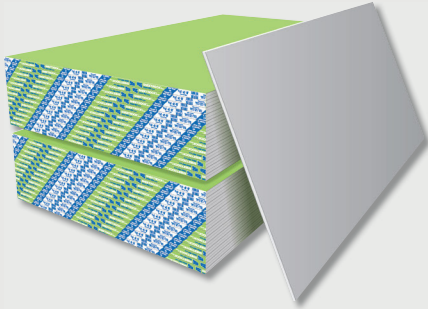


CGC SHEETROCK® BRAND GLASS-MAT PANELS MOLD TOUGH® AR FIRECODE® X



15.9 mm (5/8 in.) glass-mat Type X panels with abuse, moisture and mould 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 (5/8 in.) CGC 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 (5/8 in.), Type X and glass-mat water-resistant gypsum panel
- Tested to ASTM C1629, *Standard Classification for Abuse-Resistant Nondecorated 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. (cUL) Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

CGC Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X (UL Type AR) are 15.9 mm (5/8 in.) Type X panels designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 15.9 mm (5/8 in.) CGC Sheetrock® Brand Glass-Mat Panels Mold Tough® Firecode® X. These abuse-resistant panels feature a noncombustible, moisture-resistant gypsum core that is encased in a green coloured 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 CGC Sheetrock® or Synko® Brand joint treatment systems. The panels are cUL 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 (5/8 in.) moisture- and mould-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
- Loadbearing and non-loadbearing wood- or steel-framed fire-rated walls
- New or repair and remodel construction

LIMITATIONS

1. Avoid sustained exposure to temperatures exceeding 52°C (125°F).
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*.

LIMITATIONS, CONT.

4. For abuse-resistant construction over steel stud framing, minimum 20-gauge (0.752 mm [0.0296 in.] 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 TTMAC, TCNA and ANSI specifications. Consult with adhesive and tile manufacturers for recommendations for maximum size and weight parameters for use with gypsum panels.

INTERIOR INSTALLATION, FINISHING AND DECORATING INSTALLATION

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	Gypsum Panel Thickness	Gypsum Panel Orientation to Framing	Maximum Framing Spacing OC
Ceilings ¹	15.9 mm (5/8 in.)	Parallel	406 mm (16 in.)
		Perpendicular	610 mm (24 in.)
Walls	15.9 mm (5/8 in.)	Parallel	610 mm (24 in.)
		Perpendicular	610 mm (24 in.)

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

Location	Gypsum Panel Thickness	Gypsum Panel Orientation to Framing	Maximum Framing Spacing OC
Ceilings ¹	15.9 mm (5/8 in.)	Parallel	406 mm (16 in.)
		Perpendicular	610 mm (24 in.)
Walls	15.9 mm (5/8 in.)	Parallel	610 mm (24 in.)
		Perpendicular	610 mm (24 in.)

Note:

1. On ceilings to receive water-based texture material, 15.9 mm (5/8 in.) gypsum panels shall be applied either parallel to framing spaced at 406 mm (16 in.) OC or perpendicular to framing spaced maximum 610 mm (24 in.) OC. See Appendix A.3 of Gypsum Association's GA-216, *Specifications for the Application and Finishing of Gypsum Panel Products* for more information.

CGC Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X are by design stronger and have greater surface hardness than standard 15.9 mm (5/8 in.) 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 CGC Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X on steel thinner than 20-gauge (minimum 0.752 mm [0.0296 in.] base metal thickness), as defined by the SSMA, may result in increased fastener strip-out, improper screwhead seating or other related conditions. For more information, refer to USG TechNOTE, *Reducing Occurrences of Screw Spinout on Steel Studs When Installing Abuse- & Impact-Resistant Gypsum Panels* (ST700).

Interior assemblies are generally not designed to withstand wind loads and other mechanical loads from extreme weather. If the structure will stand open during a period of storms and high winds, fastener spacing and structural design shall be reviewed and revised, as appropriate, for the interior walls to withstand the resulting loads and movements. For more information, refer to CGC literature *Pre Dry-In Construction White Paper* (WB2665).

**INTERIOR INSTALLATION,
FINISHING AND DECORATING**

For high-quality finishing results, CGC recommends CGC Sheetrock® or Synko® Brand interior 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 CGC Sheetrock® Brand First Coat™ Primer, Synko® Brand Pre-Coat™ Drywall Surface Equalizer or with an undiluted interior latex flat paint with high-solids content. 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 CGC Sheetrock® Brand Tuff-Hide™ Primer-Surfacer. See *CGC Sheetrock® Brand Tuff-Hide™ Primer-Surfacer Submittal Sheet* (JC0156) for limitations and application instructions.

For more information, refer to CGC literature, *Finishing and Decorating Glass-Mat Gypsum Panels White Paper* (WB2646).

