ICC EVALUATION SERVICE®

ICC-ES Listing Report

ESL-1560

Issued March 2025

This listing is subject to renewal March 2026.

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CSI: DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 12 13—Cementitious Reinforced Panels

Product Certification System:

The ICC-ES product-certification system includes evaluated evidence in support of test data in accordance with the standard(s) listed below. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: USG $^1/_2$-INCH STRUCTO-CRETE® BRAND STRUCTURAL PANELS

Listee: USG CORPORATION

Evaluation: USG $^1/_2$-inch STRUCTO-CRETE® Brand Structural Panels are concrete sheathing panels produced in nominal $^1/_2$-inch (12 mm actual) thick by 4-foot (1220 mm) wide and 8-foot (2440 mm) long sheets.

USG $^1/_2$-inch STRUCTO-CRETE® Brand Structural Panels have demonstrated compliance with the following standards:

- Modified ASTM D4255-15a (Procedure A), Standard Test Method for In-Plane Shear Properties of Polymer Matrix Composite Materials by the Rail Shear Method, ASTM International.
- Modified ASTM E72-22, Standard Test Methods of Conducting Strength Tests of Panels for Building Construction, ASTM International.
- ASTM E90-09 (Reapproved 2016), Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements, ASTM International.
- ASTM E119-22, Standard Test Methods for Fire Tests of Building Construction and Materials, ASTM International.
- Modified ASTM E564-06 (Reapproved 2018), Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings, ASTM International.
- CAN/ULC-S101-14, Standard Methods of Fire Endurance Tests of Building Construction and Materials, ULC Standards.
- UL 263-11 (with revisions through August 2021), Standard for Fire Tests of Building Construction and Materials, Underwriters Laboratories, Inc.

Findings: Evaluation of USG $^1/_2$-inch STRUCTO-CRETE® Brand Structural Panels, as components of the assembly, is based on testing in accordance with the applicable test method as referenced in each ICC Design No. Approval of the product's use is the sole responsibility of the local code (building) official.

The product's ultimate loads and performances values are based on testing in accordance with the test method referenced in Tables 1 through 3, as applicable. Approval of the product's use is the sole responsibility of the local code (building) official.

Identification:

1. The ICC-ES mark of conformity, electronic labeling, or the listing report number (ICC-ES ESL-1560) and when applicable the ICC-ES listing mark, along with the name, registered trademark, or registered logo of the listee must be included in the product label.
2. In addition, the packaging for the panels of USG $^1/_2$-inch STRUCTO-CRETE® Brand Structural Panels are identified with the USG Corporation name and address.

3. The report holder's contact information is the following:

   USG CORPORTATION
   700 NORTH HIGHWAY 45
   LIBERTYVILLE, ILLINOIS 60048
   (800) USG-4-YOU
   usg4you@usg.com

Installation: The product must be installed in accordance with the USG Corporation's published installation instructions and applicable codes.

Conditions of Listing:

1. The listing report addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
4. The design loads (ASD) used in the ASTM E119 testing for the load-bearing cold-formed steel-framed walls are based on the allowable axial load of the wall framing studs and support bracing (if applicable) in accordance with AISI S100 (North American Specification for the Design of Cold-Formed Steel Structural Members), unless noted otherwise. Sheathing was not considered in the calculation of the design loads.
5. For an assembly tested in accordance with ASTM E119, the Assembly Rating shall apply to both sides of the assembly (fire from either face of the wall), unless noted otherwise.
6. USG $^1/_2$-inch STRUCTO-CRETE® Brand Structural Panels are manufactured under a quality control program with inspections by ICC-ES.

TABLE 1 – MODIFIED ASTM D4255 (PROCEDURE A) TEST PERFORMANCE[1]

IN-PLANE SHEAR PROPERTIES (USG $^1/_2$-INCH STRUCTO-CRETE® BRAND STRUCTURAL PANELS)	**PERFORMANCE VALUE[2]**
Average Ultimate Shear Stress	940 psi
Average Shear Strain at Failure	0.0052 in./in.
Average Shear Modulus of Elasticity	539,000 psi

For **SI:** 1 inch = 25.4 mm, 1 psi = 6.89 kPa

Footnotes:
[1]ASTM D4255-15a (Procedure A – Two-Rail Shear Test) testing performed included variations from the prescribed test method and therefore reported as "modified". The deviations include the following: (1) the tested specimen thickness of $^1/_2$-inch was not within the recommended specimen thickness range of 0.05 to 0.13-inches in accordance with ASTM D4255-15a Section 8.2, (2) the method of measure to determine bending in the specimen was not performed in accordance with ASTM D4255-15a Sections 7.4.1 and 11.8.1, (3) the shear strain range used to calculate the chord shear modulus of elasticity was less than the range required per ASTM D4255-15a Section 13.4.1, and (4) the offset shear strength values (as calculated in accordance with ASTM D4255-15a Section 13.5) were not calculated or reported.
[2]Reported performance values have not been adjusted by safety factors and are not intended to be used as design values for allowable stress design. Any allowable loads must be verified by a registered design professional in accordance with accepted engineering practice.

