi		
IBC803.10, Temperature Test, 200°F for 30 minutes	Interior materials did not detach when tested in horizontal and vertical directions		
ASTM D4068, Hydrostatic Pressure Test	Pass		
ASTM D751, Average Strength Test Values	Breaking Strength: Greater than 170 psi Seam Strength: Greater than 8 lbf/in.		

“NR” denotes “Not Required” due to the application.
 “--“denotes that this product thickness was not tested.

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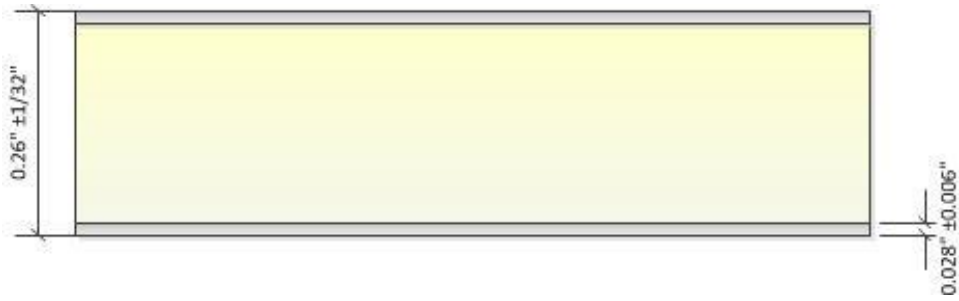


