

SECTION 07 21 00
THERMAL INSULATION

PART 1 GENERAL

1.1 SUMMARY

- A. Sections Includes: Provide Tru-R Nailbase insulation.

1.2 REFERENCES

- A. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials.
- D. DOC PS2 - Performance Standard for Wood-based Structural-use Panels.

1.3 SUBMITTALS

- A. Third Party Documents. Manufacturer literature/technical data not acceptable for submittal:
 - 1. Third party inspection agency certificate demonstrating physical properties of molded polystyrene foam insulation in compliance with ASTM C578 Type I.
 - 2. UL evaluation report covering nailbase insulation.

Note to Specifier The following item is option. Coordinate with Section 2.1

- 3. UL evaluation report covering termite resistance in accordance with ICC-ES AC 239, Acceptance Criteria for Termite -Resistant Foam Plastics

- B. 50-year R-value warranty.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain insulation through one source from a single manufacturer.
- B. Each nailbase board must be labeled with manufacturer's name, product brand name, and identification of the third party inspection agency.

1.5 DELIVERY, STORAGE & HANDLING

- A. Deliver nailbase labeled with identification of the third party inspection agency.
- B. Store in original unopened packaging above ground, and protected from moisture and sunlight prior to installation.
- C. Product should not be exposed to open flame or other ignition sources.

1.6 WARRANTY

- A. Provide 50-year R-value warranty.

PART 2 PRODUCTS

2.1 NAILBASE INSULATION

- A. Nailbase insulation consisting of ASTM C578 Type I molded polystyrene foam insulation laminated to OSB identified with APA or PFS performance mark, Exposure I, and span rating of 24/16 or greater in accordance with DOC PS-2.

- 1. Tru-R Nailbase.

Note to Specifier Select the insulation board size.

- 2. Size:
 - a. 4 foot by 8 foot
 - b. Custom sizes as indicated on drawings

Note to Specifier Select the R-value as required.

- 3. R-value:
 - a. 2" (51 mm) thick with R-value of 6.4 at 75F (6.8 at 40F)
 - b. 4" (102 mm) thick with R-value of 14 at 75F (15 at 40F)
 - c. 6" (152 mm) thick with R-value of 22 at 75F (24 at 40F)
 - d. 7.75" (197 mm) thick with R-value of 29 at 75F (31 at 40F)
 - e. 9.75" (248 mm) thick with R-value of 37 at 75F (39 at 40F)
 - f. 11.75" (298 mm) thick with R-value of 44 at 75F (48 at 40F)

Note to Specifier Optional, include this section for vented nailbase.

- 4. Provide [specify single or dual] direction vent channels with [specify 1/2", 1", 1-1/2", or 2"] depth

Note to Specifier Optional, include this section for termite resistant insulation. Coordinate with Section 1.3.

- 5. Termite Resistant Insulation
 - a. Borate treatment
 - b. Compliance with ICC-ES AC239, Acceptance Criteria for Termite-Resistant Foam Plastics

Note to Specifier Optional, include this section for mold, mildew, and termite resistant OSB.

- 6. Mold, Mildew, and Termite Resistant OSB
 - a. FrameGuard treatment

2.2 ACCESSORIES

Note to Specifier Select the appropriate fastener.

- A. Fasteners: corrosion resistant nailbase screws shall be provided by the nailbase manufacturer.
 - 1. Wood screws for attachment to wood members
 - 2. Heavy Duty metal screws for attachment to metal members (16 gauge to 3/16")
 - 3. Light Duty metal screws for attachment to metal decks (18 gauge or thinner)

Note to Specifier Specify splines as required by project requirements.

- B. Splines: OSB splines shall be supplied by the nailbase manufacturer.

Note to Specifier Specify sealant as required by project requirements.

- C. Sealant: Sealant shall be specifically designed for use with nailbase. Sealant shall be provided by the nailbase manufacturer.

2.3 MANUFACTURER

Note to Specifier Select the name and address of the local manufacturers.

- A. Thermal Foams, Inc., 2101 Kenmore Avenue, Buffalo, NY 14207
- S. Thermal Foams/Syracuse, Inc., 6173 South Bay Road, Cicero, NY 13039

PART 3 EXECUTION

3.1 INSTALLATION

- A. Installation: [Specify instructions to suit project requirements or applications].

END OF SECTION