TABLE 2 – MODIFIED ASTM E72 (SECTION 14) TEST PERFORMANCE[1,2,3]
(IN-PLANE SHEAR LOADING)

ASSEMBLY NUMBER	COLD-FORMED STEEL (CFS) BASE WALL FRAMING MEMBERS[4]				SINGLE / DOUBLE SIDED SHEATHING	FASTENER SPACING[6]	FASTENER EDGE DISTANCE (INCHES)	LOAD ASSOCIATED WITH 0.2-IN OF NET HORIZONTAL DISPLACEMENT (KIPS)	ULTIMATE LOAD[6] (KIPS)	GLOBAL SHEAR STIFFNESS OF THE ASSEMBLY, G' (KIP/INCH)
	STUDS	TRACK	MID-HEIGHT BRACING	END POST[5]						
1	18 ga. thick 362S162-43 CFS member (33 ksi) spaced max. 24-inches on center	18 ga. thick 362T125-43 CFS member (33 ksi)	18 ga. thick 362T125-43 CFS member (33 ksi)	Double	Single	6-inch o.c.	0.5	0.95	3.65	7.9
2					Single	6-inch o.c. (Modified)	0.5	1.28	4.97	9.8
3					Single	4-inch o.c.	0.5	1.02	5.22	7.8
4					Single	2-inch o.c.	0.5	1.27	6.88	10.5
5	16 ga. thick 362S162-54 CFS member (50 ksi) spaced max. 24-inches on center	16 ga. thick 362T125-54 CFS member (50 ksi)	18 ga. thick 362T125-43 CFS member (33 ksi)	Double	Single	6-inch o.c.	0.5	1.37	4.02	11.7
6					Single	6-inch o.c. (Modified)	0.5	1.42	5.33	13.0
7					Single	4-inch o.c.	0.5	1.50	5.68	15.6
8					Single	2-inch o.c.	0.5	2.40	8.51	17.5
9		16 ga. thick 362T200-54 CFS member (50 ksi)			Single	2-inch o.c.	1.25	2.03	10.79	19.6
10	14 ga. thick 362S162-68 CFS member (50 ksi) spaced max. 24-inches on center	14 ga. thick 362T200-68 CFS member (50 ksi)	18 ga. thick 362T125-43 CFS member (33 ksi)	Single	Single	2-inch o.c.	1.25	1.88	9.76	14.9
11				Double	Single	2-inch o.c.	1.25	2.34	11.70	27.5
12				Single	Double	2-inch o.c.	1.25	3.90	12.44	33.8
13				Double	Double	2-inch o.c.	1.25	3.98	18.70	43.2

For **SI:** 1 inch = 25.4 mm, 1 ksi = 6.89 MPa, 1 kip = 4.45 kN.

Footnotes:
[1]Ultimate load and performance values are based on ASTM E72-22 racking shear testing of 8 ft tall by 4 ft wide wall assemblies using one (1) 4 ft by 8 ft by $^1/_2$-inch thick STRUCTO-CRETE® Brand Structural Panel per side, as applicable.
[2]ASTM E72 (Section 14 – Racking Load) testing performed included variations from the prescribed test method and therefore reported as "modified". The variations include the following: (1) the tested specimen size of 8-ft by 4-ft and cold-formed steel framing were not in accordance with ASTM E72-22 Section 14.2.1 which requires the test specimen to be 8-ft by 8-ft and the framing to be the standard wood frame shown in ASTM E72-22 Figure 6, (2) the tested specimens did not include at least one centered vertical sheathing joint in accordance with ASTM E72-22 Section 14.2.4, (3) global shear stiffness values (G', in kips/inch) of the assembly, which is not a requirement of the ASTM E72-22 test method, were determined as a result of the testing.
[3]Reported ultimate load and performance values have not been adjusted for safety factors and are not intended to be used as design values for allowable stress design. Any allowable loads must be verified by a registered design professional in accordance with accepted engineering practice.
[4]Stud, track, and mid-height bracing members are secured together with No. 8, $^1/_2$-inch long Grabber Wafer Head - Drill Point Screws.
[5]End posts options are either single or double (back-to-back). For double end posts, steel stud members are secured together with No. 8, 1-inch long hex head drilling screws.
[6]All fasteners for attaching sheathing to framing (single or double sided) are No. 8, 1-5/8 inch long Grabber Winged Drill Point Cement Board Screws. All sheathing edges must be blocked. Fastening pattern spacing must follow Figures 1 through 5.