Figure 1: 1/4-in. GoBoard® Thickness Dimensions

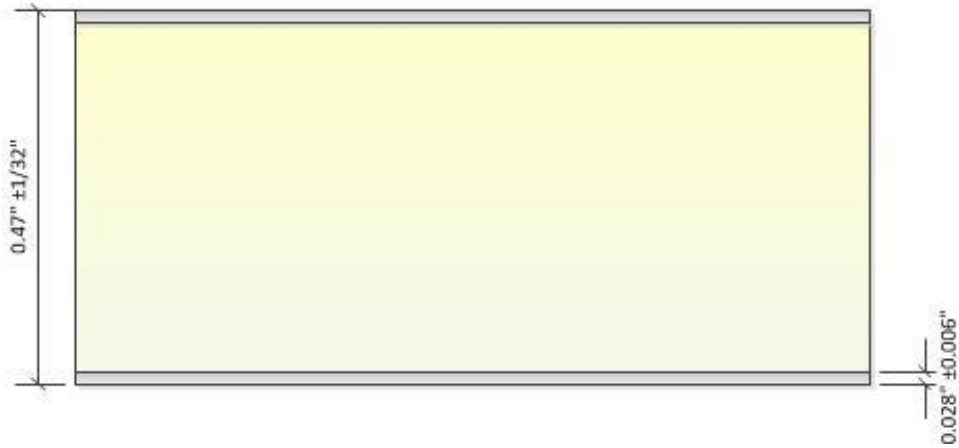


Figure 2: 1/2-in. GoBoard® Thickness Dimensions

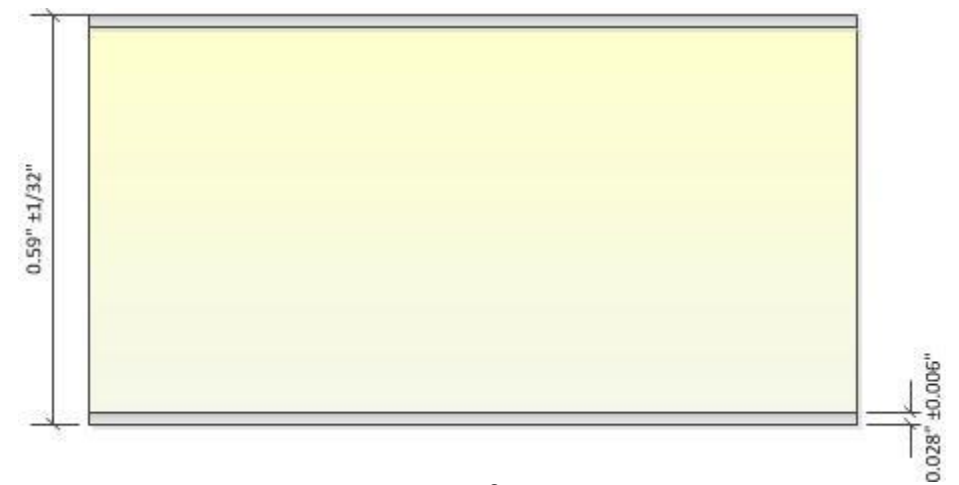


Figure 3: 5/8-in. GoBoard® Thickness Dimensions

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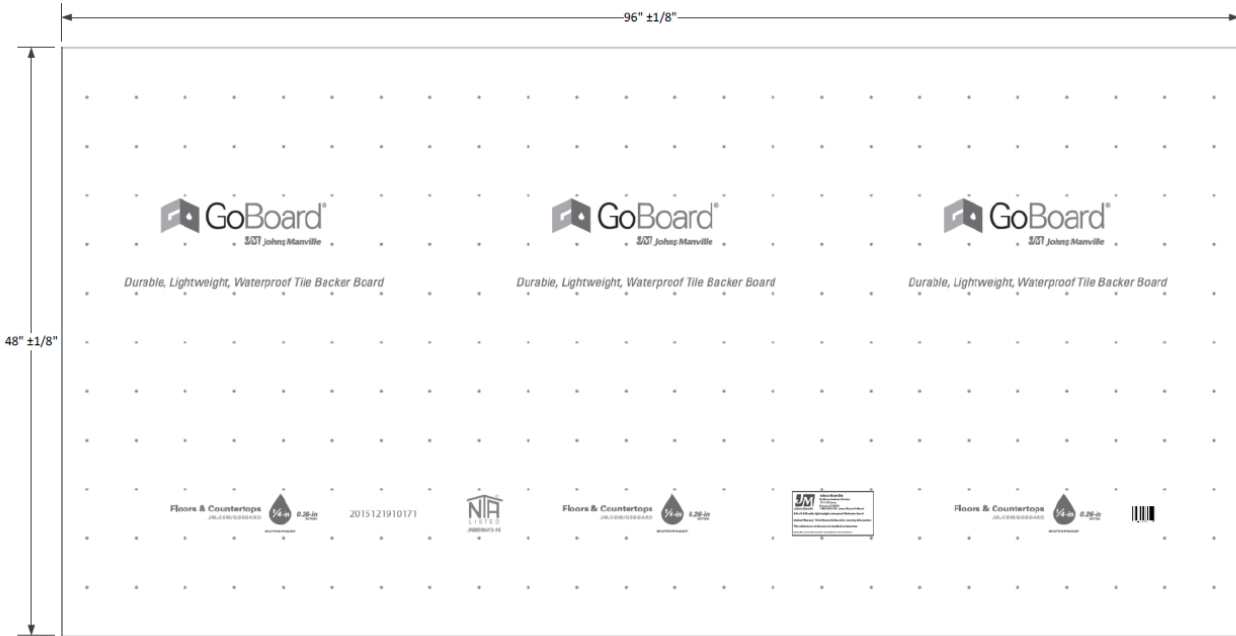


Figure 4: GoBoard® 48-in. x 96-in. Sheet Dimensions
 (1/4-in. GoBoard® is shown as an example; dimensions are the same for all three thicknesses)

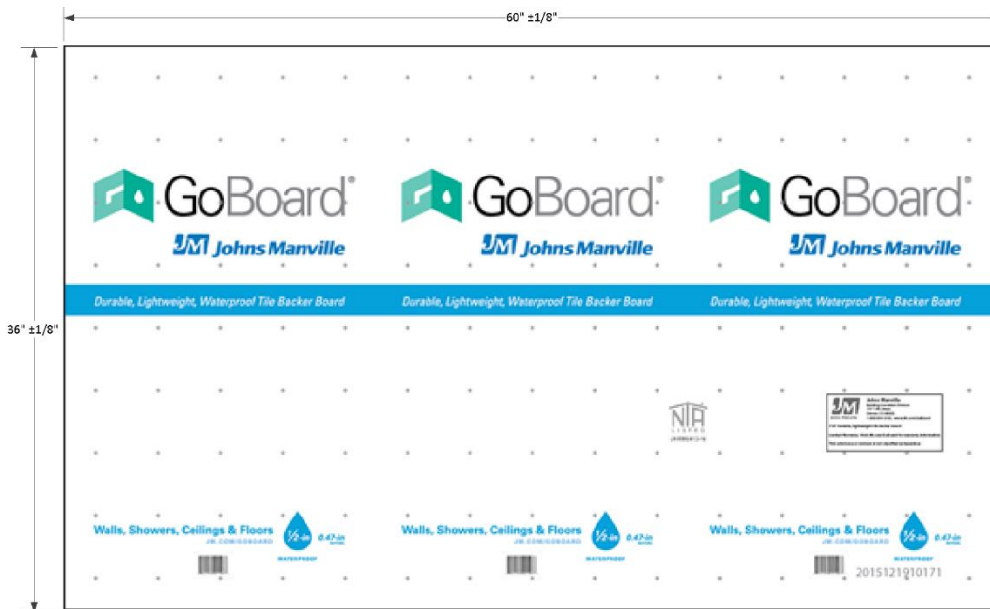


Figure 5: GoBoard® 36-in. x 60-in. Sheet Dimensions
 (1/2-in. GoBoard® is shown as an example; dimensions are the same for 1/4-in. and 1/2-in.)

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