

SECTION 09831

FIRE-RATED ACOUSTICAL BARRIERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Tackable wall panels.
- B. Ceiling paneling.
- C. Display wall.
- D. Tack board.
- E. Tackable substrate for fire-rated wall covering.
- F. Wall sheathing.
- G. Noise-deadening resilient carpet underlayment.
- H. Soffits.
- I. Fire-rated garage interiors.
- J. Interior siding.
- K. Exterior siding.
- L. \_\_\_\_\_.

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry.
- B. Section 07260 - Vapor Retarders.
- C. Section 07460 - Siding.
- D. Section 09110 - Non-Load-Bearing Wall Framing.
- E. Section 09250 - Gypsum Board.
- F. Section 09680 - Carpet.
- G. Section 09900 - Painting.
- H. Section 10300 - Fireplaces and Stoves.

I. Section \_\_\_\_\_ - \_\_\_\_\_.

### 1.3 REFERENCES

- A. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.
- B. ASTM D 1037 - Test Methods of Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
- C. UL - Report No. R-5268.
- D. UL Canada - File No. CR909.
- E. \_\_\_\_\_.

### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's catalog data, detail sheets, and specifications.
- C. Quality Assurance/Control Submittals:
  - 1. Manufacturer's installation instructions.

### 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
  - 1. Minimum 10 years experience in producing fire-rated panels of the type specified herein.

### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original packages.
- B. Inspect the materials upon delivery to assure that specified products have been received.
- C. Report damaged material immediately to the delivering carrier and note such damage on the carrier's freight bill of lading.
- D. Store materials in a dry place, indoors, or on raised platform protected from weather damage.

## PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Homasote Company, P.O. Box 7240, West Trenton, NJ 08628-0240; ASD. Tel: (609) 883-3300, Fax: (609) 530-1584, Internet address: <http://www.homasote.com>; For local rep contact: Sweet's Buyline 1-800-892-1165 (#0878).
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.
- D. Provide all fire-rated panels from a single manufacturer.

## 2.2 MATERIALS

- A. N.C.F.R.(R) Homasote: Class A fire rated, physical properties as follows:
  - 1. Thickness: 1/2 inch (13 mm).
  - 2. Density: 34-40 pcf (544-640 kg/cubic m).
  - 3. Tensile Strength parallel to surface: 400-700 psi (2,755-4,830 kPa) minimum.
  - 4. Transverse M.O.R.: 600-950 psi (4,140-6,555 kPa) minimum.
  - 5. Hardness (Janka Ball): 275 lbs. (124 kg) minimum.
  - 6. Water Absorption by Volume; ASTM D 1037:
    - a. 2 hour immersion: 5 percent maximum.
    - b. 24 hour immersion): 14 percent maximum.
  - 7. Expansion, 50 to 90 percent relative humidity: 0.30 percent.
  - 8. R-value: 0.85 (0.015).
  - 9. Noise Reduction Coefficient: 0.20.
  - 10. Finish: Natural.
  - 11. Fire Hazard Classification: Flame Spread 25, Fuel Contributed 0, Smoke Developed 20, per UL Building Materials Index.
- B. N.C.F.R.(R) Wall Shield: Class A fire rated, physical properties as follows:
  - 1. Thickness: 1/2 inch (13 mm).
  - 2. Density: 34-40 pcf (544-640 kg/cubic m).
  - 3. Tensile Strength parallel to surface: 400-700 psi (2,755-4,830 kPa) minimum.
  - 4. Transverse M.O.R.: 600-950 psi (4,140-6,555 kPa) minimum.
  - 5. Hardness (Janka Ball): 275 lbs. (124 kg) minimum.
  - 6. Water Absorption by Volume; ASTM D 1037:
    - a. 2 hour immersion: 5 percent maximum.

- b. 24 hour immersion): 14 percent maximum.
- 7. Expansion, 50 to 90 percent relative humidity: 0.30 percent.
- 8. R-value: 0.85 (0.015).
- 9. Noise Reduction Coefficient: 0.20.
- 10. Finish: Natural.

### 2.3 ACCESSORIES

- A. Metal Frame Clips: Manufacturer's standard clip for securing panels to framing.
- B. Adhesive: APA approved panel adhesive.
- C. Nails: Length as required to penetrate wood framing 3/4 inch (19 mm) minimum.
- D. Nails: Finishing nails, length as required to penetrate wood framing 3/4 inch (19 mm) minimum.
- E. Screws:
  - 1. Wood Framing: Coarse thread drywall type wood screw, length as required to penetrate framing 3/4 inch (19 mm) minimum.
  - 2. Metal Framing: 22-25 gage, drywall type steel screw.
  - 3. Metal Framing: 20 gage or heavier, self-tapping drywall type steel screw.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates upon which work will be installed.
- B. Verify framing member spacing complies with manufacturer's requirements depending on substrates and installation methods.
- C. Verify environmental conditions are, and will continue to be, maintained in accordance with manufacturer's recommendations.
- D. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates or conditions.
- E. Starting work by installer is acceptance of substrate and environmental conditions.

### 3.2 PREPARATION

- A. Follow manufacturer's instructions by separating and allowing panels to be exposed to environmental temperature and humidity conditions for not less than 24 hours before start of installation.
- B. Precondition panels larger than 4 by 8 feet (1.219 by 2.438 m) panels by sprinkling with water and stacking wet side up overnight.

### 3.3 INSTALLATION

- A. Follow manufacturer's instructions for cutting and installation of fire rated panels.
- B. Install panels in dry condition only.
- C. N.C.F.R.(R) Homasote Exterior Applications:
  - 1. Apply panels over wood sheathing or direct to framing by glue-nailing or with nails only.
  - 2. Allow 3/16 inch (4.7 mm) gap at exposed joints, seal with calking, and cover with battens.
- D. N.C.F.R.(R) Homasote Interior Applications:
  - 1. Apply panels direct to framing or solid furring by glue-nailing or with nails only.
  - 2. Apply panels to old masonry walls by glue-nailing, provided walls are flat and solid.
  - 3. Allow 3/16 inch (4.7 mm) gap at butt joints, 3/8 inch (9.5 mm) gap at floor, ceiling, and abutting framing.
- E. N.C.F.R.(R) Homasote Underlayment Applications on Wood Sub-Flooring:
  - 1. Shim or sand sub-floor as necessary to provide a flat surface continuity for panels.
  - 2. Apply underlayment panels with APA approved decking adhesive and nails, or with nails only.
  - 3. Allow 3/16 inch (4.7 mm) gap at abutting edges; 3/8 inch (9.5 mm) space at walls and partitions.
- F. N.C.F.R.(R) Wall Shield Applications:
  - 1. Space panels 1 inch (25 mm) from wall with non-combustible spacers attached to wall and spaced as recommended by panel manufacturer.
  - 2. Space panels 1 inch (25 mm) minimum and 3 inches (75 mm) maximum above floor and below ceiling.

3. Extend panels 8 inches (203 mm) minimum each side of projected area of back of stove or flue.

#### 3.4 ADJUSTING AND CLEANING

- A. Follow manufacturer's instructions for repairing damaged panels.
- B. Replace panels that cannot be repaired to "as new" condition.

END OF SECTION