TABLE 3 – MODIFIED ASTM E564 TEST PERFORMANCE[1,2,3]

ASSEMBLY NUMBER	COLD-FORMED STEEL (CFS) BASE WALL FRAMING MEMBERS[4]				SPECIMEN SIZE	PANEL ORIENT.	FASTENER SPACING[6]	FASTENER EDGE DISTANCE (INCHES)	LOAD ASSOCIATED WITH 0.2-IN OF INTERNAL SHEAR DISPLACEMENT (KIPS)	ULTIMATE LOAD (KIPS)	INTERNAL SHEAR STIFFNESS OF THE ASSEMBLY, G'_{INT} (KIP/INCH)
	STUDS	TRACK	MID-HEIGHT BRACING	END POST[5]							
1	20 ga. thick 362S162-33 CFS member (33 ksi) spaced max. 24-inches on center	20 ga. thick 362T125-33 CFS member (33 ksi)	20 ga. thick 362T125-33 CFS member (33 ksi)	Single	8-ft by 4-ft	Vertical	6-inch o.c.	0.5	2.34	3.6	10.1
2				Double	8-ft by 4-ft	Vertical	6-inch o.c.	0.5	1.83	3.9	15.8
3				Single	8-ft by 8-ft	Vertical	6-inch o.c.	0.5	5.02	7.4	11.9
4				Double	8-ft by 8-ft	Vertical	6-inch o.c.	0.5	3.55	7.3	17.1
5			20 ga. thick 362T200-33 CFS member (33 ksi)	Single	8-ft by 8-ft	Horizontal	6-inch o.c.	0.5	4.31	7.2	14.2
6				Double	8-ft by 8-ft	Horizontal	6-inch o.c.	0.5	4.19	7.4	14.2

For **SI:** 1 inch = 25.4 mm, 1 ksi = 6.89 MPa, 1 kip = 4.45 kN.

Footnotes:
[1]Ultimate load and performance values are based on ASTM E564-06 (Reapproved 2018) shear resistance testing of 8 ft tall by 4 ft wide and 8 ft tall by 4 ft wide wall assemblies where only one side (single-sided) of the assembly has $^1/_2$-inch thick STRUCTO-CRETE® Brand Structural Panels installed.
[2]ASTM E564-06 (Reapproved 2018) testing performed included a variation from the prescribed test method and therefore reported as "modified". The variation includes the following: (1) hold-downs (tie-downs) were utilized on the tension side of the tested specimens. The hold-downs consisted of a plate and rollers attached to two $^1/_2$-inch diameter threaded rods connected to the loading frame.
[3]Reported ultimate load and performance values have not been adjusted for safety factors and are not intended to be used as design values for allowable stress design. Any allowable loads must be verified by a registered design professional in accordance with accepted engineering practice.
[4]Stud, track, and mid-height bracing members are secured together with No. 8, $^1/_2$-inch long Grabber Wafer Head - Drill Point Screws.
[5]End posts options are either single or double (back-to-back). For double end posts, steel stud members are secured together with No. 8, 1-inch long hex head drilling screws.
[6]All fasteners for attaching sheathing to framing are No. 8, 1-5/8 inch long Grabber Winged Drill Point Cement Board Screws. All sheathing edges must be blocked. Fastening pattern spacing must follow Figure 2.

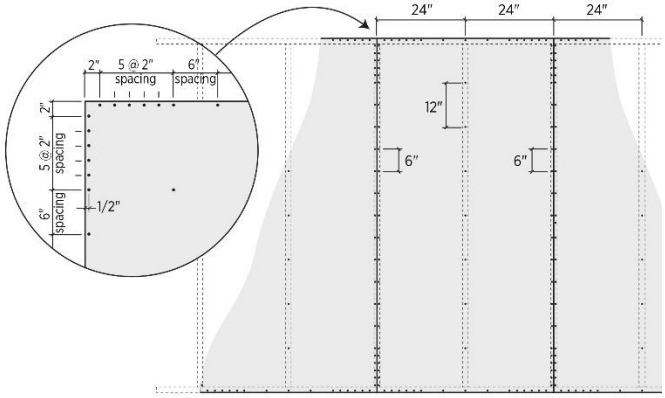


FIGURE 1 – 6-INCH O.C. MODIFIED SPACING (1/2-INCH EDGE SPACING)

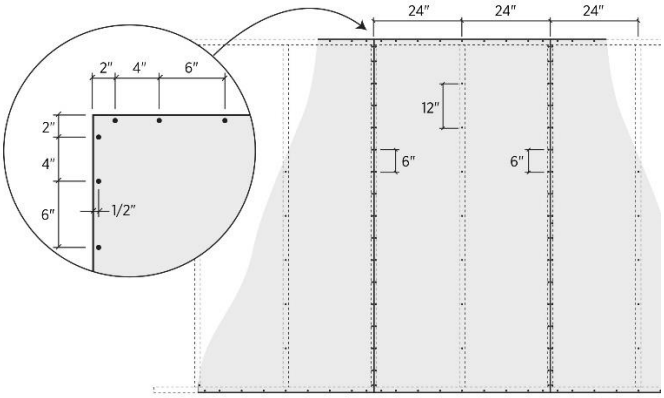


FIGURE 2 – 6-INCH O.C. SPACING (1/2-INCH EDGE SPACING)

