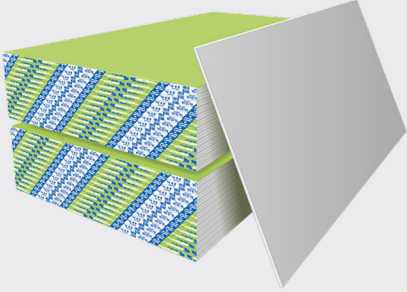


SHEETROCK® BRAND GLASS-MAT PANELS MOLD TOUGH® AR FIRECODE® X



FEATURES & BENEFITS

15.9 mm glass-mat Type X panels with abuse, moisture and mold resistance

- Feature a noncombustible, moisture-resistant gypsum core encased in a fiberglass face and back that shed water
- Designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 15.9 mm USG Sheetrock® Brand Glass-Mat Panels Mold Tough® Firecode® X
- Suitable for use in pre dry-in (fast track or pre-rock) and similar applications of panels before the building envelope is fully enclosed
- Quick score-and-snap, no sawing or special tools required
- Comply with ASTM C1658, Standard Specification for Glass Mat Gypsum Panels, for 15.9 mm, Type X and glass-mat water-resistant gypsum panel
- Tested to ASTM C1629, Standard Classification for Abuse-Resistant Non-decorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels, for surface abrasion and indentation resistance, and soft- and hard-body impact
- Score a “10” when tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- Can be exposed to weather for up to 12 months and are guaranteed three years against manufacturing defects
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X (UL Type AR) are 15.9 mm Type X panels designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 15.9 mm USG Sheetrock® Brand Glass-Mat Panels Mold Tough® Firecode® X. These abuse-resistant panels feature a non-combustible, moisture resistant gypsum core that is encased in a green colored fiberglass face and back that shed water. When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels score a “10” (highest). The fiberglass face is folded around the long edges to reinforce and protect the core, and the ends are cut square and even. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type AR panels are listed.

INTENDED FOR

- Commercial or residential applications where 15.9 mm moisture- and mold-resistant Type X panels with greater resistance to surface abrasion, indentation and impact damage are required
- Areas where additional abuse resistance is desired
- Areas where glass-mat panels are desired
- Load-bearing and non-load-bearing wood- or steel-framed fire-rated walls
- New or repair and remodel construction

LIMITATIONS

1. Avoid exposure to sustained temperatures exceeding 52°C.
2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
3. Must be stored off the ground and under cover in accordance with Gypsum Association’s GA-801, Handling and Storage of Gypsum Panel Products.

INTERIOR INSTALLATION

4. For abuse-resistant construction over steel stud framing, minimum 20-gauge (0.752 mm base metal thickness) steel studs, as defined by the Steel Stud Manufacturers Association (SSMA), are recommended.
5. Not intended for exterior applications or constant exposure to water. Protect from immersion in water and the eroding effects of cascading water.
6. Building must be dried-in prior to installation in soffits and other horizontal applications. Wall cavities, floor cavities and other enclosed areas, including insulation, must be dry prior to being closed-up and application of interior finishing.
7. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers, and other areas subject to direct water exposure.
8. Use as a wall tile substrate is limited to tile installed according to current TCNA and ANSI specifications. Consult with adhesive and tile manufacturers for recommendations for maximum size and weight parameters for use with gypsum panels.

For maximum framing spacing in non-fire-resistance-rated applications of gypsum panel products, refer to Gypsum Association’s GA-216, Specifications for the Application and Finishing of Gypsum Panel Products or ASTM C840, Standard Specification for Application and Finishing of Gypsum Board. For fire-resistance-rated applications, refer to the published UL Design or GA File Number.

Maximum Framing Spacing for Single-Layer Application

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	15.9 mm	Parallel	600 mm
		Perpendicular	600 mm

Maximum Framing Spacing for Multi-Layer Application Without Adhesive Between Layers

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	15.9 mm	Parallel	600 mm
		Perpendicular	600 mm

Notes:

1. On ceilings to receive water-based texture material, 15.9 mm gypsum board shall be applied either parallel to framing spaced at 400 mm OC or perpendicular to framing spaced maximum 600 mm OC. See Appendix A.3 of Gypsum Association’s GA-216, Specifications for the Application and Finishing of Gypsum Panel Products for more information..

USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X are by design stronger and have greater surface hardness than standard 5/8 in. (15.9 mm) Type X panels. Because of this, they are heavier and will be more difficult to install. Slower installation production rates should be accounted for in job planning.

Installing USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X on steel thinner than 20-gauge (minimum 0.0296 in. [0.752 mm] base metal thickness), as defined by the SSMA, may result in increased fastener strip-out, improper screwhead seating or other related conditions.

FINISHING AND DECORATING

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing products.

