

ARCHITECTURAL SPECIFICATIONS FOR VIROC CEMENT BONDED PARTICLE BOARD

Revised 10121/02

- I. GENERAL: The work under this section is subject to the provisions of the Contract Documents which in any way affect the work herein specified.
- II. SCOPE OF WORK
 - A. Furnish and Install all interior and exterior wall mounted VIROC cement bonded particleboard as indicated on the drawings or as herein specified
 - B. Coordinate this section with interfacing and adjoining work for proper sequencing of installation.
- III. WORK IN OTHER SECTIONS
 - A. Steel Studs
 - B. CRC horizontal bracing
 - C. Wood Studs and horizontal bracing
 - D. Wall Insulation
 - E. Gypsum wallboard
 - F. Exterior and Interior finishing and finishes
- IV. MATERIALS
 - A. All Interior and Exterior wall mounted VIROC panels shall be supplied by Allied Building Products Corp. and shall be installed in accordance with the current Viroc printed instructions.
 - B. VIROC Wall Panels
 1. Panels to be of U.S. (nominal) (metric mm) 5/16" (8mm), 3/8" (10mm), 1/2" (12mm), 5/8" (16mm), 3/4" (19mm), 7/8" (22mm), 1" (25mm), 1 1/8" (28mm), 1 1/4" (32mm), and 1 5/8" (40mm) thickness in 4' x 8' and 4' x 10' sizes as indicated on drawings. (Sizes less than indicated lengths and widths are available on special order.)
 2. Panels are standard production square edged. Tapered edges, ship laps, tongue and grooves are available on special order.
 3. Panels shall have the minimum physical properties (in dry conditions):
 - a. Non-Combustibility (per ASTM E- 136)
 - b. 0 Flame Spread and Smoke Development (per ASTM E- 84)
 - c. 1 hr. - 2 1/2hr. Fire Resistance (per ASTM E- 119)
 - d. 1 1/2hr. Horizontal Floor Fire Resistance (per ASTM E-I 19)
 - e. Modulus of Elasticity - 711,000 PSI (per ASTM C- 120)
 - g. Shear Strength - 2,250 PSI (per ASTM D-732)
 - h. Tensile Strength - 793 PSI (Parallel), 99.8 PSI (Perpendicular) (per ASTM D-209)
 - i. Compressive Strength - 6,860 PSI (per ASTM C- 170)
 - j. Coefficient of Linear Expansion - 1.07 in/in/deg C as per (per ASTM D-696)
 - k. Water vapor transmission

g/hr/m ²	.78
Grains /hr-ft ²	1.119
Permeance, US Perms	2.698
Permeability	1.241
 1. Thermal Conductivity "R" Value 0.36 (per ASTM C-156)
 - m. Impact Resistance 0.46 ft / lbs / inch of Notch (per ASTM D-256)
 - n. Sound Transmission STC Rating 31 at 1/2" thick (per ASTM E-90)
 4. Panels shall meet all of the evaluation standards as set forth in BOCA Research Report 94-61
 5. The proper panel thickness for the design load, deflection limit, and framing spacing shall be selected from the manufacture's loading tables.
 6. VIROC panels are water vapor permeable and will adapt to the ambient humidity level. For application of surface treatments which are not vapor permeable, the reverse side and edges of VIROC panels must be sealed with non-vapor permeable sealer.
 7. Panels shall consist of circa 19% wood particles by weight encapsulated in cement. Panels are to be free of asbestos, formaldehyde and hazardous volatiles. Wood particles are to be mineralized into a state where the board is resistant to attack from chemicals, weather, fire, insects and biological agents.

C. Mechanical Attachment

VIROC can be nailed, screwed, or fastened with clips. The panels should be pre-drilled whenever conditions of use require clearance on installation. In any event, whether the panels are nailed, screwed, or fastened with clips by the means of electric or pneumatic equipment, it is important to comply with manufacturer's instructions.

D. Fasteners

1. Countersunk screws designed for particle boards or gypsum boards, in stainless steel or galvanized, preferably self tapping screws with central tip adapted to the type of substrate.
 - a. Diameter: 2.2 to 3.1 nun
 - b. Length: 3 to 3.5 times the panel thickness

E. Surface Treatments

1. Synthetic stucco systems
 - a. VIROC is compatible with many acrylic systems. Consult particular manufacturers for approved application details.
2. Paints
 - a. VIROC has a smooth surface ready for paint decoration.
 - b. Insure that the surface is dust free before painting
 - c. VIROC has a pH ranging from 11-13. Use alkali resistant primers when applicable.

V. SAMPLES AND SUBMITTALS

- A. Submit two 6" x 6" pieces of VIROC panels in thickness selected.
- B. Submit two copies of specifications, installation instructions and general recommendations of the manufacturer.

VI. TESTS: Meet minimum mechanical and physical properties, as herein specified, tested by independent laboratories with corroborating support documentation.

VII. FIRE RESISTANCE: VIROC is rated for 0 flame spread and 0 smoke developments under ASTM E 84. It is also non-combustible in accordance with ASTM E-136. Consult Manufacturer for specific fire rated assemblies as required.

VIII. MANUFACTURING TOLERANCES

- A. Length / Width + - 5mm
- B. Squareness + - 2.5mm on a panel width
- C. Straightness of Edges 6.5mm/meter
- D. Thickness + - 0.7 nun up to 10mm thickness
+ - 1.0mm for thickness of 12 to 16mm
+ - 1.5mm for thickness of 19mm or greater

IX. DELIVERY AND STORAGE

- A. VIROC panels are normally delivered to site in wrapped units with edge protection to facilitate forklift handling. When transporting loose panels by truck, they must be laid flat and fully protected against edge damage and covered with a waterproof protection. When hand carrying single panels, they must be carried on the edge.
- B. Deliver, store, and handle materials to prevent breakage, warpage, or damage by water.
- C. Acclimatize materials by storing on site not less than two days prior to installation.
- D. Material should be stored on leveled dunnage not exceeding 32" on centers, elevated above the ground, and covered top and sides to prevent water damage.
- E. Panels should be stored flat and not on edges.