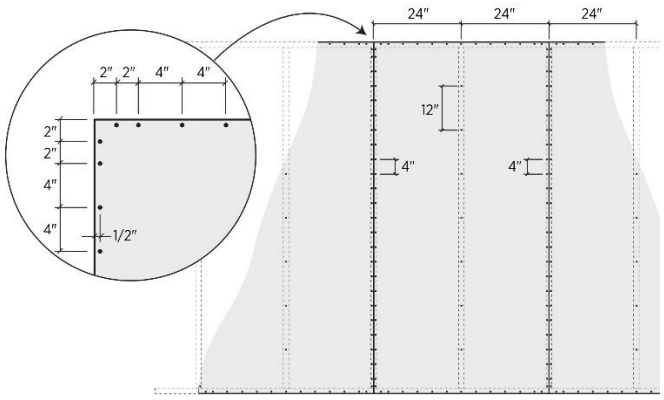


FIGURE 3 – 4-INCH O.C. SPACING (1/2-INCH EDGE SPACING)

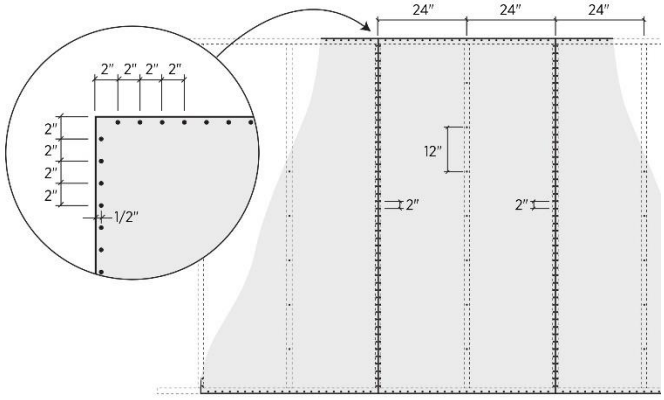


FIGURE 4 – 2-INCH O.C. SPACING (1/2-INCH EDGE SPACING)

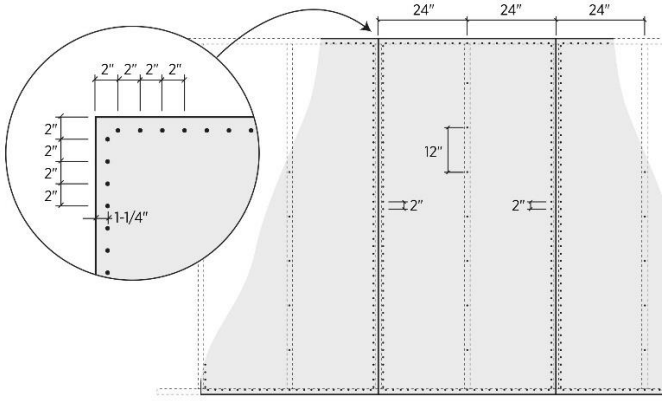


FIGURE 5 – 2-INCH O.C. SPACING (1 1/4-INCH EDGE SPACING)

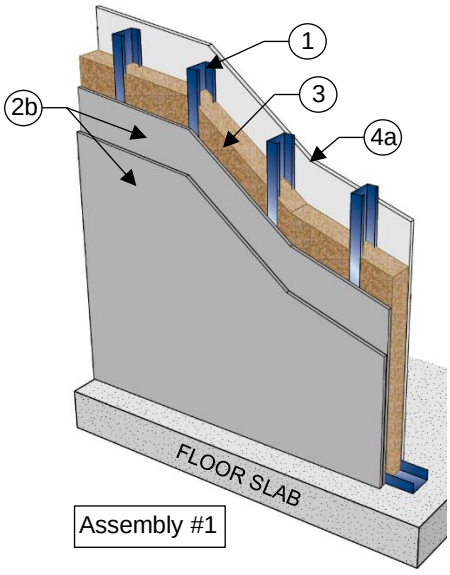
Applicant: USG CORPORATION

Product: USG 1/2-INCH STRUCTO-CRETE® BRAND STRUCTURAL PANELS

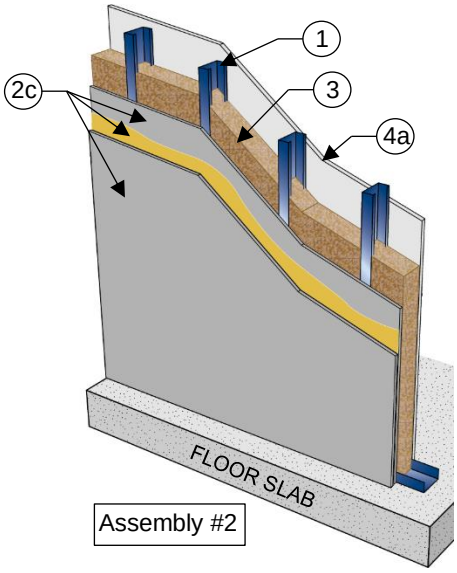
Standard: ASTM E90

Acoustical Performance Ratings: (See WPC-1560-01 Table 1)