TEST DATA

Property		Test Method	Requirement	UL Type AR
Noncombustibility		CAN/ULC-S114	Noncombustible	Meets
Surface-burning characteristics	Flame spread	CAN/ULC-S102	Flame Spread Index, not greater than 25	0
	Smoke developed	CAN/ULC-S102	N/A ²	0
Core hardness	Field	ASTM C473 (B)	Not less than 15 lbf (67 N) ²	Meets
	End	ASTM C473 (B)	Not less than 15 lbf (67 N) ²	Meets
	Edge	ASTM C473 (B)	Not less than 15 lbf (67 N) ²	Meets
Flexural strength	Parallel	ASTM C473 (B)	Not less than 100 lbf (445 N) ²	Meets
	Perpendicular	ASTM C473 (B)	Not less than 140 lbf (623 N) ²	Meets
Humidified deflection		ASTM C473	Not greater than 1/4 in. (6 mm) ²	Meets
Nail pull resistance		ASTM C473 (B)	Not less than 90 lbf (400 N) ²	Meets

Note:

2. Per ASTM C1658 for 15.9 mm (5/8 in.) glass mat gypsum panels.

MOISTURE AND MOULD RESISTANCE

Per ASTM C473, *Test Methods for Physical Testing of Gypsum Panel Products*, the average water absorption for CGC 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 score a "10", meeting ASTM C1658 specifications. This ASTM lab test may not accurately represent the mould performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mould. To manage the growth of mould, 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.

ABUSE RESISTANCE

Test Standard	Test Summary	ASTM C1629 Classification Levels	Test Results
Abrasion Resistance ASTM D4977	A sample is placed under a wire brush weighted with 25 lbs. (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 = 0.126 in. (3.2 mm) Level 2 = 0.059 in. (1.5 mm) Level 3 = 0.010 in. (0.3 mm)	Level 2 ³
Indentation Resistance ASTM D5420	A 2 lb. (0.91 kg) weight is raised to a 36 in. (914 mm) height and dropped onto a 5/8 in. (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 = 0.150 in. (3.8 mm) Level 2 = 0.100 in. (2.5 mm) Level 3 = 0.050 in. (1.3 mm)	Level 2
Soft-Body Impact Resistance ASTM C1629	A 60 lb. (27.2 kg) leather bag is suspended on a rope and raised away angularly from a sample installed on 2 x 4 in. (38 x 89 mm) wood framing 16 in. (406 mm) O.C. The bag is raised (in 6 in. [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 2 x 2 ft. (610 x 610 mm) sample is mounted vertically to a metal frame and impacted with a 2.75 in. (70 mm) diameter weighted swinging ram (resembling a sledgehammer). Weight is added in 2.5 lb. (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 1

Note:

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

PRODUCT INFORMATION

See cgcinc.com for the most up-to-date product information.

GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

CAUTION

Dust may cause irritation to eyes, skin, nose, throat, and upper respiratory tract. Cut and trim with a utility knife or hand saw to minimize dust levels. Power tools must be equipped with a dust collection system. Wear eye, skin, and respiratory protection if necessary. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call a physician. Do not swallow. If swallowed, call a physician. For more information please visit cgcinc.com to view the Safety Data Sheet (SDS).
KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

The trademarks CGC, FIRECODE, FIRST COAT, PRE-COAT, MOLD TOUGH, SHEETROCK, SYNKO, TUFF-HIDE, IT'S YOUR WORLD. BUILD IT., the CGC logo, the design elements and colours, and related marks are trademarks of USG Corporation or its affiliates.

NOTE

Products described here may not be available in all geographic markets. Consult your CGC Inc. sales office or representative for information. The information in this document is subject to change without notice. CGC Inc. assumes no responsibility for any errors that may inadvertently appear in this document.

NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.



PRODUCT DATA

	UL Type AR
Thickness	15.9 mm (5/8 in.)
Lengths⁴	2438-3658 mm (8-12 ft.)
Width	1219 mm (4 ft.)
Weight⁵, nominal	13.7 kg/sq. m. (2.8 lb./sq. ft.)
Edges	Tapered
Packaging	Two panels per bundle

Notes:

- Other sizes available by special order. Check with your local CGC representative for availability.
- Represents approximate weight for design and shipping purposes. For specific product weight in your area, contact your local CGC representative or call the Customer Service Center at 800 387-2690 (English) or 800 361-1310 (French)

COMPLIANCE

- Comply with ASTM C1658 for 15.9 mm (5/8 in.), Type X and glass-mat water-resistant gypsum panel
- Meet ASTM C1629 classification for abuse-resistant gypsum panels
- cUL Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

800 387-2690 - English
800 361-1310 - French
cgcinc.com

Manufactured by
CGC Inc.
350 Burnhamthorpe Rd. W, 5th Floor
Mississauga, ON, L5B 3J1

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