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The Subcommittee on Evaluation has reviewed the data submitted for compliance with the Standard Building Code® and the International One and Two Family Dwelling Code and submits to the Building Official or other authority having jurisdiction the following report. The Subcommittee on Evaluation, ICC-ES and its staff are not responsible for any errors or omissions to any documents, calculations, drawings, specifications, tests or summaries prepared and submitted by the design professional or preparer of record that are listed in the Substantiating Data Section of this report.

REPORT NO.: 2319

EXPIRES: See the current EVALUATION REPORT INDEX

CATEGORY: INSULATION

SUBMITTED BY:

POLYMASTER, INC.
10523 LEXINGTON DRIVE
KNOXVILLE, TENNESSEE 37932

1. PRODUCT TRADE NAME

Polymaster R-501

2. SCOPE OF EVALUATION

- 2.1 Surface Burning Characteristics
2.2 Thermal Resistance

3. USES

Polymaster R-501 is used for thermal insulation.

4. DESCRIPTION

4.1 Polymaster R-501

Polymaster R-501 is a two component system consisting of an aqueous plastic three polymer resin (Polymaster R-501) combined with the FA-541 catalyst and nitrogen or compressed air. When properly combined, Polymaster Plastic Foam is formed. The hardening time for Polymaster R-501 may be adjusted from 10 seconds to 30 seconds. Complete curing requires 48 hours. Polymaster R-501 Plastic Foam is fully expanded as it leaves the mixing equipment.

4.2 Surface Burning Characteristics

Polymaster R-501 was tested in a thickness of 2.4 inch (25 mm)

and demonstrated a flamespread rating of less than 75 and smoke developed rating of less than 450 in accordance with ASTM E 84.

4.3 Thermal Characteristics

When tested in accordance with ASTM C 518, Polymaster R-501 with a density of 0.70 pounds per cubic foot has a thermal conductivity (k) of 0.2161 Btu-in/h-ft²·°F, thermal resistance (R) of 4.63 h-ft²·°F/Btu-in when measured at 25° F.

5. INSTALLATION

The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available on the jobsite at all times during installation.

6. SUBSTANTIATING DATA

- 6.1 Manufacturer's specifications, drawings, and installation instructions.
6.2 Test report on Polymaster R-501 in accordance with ASTM E 84, prepared by Commercial Testing Company, Report No. 98990, Test No. 2573-3769, dated August 16, 1994, signed by Jonathan Jackson.
6.3 Test report on thermal properties in accordance with ASTM C 518, prepared by Commercial Testing Company, Report No. 9908112, Test No. 3056-7241, dated May 21, 1999, signed by Jonathan Jarbson.

7. CODE REFERENCES

Standard Building Code - 1999 Edition

Table with 2 columns: Code Section, Description. Includes Section 103.7 (Alternate Materials and Methods), Section 707 (Combustibles in Concealed Spaces), Section 708 (Thermal Insulating Materials), and Section 2603 (Foam Plastic Insulation).

International One and Two Family Dwelling Code - 1998 Edition

Table with 2 columns: Code Section, Description. Includes Section 108 (Alternate Materials and Systems), Section 317 (Foam Plastic), and Section 319 (Insulation).

8. COMMITTEE FINDINGS

The Subcommittee on Evaluation in review of the data submitted finds that, in their opinion, Polymaster R-501 as described in this

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report conforms with or is a suitable alternate to that specified in the *Standard Building Code* and the International One and Two Family Dwelling Code or Supplements thereto.

9. LIMITATIONS

- 9.1 Polymaster R-501 shall be fully protected from the interior of the building by an approved fifteen (15) minute thermal barrier.
- 9.2 Polymaster R-501 shall not be used as a component of a fire rated assembly unless its performance has been documented by tests.
- 9.3 Polymaster R-501 shall be applied by Polymaster, Inc. trained applicators only.
- 9.4 Polymaster R-501 shall be limited to a maximum thickness of 2.4 inch (61 mm).

10. IDENTIFICATION

Packaging of Polymaster R-501 components shall bear the manufacturer's name, address, the SBCCI Public Safety Testing and Evaluation Services, Inc. initials (SBCCI PST & ESI) or seal, and the number of this report for field identification.

11. PERIOD OF ISSUANCE

SEE THE CURRENT EVALUATION REPORT INDEX FOR STATUS OF THIS LEGACY EVALUATION REPORT.

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