The nature of the texture and absorption properties of the panel will require an additional skim coat of the entire panel surface with joint compound in most applications. Additionally, an aesthetic benchmark or mock-up is recommended for establishing and demonstrating an approved finishing system to coordinate the expectations of the design professionals with those of the contracted workforce. The finished appearance of the constructed standard should be approved in advance of any widespread work.

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer’s directions for materials used. Gypsum Association’s GA-214, Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with USG Sheetrock® All Purpose Joint Compound. Allow to dry before decorating. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural lighting, or will be decorated with a gloss paint (eggshell, semigloss or gloss), the gypsum panel should be skim coated with joint compound. This equalizes suction and texture differences between the fiberglass face and the finished joint compound before painting. When a Level 5 finish is required, use USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacers.

INSTALLATION

Property		ASTM Test Method	Requirement	UL Type AR
Noncombustibility		E136	Noncombustible	Meets
Surface-burning characteristics	Flame Spread	E84	Flame Spread Index, not greater than 25 ¹	0
	Smoke Developed	E84	-	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness (lbf)	Field	C473 (B)	Not less than 15 lbf	Meets
	End	C473 (B)	Not less than 15 lbf	Meets
	Edge	C473 (B)	Not less than 15 lbf	Meets
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 100 lbf	Meets
	Perpendicular	C473 (B)	Not less than 140 lbf	Meets
Humidified deflection, gypsum wallboard		C473	Not greater than 6 mm ¹	Meets
Nail pull resistance (lbf)		C473 (B)	Not less than 90 lbf	Meets

Notes:

1. Per ASTM C1658 for 15.9 mm glass mat gypsum panels.

MOISTURE AND MOLD RESISTANCE

Per ASTM C473, Test Methods for Physical Testing of Gypsum Panel Products, the average water absorption for USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X is not greater than 5% by weight after two-hour immersion. In independent lab tests conducted per ASTM D3273 at the time of manufacture, the panels meet or exceed ASTM C1396 specifications. This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building.

This can be accomplished by using good design and construction practices.

PRODUCT DATA

	Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X
Thickness	15.9 mm
Lengths ¹	2440-3660 mm
Width	1220 mm
Weight ² , nominal	13.7 kg/m ²
Edges	Tapered
Packaging	Two panels per bundle

Notes:

1. Other sizes available by special order.

2. Represents approximate weight for design and shipping purposes.

ABUSE RESISTANCE

Fastener Spacing, Single-Layer Over Metal Framing

Test Standard	Test Summary	ASTM C1629 Classification Levels	Test Results
Abrasion Resistance ASTM D4977	A sample is placed under a wire brush weighted with 11.3 kg. The brush is then cycled 50 times back and forth across the surface. This creates surface wear that is measured to determine the level of abrasion resistance.	Maximum Depth Level 1 = 3.2 mm Level 2 = 1.5 mm Level 3 = 0.3 mm	Level 2 ¹
Indentation Resistance ASTM D5420	A 0.91 kg weight is raised to a 914 mm) height and dropped onto a 15.9 mm hemispherical die that strikes the sample with 72 in•lb (12.6 J) of force. The depth of the indentation is measured to determine the level of indentation resistance.	Maximum Depth Level 1 = 3.8 mm Level 2 = 2.5 mm Level 3 = 1.3 mm	Level 2
Soft-Body Impact Resistance ASTM C1629	A 27.2 kg leather bag is suspended on a rope and raised away angularly from a sample installed on 38 x 89 mm metal framing 406 mm OC. The bag is raised (152 mm increments) and released to impact the sample. The impact energy is calculated based upon the bag weight and drop height where structural failure occurs.	Minimum ft•lbf (structural failure) Level 1 = 90 ft•lbf (122 J) Level 2 = 195 ft•lbf (265 J) Level 3 = 300 ft•lbf (408 J)	Level 3
Hard-Body Impact Resistance ASTM C1629	A 610 x 610 mm sample is mounted vertically to a metal frame and impacted with a 70 mm diameter weighted swinging ram (resembling a sledgehammer). Weight is added in 1.1 kg increments to increase the impact force. Failure energy is determined when penetration through the face into the frame cavity occurs.	Minimum ft•lbf (structural failure) Level 1 = 50 ft•lbf (68 J) Level 2 = 100 ft•lbf (136 J) Level 3 = 150 ft•lbf (204 J)	Level 4

Notes:

1. USG testing demonstrates that when painted with one coat of primer and two coats of semigloss latex paint, the abrasion resistance increases to Level 3.

COMPLIANCE

- Comply with ASTM C1658 for 15.9 mm, Type X and glass-mat water-resistant gypsum panel
- Meet ASTM C1629 classification for abuse-resistant gypsum panels
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

Notice:

As we are involved in constant products development; this document information is subject to change without prior notice. Please always refer to usgme.com for the updated products information document.

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