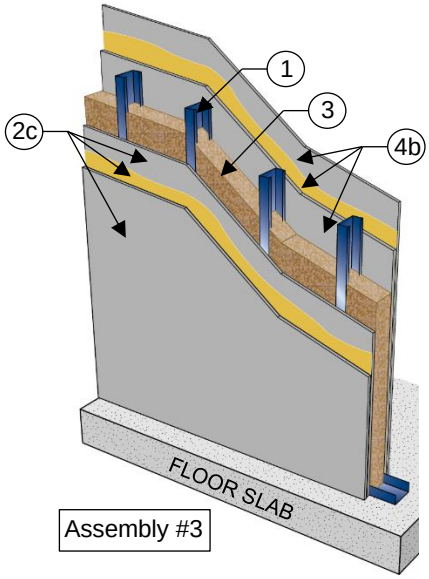
WPC = Wood, Plastics and Composites



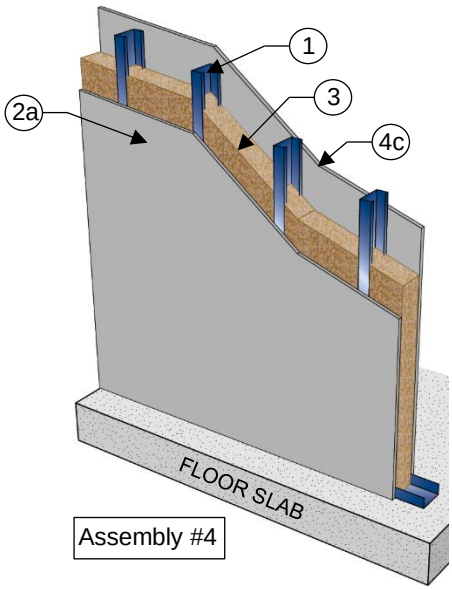
Assembly #1



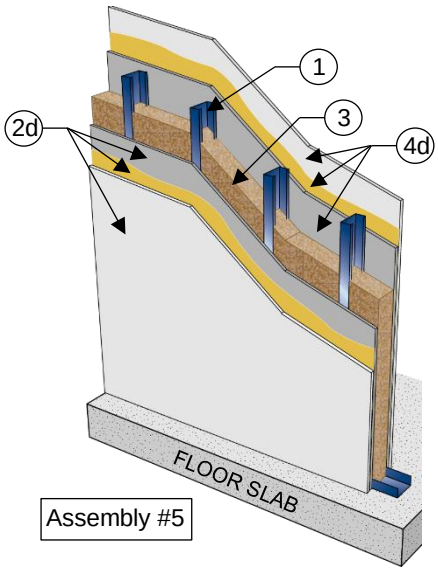
Assembly #2



Assembly #3



Assembly #4



Assembly #5

WPC-1560-01 TABLE 1 – ACOUSTICAL PERFORMANCE RATINGS FOR USG 1/2-INCH STRUCTO-CRETE® BRAND STRUCTURAL PANELS

			ASSEMBLY #				
			1	2	3	4	5
			STC/OITC Rating				
Component	**Item #**	**Component Details**	**50/33**	**53/33**	**60/43**	**47/31**	**56/36**
Wall Framing	**1**	Nominal 3 5/8-inch deep, 20 gauge (33 mils) thick, steel studs spaced 24 inches on center.	X	X	X	X	X
First Side Sheathing (Source Side)	**2a**	(1) Layer of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels				X	
	2b	(2) Layers of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels	X				
	2c	(2) Layers of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels. Construction adhesive applied between layers		X	X		
	2d	(1) Layer of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels (Base Layer) and (1) Layer of 5/8-inch USG Sheetrock® Brand Firecode® X (UL Type ULIX) (Face Later). Construction adhesive applied between layers					X
Cavity Insulation	**3**	Nominal 3 1/2-inch thick, R-13 glass fiber insulation is friction fit into each stud cavity.	X	X	X	X	X
Second Side Sheathing (Receiving Side)	**4a**	(1) Layer of 5/8-inch UL Type ULIX™ Gypsum Panels	X	X			
	4b	(2) Layers of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels. Construction adhesive applied between layers			X		
	4c	(1) Layer of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels				X	
	4d	(1) Layer of 1/2-inch USG STRUCTO-CRETE® Structural Brand Panels (Base Layer) and (1) Layer of 5/8-inch USG Sheetrock® Brand Firecode® X (UL Type ULIX) (Face Later). Construction adhesive applied between layers					X

For **SI:** 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pcf (lbs./ft^3) = 16.01 kg/m^3.

Footnotes:
See Components of Construction for assembly component details.

COMPONENTS OF CONSTRUCTION:

