

SECTION 09 29 00 – GYPSUM BOARD, 5/8 in. (15.9 mm) USG Sheetrock® Brand EcoSmart Panels Firecode 30® (UL Type FC30)

Sustainability Notes: (Architecture 2030 Challenge for Products – LEED® v4 EPD/LCA improvements)	
<ul style="list-style-type: none"> USG Sheetrock® Brand EcoSmart Panels Firecode 30® (UL Type FC30) are formulated and manufactured using the most sustainable method to date <ul style="list-style-type: none"> Up to 25% less global warming potential (GWP)¹ Up to 30% less weight reduces transportation fuel energy by up to 20% Living Building Challenge™ Red List Free Contain 100% USDA certified biobased content Up to 97.3% recycled content (regionally available) Achieved GREENGUARD Gold Certification and qualify as a low VOC emitting material (meets CA 01350) USGBC® LEED® v4 – may assist in achieving additional credits Developed to meet the Architecture 2030 Challenge for Products, USG Sheetrock® Brand EcoSmart Panels Firecode 30® (UL Type FC30) have lower carbon dioxide emissions than standard Type X gypsum board. These values are defined by the Gypsum Association's Type III EPD per ISO 14040 for North American gypsum board. 	
Gypsum Panel	CO₂ eq. (kg CO₂/1000 sq. ft.)
USG Sheetrock® Brand EcoSmart Panels Firecode 30® (per EPD 218)	207
GA Industry Average – Standard 5/8 in. (15.9 mm) Type X	277
1. Compared to standard 5/8 in. (15.9 mm) Type X gypsum panels as presented in the Gypsum Association's 5/8 in. (15.9 mm) Type X Conventional Gypsum Board Environmental Product Declaration (EPD 10270).	

Product Summary:
<ul style="list-style-type: none"> Sustainable and ultralightweight 5/8 in. (15.9 mm) panels for interior wall and ceiling applications Feature an innovative noncombustible gypsum core encased in 100% recycled face and back papers that form a high strength-to-weight ratio composite design Comply with ASTM C1396, <i>Standard Specification for Gypsum Board</i>, for 5/8 in. (15.9 mm) and non-Type X gypsum wallboard Underwriters Laboratories Inc. (UL) Classification as to fire resistance (30-minute and 1-hour fire-rated walls), surface-burning characteristics and noncombustibility Offer comparable strength and sag resistance to standard 5/8 in. (15.9 mm) Type X Can be used in any UL Design in which Type FC30 panels are listed For more information, refer to product submittal sheet WB2858 or usg.com

Note to Specification Writers:
<ul style="list-style-type: none"> This document is not intended to function as a standalone specification. It is intended to assist the specifier in inserting the proper language into the following recommended specification sections: 09 29 00 – GYPSUM BOARD. This product is manufactured at USG gypsum panel plants, reducing distances and carbon footprint for transport. Panels shall be installed in accordance with GA-216, <i>Specifications for the Application and Finishing of Gypsum Panel Products</i> and ASTM C840, <i>Standard Specification for Application and Finishing of Gypsum Board</i>. Contact USG at 800.874.4968 for technical questions.



PART 2 – GYPSUM PANEL PRODUCTS

2.1 SUSTAINABLE NON-TYPE X GYPSUM PANEL

- A. ASTM C1396, *Standard Specification for Gypsum Board*, for 5/8 in. (15.9 mm) and non-Type X gypsum wallboard
1. Basis of Design: Subject to compliance with project requirements, the design is based on the following: United States Gypsum Company, USG Sheetrock® Brand EcoSmart Panels Firecode 30®
 2. ISO 14040 Environmental Management, Life Cycle Assessment, Principles and Framework:
 - a. Carbon emissions per Gypsum Association; Industry Standard Type III EPD for North American Type X wallboard have a Global Warming Potential value of 277 CO₂ eq.: **207 kg CO₂/1000 sq. ft.**
 - b. Primary energy from non-renewable resources per Gypsum Association; Industry Standard Type III EPD for North American Type X wallboard have a value of 4,100 MJ/1000 sq. ft.: **3,730 MJ/1000 sq. ft.**
 3. UL Type Designation: “FC30”
 4. ASTM E136 Noncombustibility: Meets
 5. ASTM E84 Surface-Burning Characteristics
 - a. Flame Spread: 15
 - b. Smoke Developed: 0
 - c. Class A (Flame spread not greater than 25 and smoke developed not greater than 450): Meets
 6. ASTM C473, *Standard Test Methods for Physical Testing of Gypsum Panel Products*
 - a. Core Hardness
 - 1) Field [Not less than 11 lbf (49 N)]: Meets
 - 2) End [Not less than 11 lbf (49 N)]: Meets
 - 3) Edge [Not less than 11 lbf (49 N)]: Meets
 - b. Flexural Strength
 - 1) Parallel [Not less than 46 lbf (205 N)]: Meets
 - 2) Perpendicular [Not less than 147 lbf (654 N)]: Meets
 - c. Nail Pull Resistance [Not less than 87 lbf (387 N)]: Meets
 - d. Humidified Deflection [Not greater than 5/8 in. (15.9 mm)]: Meets
 7. Thickness: 5/8 in. (15.9 mm)
 8. Length: 8-16 ft. (2438-4877 mm)
 9. Width: 4 ft. (1219 mm)
 10. Weight: 1.7 lb./sq. ft. (8.3 kg/sq. m.)
 11. Edge: Tapered
 12. Shear Value for Wood-Frame; Screws, 8 in. (203 mm) OC perimeter, 12 in. (305 mm) OC field: 75 plf
 13. Shear Value for Wood-Frame; Nails, 4 in. (102 mm) OC perimeter, 7 in. (178 mm) OC field: 127 plf

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