



STERLING CUSTOM SHEET METAL, INC.
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STERLING BEST SEALED- INSULATED AIR REGISTER BOX

CSI Division:

**23 00 00 HEATING VENTILATION AND
AIR CONDITIONING (HVAC)**

1.0 AREA OF RECOGNITION

Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box, recognized in this report has been evaluated for surface burning and progressive combustion, and is a suitable alternative for use with HVAC Ducts required in the IMC and IRC. The following code editions are recognized:

- 2021, 2018, 2015, 2012, 2009, and 2006 International Mechanical Code® (IMC)
- 2021, 2018, 2015, 2012, 2009, and 2006 International Residential Code® (IRC)
- LC-1017, approved October 2008 (applicable portions)

2.0 LIMITATIONS

Use of Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box recognized in this report is subject to the following limitations:

2.1 Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box shall be manufactured, identified, and installed in accordance with this report and the applicable code. In the event of a conflict, this report governs.

2.2 Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box is limited to use in HVAC systems contained in buildings of Type V construction under the IBC and any type of construction permitted by the IRC.

2.3 Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box is limited to a total of 13 pounds of foam per 1000 square feet of floor area.

3.0 PRODUCT/CODE APPLICATION

Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box is a factory-made, internally insulated, polyurethane transition HVAC fitting from square to round metallic duct.

The foam plastic insulation is used to increase energy efficiency in a difficult to insulate section of the HVAC system. The foam plastic insulation has a nominal thickness of 1¹/₄ inches (31.7 mm) or 1⁹/₁₆ inches (39.7 mm), and a nominal density of 2.25 lbs/ft³ (36.0 kg/m³).

3.1 ASTM E84: When tested in the as-built configuration in accordance with ASTM E84, the flame spread index was 25 or less and the smoke-developed index was 200 or less.

3.2 ASTM C411: When the foam plastic insulation alone was subjected to testing in accordance with ASTM C 411 at a temperature of 250°F ± 12.5°F (121°C. ± 6.9°C), the insulation did not flame, glow, smolder or smoke.

3.3 R-Value: When tested in accordance with ASTM C518 at a nominal thickness of 1¹/₄ inches (31.7 mm), the thermal resistance of the foam plastic insulation resulted in an R-value of 6. When tested at a nominal thickness of 1⁹/₁₆ inches (39.7 mm), the thermal resistance of the foam plastic insulation resulted in an R-value of 8.

4.0 INSTALLATION

Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box foam plastic internally insulated transition fittings shall be installed such that the total amount of foam plastic insulation from all installed fittings does not exceed 13 pounds per 1000 square feet of floor area.

When installed in accordance with this report, the foam plastic insulation installed in the insulated air register box is not required to be protected by either an ignition barrier or a thermal barrier.

5.0 SUBSTANTIATING DATA

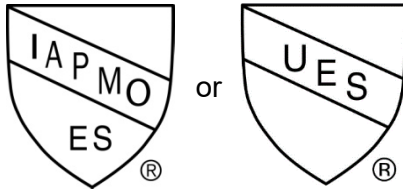
Data in accordance with LC-1017, approved October 2008 (applicable portions), manufacturer's descriptive literature, and installation instructions.

Test reports are from laboratories in compliance with ISO/IEC 17025.



6.0 IDENTIFICATION

Each Sterling Custom Sheet Metal, Inc.'s Sterling Best Sealed Insulated Air Register Box shall be labeled with the name of the manufacturer (Sterling Custom Sheet Metal, Inc.), part description, the weight of foam plastic, R-Value, 13 pounds / 1000 sq. ft. limitation, and one of the IAPMO UES Marks of Conformity shown below.



IAPMO ER-448

For additional information about this evaluation report please visit www.uniform-es.org or email at info@uniform-es.org