ITEM NO.	COMPONENTS	MATERIALS
1	**Wall Framing—**	Nominal 3 5/8-inch (92.1 mm) deep, 1 3/4-inch (44.5 mm) wide, 20 gauge (33 mils) thick, corrosion-protected or galvanized steel channel-shaped studs, spaced 24 inches (609.6 mm) on center. Studs are secured to top and bottom track members (nominal 3 5/8-inch (92 mm) deep, 1 inch (25.4 mm) wide, 20 gauge (33 mils) thick) with Type S12 wafer head stud screws.
2	**First Side Sheathing (Source Side)—** Use A, B, C or D	**A —** One layer of **$^1/_2$-inch (12.7 mm) thick USG STRUCTO-CRETE® Structural Brand Panels** must be installed vertically and secured to the framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long bugle head winged cement board screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Nominal 4 inch (104.8 mm) wide, 0.032-inch (0.8 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping must span between stud members and be secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		B — Two layers of **$^1/_2$-inch (12.7 mm) USG STRUCTO-CRETE® Structural Brand Panels**. Base layer panels must be installed vertically and secured to the framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center horizontally, 12-inches (304.8 mm) on center vertically, and 12-inches (304.8 mm) on center along the perimeter of the panels. Face layer panels must be installed vertically and secured through the base layer to framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center along the perimeter and in the field of the panels. Face layer vertical seams must be staggered from the base layer vertical seams. Nominal 4 $^1/_8$-inch (101.6 mm) wide, 0.028-inch (0.7 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping must span between stud members and be secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		C — Two layers of **$^1/_2$-inch (12.7 mm) USG STRUCTO-CRETE® Structural Brand Panels**. Base layer panels must be installed vertically and secured to framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center horizontally, 12-inches (304.8 mm) on center vertically, and 12-inches (304.8 mm) on center along the perimeter of the panels. Taylor Versatile Premium Pressure Sensitive Adhesive must be applied between layers using a $^1/_{16}$-inch (1.59 mm) V-notch trowel in accordance with the adhesive manufacturer's published application instructions. Face layer panels must be installed vertically and secured through the base layer to the framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center along the perimeter and in the field of the panels. Face layer vertical seams must be staggered from the base layer vertical seams. Nominal 4 $^1/_8$-inch (101.6 mm) wide, 0.028-inch (0.7 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping must span between stud members and be secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		D — One layer of **$^1/_2$-inch (12.7 mm) USG STRUCTO-CRETE® Structural Brand Panels** as the base layer and one layer of $^5/_8$-inch (15.9 mm) USG Sheetrock® Brand Firecode® X (UL Type ULIX) as the face layer. Base layer panels must be installed vertically and secured to framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long wafer head winged cement board screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Taylor Versatile Premium Pressure Sensitive Adhesive must be applied between layers using a $^1/_{16}$-inch (1.59 mm) V-notch trowel in accordance with the adhesive manufacturer's published application instructions. Face layer panels must be installed vertically and secured through the base layer to the framing members and steel strapping with 1 $^5/_8$-inch (41.3 mm) long Type S bugle head drywall screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Face layer vertical seams must be staggered from the base layer vertical seams. Nominal 4 inch (104.8 mm) wide, 0.032-inch (0.8 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping spans between stud members and is secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
3	**Cavity Insulation—**	Nominal 3 1/2-inch (88.9 mm) thick, R-13 glass fiber insulation is friction fit into each stud cavity.
4	**Second Side Sheathing (Receiving Side)—** Use A, B, C, or D	**A —** One layer of 5/8-inch (15.9 mm) UL Type ULIX Gypsum Panels must be installed vertically and secured to the framing members with 1 1/4-inch (31.8 mm) long Type S bugle head drywall screws spaced 8-inches (203.2 mm) on center along the perimeter and 12-inches (304.8 mm) on center in the field of the panels. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		B — Two layers of **1/2-inch (12.7 mm) USG STRUCTO-CRETE® Structural Brand Panels**. Base layer panels must be installed vertically and secured to the framing members and steel strapping with 1 5/8-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center horizontally, 12-inches (304.8 mm) on center vertically, and 12-inches (304.8 mm) on center along the perimeter of the panels. Taylor Versatile Premium Pressure Sensitive Adhesive must be applied between layers using a 1/16-inch (1.59 mm) V-notch trowel in accordance with the adhesive manufacturer's published

		application instructions. Face layer panels must be installed vertically and secured through the base layer to framing members and steel strapping with 1 5/8-inch (41.3 mm) long wafer head winged cement board screws spaced 24-inches (609.6 mm) on center along the perimeter and in the field of the panels. Face layer vertical seams must be staggered from the base layer vertical seams. Nominal 4 1/8-inch (101.6 mm) wide, 0.028-inch (0.7 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping must span between stud members and be secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		C — One layer of **1/2-inch (12.7 mm) thick USG STRUCTO-CRETE® Structural Brand Panels** must be installed vertically and secured to the framing members and steel strapping with 1 5/8-inch (41.3 mm) long bugle head winged cement board screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Nominal 4 inch (104.8 mm) wide, 0.032-inch (0.8 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Receiving Side of the wall assembly. The strapping must span between stud members and be secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.
		D — One layer of **1/2-inch (12.7 mm) USG STRUCTO-CRETE® Structural Brand Panels** as the base layer and one layer of 5/8-inch (15.9 mm) USG Sheetrock® Brand Firecode® X (UL Type ULIX) as the face layer. Base layer panels must be installed vertically and secured to framing members and steel strapping with 1 5/8-inch (41.3 mm) long wafer head winged cement board screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Taylor Versatile Premium Pressure Sensitive Adhesive must be applied between layers using a 1/16-inch (1.59 mm) V-notch trowel in accordance with the adhesive manufacturer's published application instructions. Face layer panels must be installed vertically and secured through the base layer to the framing members and steel strapping with 1 5/8-inch (41.3 mm) long Type S bugle head drywall screws spaced 12-inches (304.8 mm) on center along the perimeter and in the field of the panels. Face layer vertical seams must be staggered from the base layer vertical seams. Nominal 4 inch (104.8 mm) wide, 0.032-inch (0.8 mm) thick steel strapping must be installed as horizontal seam backing for the sheathing on the Source Side of the wall assembly. The strapping spans between stud members and is secured using two Type S12 wafer head stud screws at each stud location. All panel joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fastener heads must be covered with two layers of joint compound.

