



CSI FORMAT SPECS



MEGCRETe™ SHEATHING SYSTEM

Format Specification – 062417, Issue. 050319

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. MEGCRETe™ wall board, interior and exterior applications
- B. MEGCRETe™ ceiling board
- C. MEGCRETe™ backer board & underlayment
- D. MEGCRETe™ “one hour” and “two hours” area separation walls
- E. MEGCRETe™ horizontal exterior siding
- F. MEGCRETe™ 111 Vertical exterior siding
- G. MEGCRETe™ drop ceiling panels
- H. MEGCRETe™ roofing and flooring substrate

NOTE: ALL MEGCRETE™ SHEATHING PRODUCTS ARE HIGH ABUSE, HIGH IMPACT AND CO2 NEGATIVE, AND USE THE SAME MANUFACTURING FORMULATION.

1.2 RELATED SECTIONS

- A. Section 05400 – Cold formed metal framing
- B. Section 06100 – Rough Carpentry: Wood framing
- C. Section 06100 – Rough Carpentry: Sheathing
- D. Section 06200 – Finish Carpentry: Adjacent work to receive fire treated sheathing



- E. Section 06400 – Architectural Woodwork: Adjacent work to receive fire treated sheathing
- F. Section 07210 - Insulation: Exterior wall insulation
- G. Section 07900 – Sealant: Joint sealant and acoustical sealant
- H. Section 08100 – Metal support assemblies
- I. Section 09215 – Veneer plaster

1.3 REFERENCES

- A. **ICC-ES AC308 Acceptance criteria for fiber-reinforced magnesium-oxide based sheets**
- B. **ASTM International (ASTM):**
 - 1. ASTM C1185-03 Flexural Strength
 - 2. ASTM C1325-04 Dimensions and Tolerances
 - 3. ASTM C1186-02 Moisture Movement
 - 4. ASTM C1186-02 Water Absorption
 - 5. ASTM C1325-04 Compression Indentation
 - 6. ASTM C1325-04 Nail Head Pull-Through
 - 7. ASTM C1325-04 Falling Ball Impact
 - 8. ASTM C1325-04 Shear Bond Strength
 - 9. ASTM C1396-06a Humidified Deflection
 - 10. AC308 and ASTM E72 section 15 Wet Racking Shear
 - 11. ASTM G155 Xenon Arc Accelerated Weathering



12. ASTM E84-05 Surface Burning Characteristics
13. ASTM E136-04 Behavior of Materials in a Vertical Tube at 750°C
14. University of Pittsburg Protocol Measurement of Acute Lethality of Thermal decomposition Products – Toxicity Test
15. ASTM C1185 Frost Resistance (Freeze / Thaw)
16. ASTM E119-08a Standard Test Methods for Fire Tests of Building Construction and Materials
17. ANSI / UL263 (ASTM E119 and NFPA 251) Underwriters Laboratory Standard Test Method for Building Construction and Materials– One Hour Wall Rating
18. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric materials to Fungi.
19. ASTM E84-05 Surface Burning Characteristics. MEGCRETe™ Sheathing products meet Class A and have zero smoke developed and zero flame spread.
20. ASTM E136 Noncombustible construction classification.
21. ULC S102-10, Surface Burning Characteristics. In Canada, MEGCRETe™ Sheathing products are zero smoke developed and zero flame spread.
22. ULC S135-14, Noncombustible construction classification.

C. Fire Rated Assemblies: Provide materials and construction identical to those tested in fire endurance rated assemblies by an independent testing agency acceptable to the authorities having jurisdiction.

1. Test method: ASTM E 119 / UL 263
2. Test method: CAN / ULC-S101M
3. Ratings: As indicated on the drawings; designations listed are from:
 - a. UL Fire Resistance Directory
 - b. ULC Fire Resistance Directory



D. Canadian Construction Materials Centre (CCMC)

1. Approved

E. Conformance Europeene (CE)

1. Fire testing completed and approved
2. Balance of testing in process

1.4 SUBMITTALS

A. Submit under provisions of 01300.

B. Product Data:

1. Manufacturers data sheets on each product to be used
2. Storage and handling requirements and recommendations
3. Installation methods

C. Closeout Submittals:

1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.5 QUALITY ASSURANCE

- A.** Follow good construction installation practices and MEGCRETe™ Sheathing System Installation Guidelines as applicable.

1.6 DELIVERY, STORAGE AND HANDLING

- A.** Deliver and store MEGCRETe™ Sheathing in accordance with this procedure
- B.** Ship materials on sturdy pallets and well covered to keep from weather, damage and dirt.



- C. Keep material dry prior to and during installation.
- D. Stack flat on dun-age – do not allow material to bow, or to sit directly on the ground.
- E. Do not stack other materials on top of MEGCRETe™ Sheathing.
- F. Protect MEGCRETe™ Sheathing from jobsite dirt.
- G. Protect edges, ends and faces of MEGCRETe™ Sheathing from damage.
- H. Store MEGCRETe™ Sheathing inside and protected from damage by weather and direct sunlight.

