



ToughRock™ Gypsum Sheathing (Treated Core)

Manufacturer

G-P Gypsum Corporation
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Atlanta, GA 30303
Technical Hotline: 1-800-225-6119 (M-F 8-7 ET)

Description

ToughRock™ Gypsum Sheathing treated core has a water-resistant, dimensionally stable, non-combustible inert gypsum core. ToughRock 5/8" Fireguard® Gypsum Sheathing is a UL Classified Type X panel and can be used in a variety of fire-rated wood and steel-framed assemblies. The surfacings on both faces and on the long edges are water-repellent surfaced 100% recycled paper, brown colored. The ends are square cut, smooth finished with no paper facing.

Primary Uses

ToughRock Gypsum Sheathing treated core is used as a water-resistant underlayment that is covered by an exterior finish cladding such as vinyl/wood siding, paneling, masonry veneer or wire lath stucco for use in new building construction or renovation work. It is also used in steel stud curtain wall construction. It is designed for direct mechanical attachment (screws, nails and adhesive, never adhesive only) to wood and metal framing.

Limitations

ToughRock Gypsum Sheathing treated core is a nonstructural product and shall not be used as a nailing base to support heavy wall-mounted objects or the exterior finish material. Exterior finish claddings over the sheathing shall be applied with mechanical fasteners through the sheathing into the wall framing or structure.

ToughRock Gypsum Sheathing is not intended for long-term exposure to the weather. Local weather conditions will dictate the length of time sheathing may be left exposed. The

sheathing should be covered by an exterior finish cladding or building felt or equivalent protection if weather conditions will be severe or exposure time will exceed one month.

ToughRock Gypsum Sheathing treated core is not recommended for ceilings.

Do not use ToughRock Gypsum Sheathing treated core where there is prolonged exposure to temperature exceeding 125°F and/or continuous exposure to extreme humidity; e.g., located adjacent to wood burning stoves, heating appliances, swimming pools, saunas or steam rooms.

Applicable Standards

ASTM C 79 and C 1396, and CSA-A82.27-M and Federal Specification SS-L-30D, Type II, Grade W, X.

Building Code Conformity

ToughRock Gypsum Sheathing treated core conforms to the requirements of major building codes.

Sizes and Edges

Thickness nominal	Widths nominal	Lengths standard
1/2"	2' and 4'	8'
5/8"	4'	8'

Edges: Square, tongue and groove.*

Supplemental Materials

Fasteners: Nails, screws and staples.

Technical Data

Surface Burning Characteristics

Flame spread rating 20 and smoke developed 0, when tested in accordance with ASTM E 84 or CAN/ULC-S102. The core is noncombustible when tested in accordance with ASTM E 136.

Fire Resistance Rating

Fire resistance ratings are determined by tests made on assemblies of specific materials. Caution must be used to ensure that each component of the construction design meets the specified and tested assembly. ToughRock 5/8" Fireguard Gypsum Sheathing is classified by Underwriters Laboratory as a Type X panel.

Sound Control

Sound-rated assemblies require sealing at top, bottom, intersections and other penetrations to ensure the effectiveness of the assembly and to obtain desired STC rating.

Installation

Application Standards

ToughRock Gypsum Sheathing treated core shall be installed according to the Gypsum Association Publication GA 253 and ASTM C 1280.

To achieve a designated fire resistance rating, installation and details must be consistent with tested assemblies as published in the Gypsum Association Fire Resistance Design Manual GA-600, UL/ULC Fire Resistance Directory and Intertek Testing Services/Warneck Hersey Listing Book.

Methods

Appropriate methods of installation are based on the desired fire resistance rating or specified STC value required. These ratings and values require that details of the tested assemblies be followed. In addition to these details, the installation methods outlined in Gypsum Association Publication GA-253 and ASTM C 1280 will facilitate optimum performance through preferred construction practices.

For non-rated construction, installation methods for single- or multi-layer construction involving attachment using mechanical

*T&G 2' wide only.

TABLE I
SHEAR LOAD IN LBS. PER LINEAL FOOT (ULTIMATE)*

	DRY	WET
5/8" Thickness 4' Wide	654	522
Wood Framing	Studs spaced maximum 16" o.c.	
Nails	11 gauge, large head, galvanized "roofing type", 2" long	
Nailing Schedule	4" o.c. on edges and ends, 7" o.c. in field	
Metal Framing	Studs spaced maximum 24" o.c.	
Screw Spacing	1" Type S or S-12 self-tapping drywall screws spaced 12" o.c.	

*Tests were conducted per ASTM E 72.

NOTE: Shear design in metal framing will depend on the type, gauge and bracing criteria of the exterior wall design and the composite contribution of gypsum sheathing is usually not calculated.

fasteners are numerous and varied. Refer to Gypsum Association publications for application and installation details.

The installation method selected should be planned carefully to minimize the number of end joints. ToughRock™ Gypsum Sheathing treated core can be cut by scoring and snapping or sawing, working from the face side. All cut edges and ends are smoothed by rasping or other suitable methods to form tight-fitting joints when installed. Seal raw edges (end joints and cutouts) with a waterproofing compound.

Safety

During installation involving cutting, scoring, and breaking, safety glasses are recommended. If the work environment is dusty, an approved respirator should be worn. Do not use a power saw.

Handling Precautions

Stack ToughRock Gypsum Sheathing treated core on a flat, level surface. As individual sheets are removed for installation, they should be raised carefully on edge and carried in a vertical position. Appropriate handling is also outlined in Gypsum Association

Publications GA-216 and GA-801. Take care to avoid impact, undue flexing, and subsequent damage to board edges, ends and corners.

Material Safety Data Sheet

Material Safety Data Sheet (MSDS) is available upon request.

**TABLE II
PHYSICAL PROPERTIES**

PROPERTIES ¹	TOUGHROCK™ 1/2" SHEATHING (TREATED CORE)	TOUGHROCK™ 5/8" FIREGUARD® SHEATHING (TREATED CORE)
Thickness, nominal	1/2" ± 1/64"	5/8" ± 1/64"
Width, nominal	2' and 4' ± 3/32"	4' ± 3/32"
Length, standard	8' ± 1/4"	8' ± 1/4"
Weight, lbs./M sq. ft., nominal	1900	2500
Edges	Square, tongue-and-groove (2' only)	Square, tongue-and-groove
Flexural strength, minimum Parallel, lbs. f. Perpendicular, lbs. f.	40 110	50 150
R value ²	.45	.56
Nail pull resistance lbs./minimum	80	90
Hardness, lbs. force core, edges and ends	≥15	≥15
Humidified deflection, maximum	10/6"	5/8"
Packaging	Two pieces per bundle, face-to-face and end taped	Two pieces per bundle, face-to-face and end taped
Surface Burning Characteristics (per ASTM E 84 or CAN/ULC-S102)	Flame Spread 20 Smoke Developed 0	Flame Spread 20 Smoke Developed 0
Surfacing	Water-repellent, brown 100% recycled paper on face, back and long edges	Water-repellent, brown 100% recycled paper on face, back and long edges
Framing Spacing, maximum	Walls: 24" o.c. Ceilings: Not recommended	Walls: 24" o.c. Ceilings: Not recommended
Water absorption, % maximum	10.0	10.0

¹Tested in accordance with ASTM C 473.
²Tested in accordance with ASTM C 518.
 NOTE: Specified minimum values are as in ASTM C 79.
 Values are based on tests conducted in accordance with ASTM C 473.

For more information about these and other products, contact:
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