For **SI:** 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 lbs./ft^3 = 16.01 kg/m^3.

ICC Design No. WPC-1560-02

ESL-1560

Issued March 2025

This listing is subject to renewal March 2026.

Applicant: USG CORPORATION

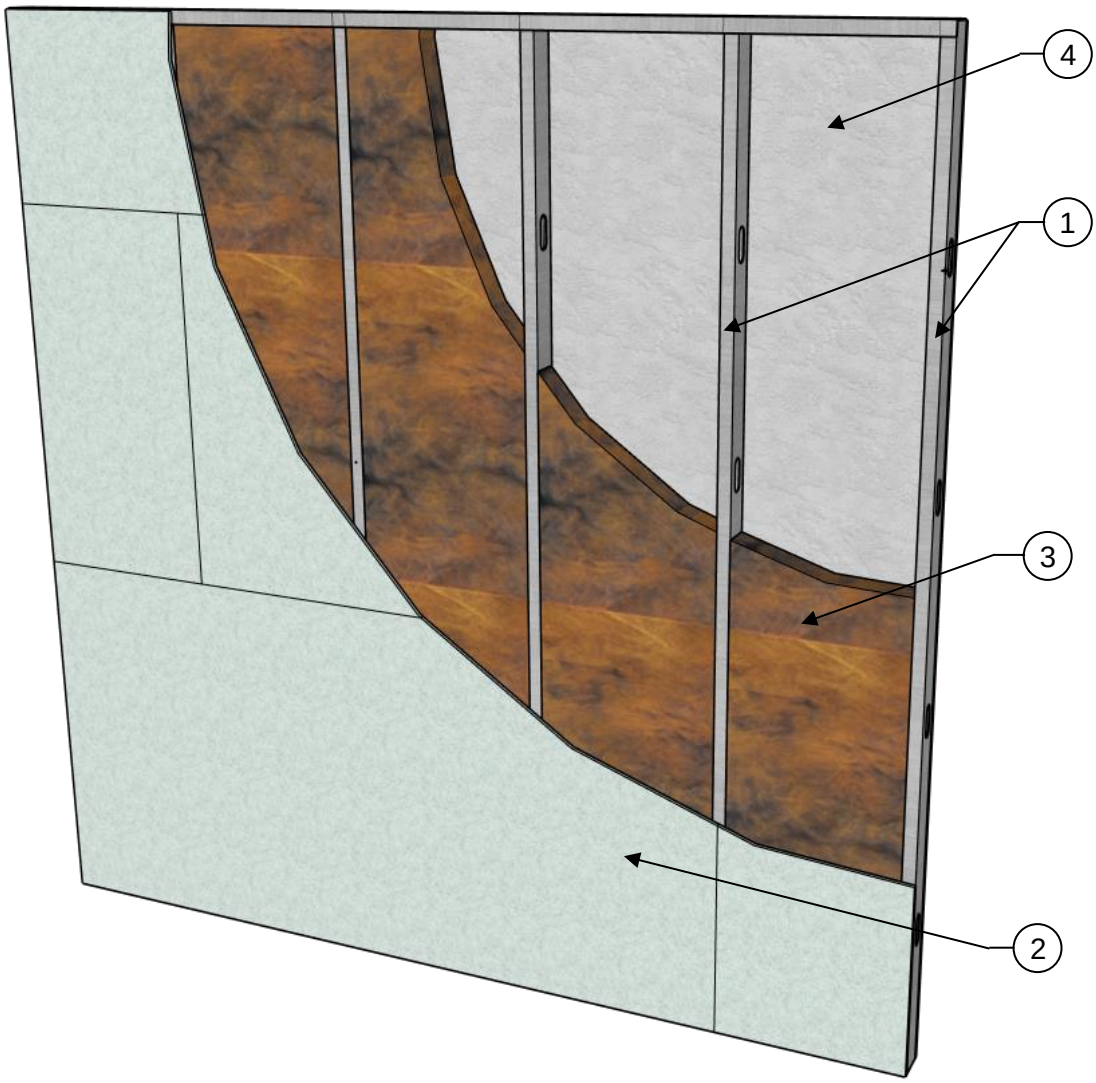
Product: USG $^{1}/_{2}$-INCH STRUCTO-CRETE® BRAND STRUCTURAL PANELS

Standard: ASTM E119 (UL 263) / CAN/ULC-S101

Assembly Rating: 1-Hour

Load: Load Bearing – See Conditions of Listing Note #4

WPC = Wood, Plastics and Composites



COMPONENTS OF CONSTRUCTION:

