

# CGC SHEETROCK® BRAND AR FIRECODE® C PANELS



## DESCRIPTION

### 12.7 mm (1/2 in.) Type C panels with abuse resistance for interior applications

- Designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 12.7 mm (1/2 in.) CGC Sheetrock® Brand Firecode® C panels.
- Comply with ASTM C1396, *Standard Specification for Gypsum Board*, for 12.7 mm (1/2 in.) gypsum wallboard
- 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
- 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)

CGC Sheetrock® Brand AR Firecode® C Panels (UL Type AR) are 12.7 mm (1/2 in.) Type C Panels designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 12.7 mm (1/2 in.) CGC Sheetrock® Brand Firecode® Type C Panels. These abuse-resistant panels feature a noncombustible gypsum core that is encased in 100% recycled, heavy duty face and back papers that form a high strength composite design. The face paper 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 C panels are listed. On the face, along the long edge of each panel, the UL Type Designation is printed for easy identification by building inspectors.

## INTENDED FOR

- Commercial or residential applications where 12.7 mm (1/2 in.) Type C panels with greater resistance to surface abrasion, indentation and impact damage are required
- Areas where additional abuse resistance is desired
- Load-bearing and nonload-bearing 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*.
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.

## 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 <sup>1</sup>	12.7 mm (1/2 in.)	Parallel	406 mm (16 in.)
		Perpendicular	610 mm (24 in.)
Walls	12.7 mm (1/2 in.)	Parallel	610 mm (24 in.)
		Perpendicular	610 mm (24 in.)

**INTERIOR INSTALLATION,  
FINISHING AND DECORATING, CONT.**  
INSTALLATION

**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 <sup>1</sup>	12.7 mm (1/2 in.)	Parallel	406 mm (16 in.)
		Perpendicular	610 mm (24 in.)
Walls	12.7 mm (1/2 in.)	Parallel	610 mm (24 in.)
		Perpendicular	610 mm (24 in.)

**Note:**

- On ceilings to receive water-based texture material, 12.7 mm (1/2 in.) gypsum board shall be applied perpendicular 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 AR Firecode® C Panels are by design stronger and have greater surface hardness than standard 12.7 mm (1/2 in.) Type C 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 AR Firecode® C Panels 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. The equivalent gauge framing is also more sensitive to screw configuration and thread pitch. Due to the wide variety of “equivalent” or “effective” gauge studs and the variation by manufacturer in actual steel thickness, refer to USG Tech Note, *Reducing Occurrences of Screw Spinout on Steel Studs When Installing Abuse- & Impact-Resistant Gypsum Panels* (ST700).

FINISHING AND DECORATING

For high-quality finishing results, CGC recommends CGC Sheetrock® or Synko® Brand interior finishing products.

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 drywall face paper and the finished joint compound before painting. As an alternative to skim coating, or 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 & Decorating Gypsum Panels White Paper* (J2010).

TEST DATA

Property	Test Method	Requirement	UL Type C
<b>Noncombustibility</b>	CAN/ULC-S114	Noncombustible	Meets
<b>Surface-burning characteristics</b>	Flame spread	CAN/ULC-S102	Flame Spread Index, not greater than 25
	Smoke developed	CAN/ULC-S102	N/A <sup>2</sup>
<b>Core hardness</b>	Field	ASTM C473 (B)	Not less than 11 lbf (49 N) <sup>2</sup>
	End	ASTM C473 (B)	Not less than 11 lbf (49 N) <sup>2</sup>
	Edge	ASTM C473 (B)	Not less than 11 lbf (49 N) <sup>2</sup>
<b>Flexural strength</b>	Parallel	ASTM C473 (B)	Not less than 36 lbf (160 N) <sup>2</sup>
	Perpendicular	ASTM C473 (B)	Not less than 107 lbf (476 N) <sup>2</sup>
<b>Humidified deflection</b>	ASTM C473	Not greater than 1-1/4 in. (32 mm) <sup>2</sup>	Meets
<b>Nail pull resistance</b>	ASTM C473 (B)	Not less than 77 lbf (343 N) <sup>2</sup>	Meets

**Note:**

- Per ASTM C1396 for 12.7 mm (1/2 in.) gypsum wallboard.

## TEST DATA CONT.

### ABUSE RESISTANCE

Test Standard	Test Summary	ASTM C1629 Classification Levels	Test Results
<b>Abrasion Resistance ASTM D4977</b>	A sample is placed under a wire brush weighted with 11.3 kg (25 lbs.). 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 (0.126 in.) Level 2 = 1.5 mm (0.059 in.) Level 3 = 0.3 mm (0.010 in.)	Level 2 <sup>3</sup>
<b>Indentation Resistance ASTM D5420</b>	A 0.91 kg (2 lb.) weight is raised to a 914 mm (36 in.) height and dropped onto a 15.9 mm (5/8 in.) hemispherical die that strikes the sample with 12.6 J (72 in•lb) of force. The depth of the indentation is measured to determine the level of indentation resistance.	Maximum Depth Level 1 = 3.8 mm (0.150 in.) Level 2 = 2.5 mm (0.100 in.) Level 3 = 1.3 mm (0.050 in.)	Level 1
<b>Soft-Body Impact Resistance ASTM C1629</b>	A 27.2 kg (60 lb.) 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 406 mm (16 in.) OC. The bag is raised (in 152 mm [6 in.] 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 2
<b>Hard-Body Impact Resistance ASTM C1629</b>	A 610 x 610 mm (2 x 2 ft.) sample is mounted vertically to a metal frame and impacted with a 70 mm (2.75 in.) diameter weighted swinging ram (resembling a sledgehammer). Weight is added in 1.1 kg (2.5 lb.) 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:**

3. 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 DATA

	UL Type C
<b>Thickness</b>	12.7 mm (1/2 in.)
<b>Lengths<sup>4</sup></b>	2438-3658 mm (8-12 ft.)
<b>Width</b>	1219 mm (4 ft.)
<b>Weight<sup>5</sup>, nominal</b>	10.5 kg/sq. m. (2.2 lb./sq. ft.)
<b>Edges</b>	Tapered
<b>Packaging</b>	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

- Complies with ASTM C1396 and CAN/CSA-A82.27-M for 12.7 mm (1/2 in.) gypsum wallboard
- Meets 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

<b>Job Name</b>	
<b>Contractor</b>	<b>Date</b>

### PRODUCT INFORMATION

See [cgcinc.com](http://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](http://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](http://cgcinc.com) to view the Safety Data Sheet (SDS).

**KEEP OUT OF REACH OF CHILDREN.**

### TRADEMARKS

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### NOTE

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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.



Customer Service  
800 387-2690 - English  
800 361-1310 - French  
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EWB2133C-CAN-ENG/rev. 6-20  
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