PART 2 PRODUCTS

2.1 Manufacturers

- A. Contact: SHLD Building Systems Calgary, AB, Canada. Tel: 1-587-331-6220, Email: admin@shldbuilt.com – Web: www.SHLDbuilt.com
- B. Substitutions: Not permitted

2.2 MEGCRETe™ Sheathing – All Products / Applications

A. Sheathing

- 1. Sizes
 - a. Lengths: 8', 9', 10' and 12'
 - b. Widths: 4' standard
 - c. Metric sizes are available upon request
 - d. Special sizes are available upon request
- 2. Thicknesses
 - a. 1/8" (3MM)
 - b. 3/32" (4MM)
 - c. 1/5" (5MM)
 - d. 1/4" (6MM)
 - e. 5/16" (8MM)
 - f. 11/32" (9MM)



- g. 3/8" (10MM)
- h. 7/16" (11MM)
- i. 15/32" (12MM)
- j. 17/32" (14MM)
- k. 5/8" (15MM)
- l. 23/32" (18MM)
- m. 3/4" (19MM)
- n. 25/32" (20MM)

3. Edges
- a. Square
 - b. Beveled
 - c. Tape step relief: 9MM thicknesses to 20MM thicknesses (other by special order)
 - d. Ship lap: 12mm minimum thickness
 - e. Tongue and Groove: 15mm minimum thickness

4. Physical Characteristics

DRY

THICKNESS	DIRECTION	AVE FLEXURAL	MODULUS OF
		STRENGTH (PSI)	ELASTICITY (PSI)
6MM	Machine	2296 PSI	1,158,532
	Cross	2054 PSI	1,145,587
10MM	Machine	1900 PSI	787,801
	Cross	1694 PSI	744,632
12MM	Machine	1038 PSI	625,536
	Cross	1508 PSI	719,574

SATURATED

6mm	Machine	2,023 PSI	608,575
	Cross	1,707 PSI	572,930
10MM	Machine	1,376 PSI	427,625
	Cross	1,068 PSI	402,869
12mm	Machine	1,110 PSI	364,706
	Cross	649 PSI	380,366

ICC AC-308 specifies a minimum average flexural strength of 580 psi. MEGCRETe™ Sheathing exceeds this requirement.

MEGCRETe™ SHEATHING



Dry flexural strength, in-house laboratory tested

THICKNESS	MPa
9 mm	18.67
15mm	8.88
18mm	7.426 (Standard sheathing)

5. Fungus / Mold: Non-nutrient when tested in accordance with ASTM G21

B. Siding

1. Sizes
 - a. Lengths: 12' maximum
 - b. Widths: 8 ½" and 9 ½"
 - c. Metric sizes are available upon request
 - d. Special sizes are available upon request
2. Thicknesses
 - a. 10mm
3. Edges
 - a. Square Edge
 - b. Bull Nose available upon request
5. Profiles
 - a. Wood Grain
 - b. Coarse Texture
 - c. Smooth

C. MEGCRETe™ 111

1. Sizes
 - a. Lengths: 12' maximum
 - b. Widths: 4' standard
 - c. Metric sizes are available upon request
 - d. Special sizes are available upon request
2. Thicknesses
 - a. 10mm minimum
3. Edges

MEGCRETe™ SHEATHING



- a. Square Edge

D. Roofing and Flooring Substrate

1. Sizes:
 - a. Lengths: 12’ maximum
 - b. Widths: 4’ standard
 - c. Metric sizes are available upon request
 - d. Special sizes are available upon request
2. Thickness:
 - a. 18mm minimum
3. Edges:
 - a. Square Edge
 - b. Ship Lap
 - c. Beveled
 - d. Tongue and Groove
4. Physical Properties – Tested per ASTM D6109

THICKNESS	FLEXURAL STRENGTH	MPa
18mm	≥1,372 PSI	9.46
	FLEXURAL MODULUS	MPa
	≥107 PSI	0.74
	SHEAR STRENGTH	MPa
	≥386 PSI	2.66

2.3 ACCESSORIES

- A. Refer to MEGCRETE™ Sheathing System Install Guides for fastener recommendations.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify site conditions are ready to receive work and framing and opening dimensions are as indicated on the Drawings. NOTE: Unsquared framing may result in board cracking.



- B. If preparation is the responsibility of another installer, notify Architect of any unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the specified results

3.3 INSTALLATION & FINISHING

- A. Follow MEGCRETe™ Sheathing System install guidelines for each product and installation application.

Finishing:

- 1. Interior and Exterior Applications can be finished with most any material including, but not limited to:
 - a. Exterior
 - i. Paint: Products recommended by Sherwin Williams
 - ii. Portland type stucco
 - iii. Synthetic stucco
 - iv. Tile
 - v. Brick
 - vi. Stone

NOTE: When stucco finish is specified, install MEGCRETe™ Sheathing System with the machined surface out.

- b. Interior
 - i. Paint:
 - ii. Wall paper
 - iii. Cloth or other similar finish
 - iv. Tile
 - v. Brick
 - vi. Stone
 - vii. Plaster
 - viii. Other



3.4 PROTECTION

- A. Protect installed products until completion of project and acceptance of work.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.5 CLEANUP

- A. Upon completion and acceptance of installed work, remove surplus materials, excess materials, rubbish, tools and equipment.
- B. Always follow local, State, and Federal guidelines for disposing of waste materials.

MEGCRET[™] Sheathing Systems are a non-toxic, mineral based, CO₂ negative green building material.

INSTALL IT FOR HEALTH – INSTALL IT FOR LIFE