ITEM NO.	COMPONENTS	MATERIALS
1	**Wall Framing—**	Minimum 3 1/2-inch (88.9 mm) deep, minimum 20 gauge (33 mils) thick, corrosion-protected or galvanized steel channel-shaped studs, spaced at a maximum of 24 inches (609.6 mm) on center, are secured to top and bottom track members (with same gauge thickness as studs) with minimum 1/2-inch (12.7 mm) long No. 8 pan head self-drilling screws. Steel studs must have minimum 1 5/8-inch (41.3 mm) flanges and ½-inch (12.7 mm) returns. Note: See Conditions of Listing Item 4 of ESL-1560.
2	**First Side Sheathing (Source Side)—** Use either A or B	**A —** One layer of **1/2-inch (12.7 mm) thick USG STRUCTO-CRETE® Brand Structural Panels** must be secured directly to the framing on the first side of the wall assembly using minimum 1 5/8-inch (41.3 mm) long No. 8, wafer head screws with winged-tipped self-drilling points. Corner perimeter screws must be positioned 2 inches (50.8 mm) from the corner with the next screw positioned a maximum of 6 inches (152.4 mm) from the first screw. All subsequent perimeter fasteners must be spaced at a maximum of 8 inches (203.2 mm) on center. Fasteners in the field of the panels must be spaced 12 inches (304.8 mm) on center. STRUCTO-CRETE® Brand Structural Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. Horizontal seams are permitted to be left unbacked. STRUCTO-CRETE® Brand Structural Panels edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed.
		B — One layer of **3/4-inch (19 mm) thick USG STRUCTO-CRETE® Brand Structural Panels** must be secured directly to the framing on the first side of the wall assembly using minimum 1 5/8-inch (41.3 mm) long No. 8, wafer head screws with winged-tipped self-drilling points. Corner perimeter screws must be positioned 2 inches (50.8 mm) from the corner with the next screw positioned a maximum of 6 inches (152.4 mm) from the first screw. All subsequent perimeter fasteners must be spaced at a maximum of 8 inches (203.2 mm) on center. Fasteners in the field of the panels must be spaced at a maximum of 12 inches (304.8 mm) on center. STRUCTO-CRETE® Brand Structural Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. Horizontal seams are permitted to be left unbacked. STRUCTO-CRETE® Brand Structural Panels edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed.
3	**Cavity Insulation—** Use either A or B	**A —** R-11 glass fiber batt insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a minimum thickness of 3 1/2-inch (88.9 mm) is friction fit into each stud cavity. The insulation thickness cannot exceed the stud cavity depth.
		B — Minimum R-11 mineral fiber insulation, bearing the UL Classification Marking for surface burning and/or fire resistance, with a minimum thickness of 3 1/2-inch (88.9 mm) is friction-fit into each stud cavity. The insulation thickness cannot exceed the stud cavity depth.
4	**Second Side Sheathing—** Use either A or B	**A —** One layer of **5/8-inch (15.9 mm) USG Sheetrock® Brand Firecode® X (UL Type SCX) gypsum wallboard (GWB)** must be secured directly to the framing on the second side of the wall assembly using 1 1/4-inch (31.2 mm) long Type S bugle-head steel screws (minimum of three (3) exposed threads must protrude through framing members) spaced at a maximum of 8 inches (203.2 mm) on center along the perimeter and in the field of the gypsum board. Fasteners must be spaced a minimum of 3/8-inch (9.5 mm) from the edge of the panel. Gypsum wallboard may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. Horizontal seams are permitted to be left unbacked. All GWB tapered joints must be treated with a minimum level 2 finish consisting of nominal 2-inch (50.8 mm) wide paper tape and two layers of USG joint compound. All fasteners head must be covered with two layers of joint compound.
		B — One layer of **3/4-inch (19 mm) thick USG STRUCTO-CRETE® Brand Structural Panels** must be secured directly to the framing on the second side of the wall assembly using minimum 1 5/8-inch (41.3 mm) long No. 8, wafer head screws with winged-tipped self-drilling points. Corner perimeter screws must be positioned 2 inches (50.8 mm) from the corner with the next screw positioned a maximum of 6 inches (152.4 mm) from the first screw. All subsequent perimeter fasteners must be spaced at a maximum of 8 inches (203.2 mm) on center. Fasteners in the field of the panels must be spaced at a maximum of 12 inches (304.8 mm) on center. STRUCTO-CRETE® Brand Structural Panels may be installed vertically or horizontally to the studs. All vertical seams must fall on studs and must be staggered from one side of the assembly to the opposite sides of the assembly by a minimum of one stud cavity. Horizontal seams are permitted to be left unbacked. STRUCTO-CRETE® Brand Structural Panels edge joints are permitted to be left uncovered without joint compound. Fastener heads are permitted to be left exposed.
5	**Exterior Facing Assembly (Not Shown)—**	Where the assembly is used as an exterior wall, any exterior facing may be included, as authorized by the authority having jurisdiction, and must be installed in accordance with the manufacturer's installation instructions.

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