

SECTION 07435

LIGHT TRANSMITTING PANELS

PART GENERAL

SECTION INCLUDES

Insulated plastic skylight domes installed in metal roofing.

RELATED SECTIONS

Section 07610 - Sheet Metal Roofing.

REFERENCES

ASTM D 635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position.

ASTM D 1003 - Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics.

ASTM D 1929 - Standard Test Method for Ignition Properties of Plastics.

ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.

ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

Uniform Building Code Standards.

PERFORMANCE REQUIREMENTS

Air Infiltration (ASTM E 283): Less than 0.01 CFM at 6.24 psf.

Water Penetration (ASTM E 331): No water penetration at 6.24 psf.

Total Imposed Load (ASTM E 330): 0.85 inch deflection, no failure at 120 psf (5-foot purlins).

Uplift (ASTM E 330): 0.060 inch deflection, no failure at 60 psf (5-foot purlins).

SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Provide manufacturer's standard details and catalog data demonstrating compliance with referenced standards.

Shop Drawings: Submit for approval the following:
Drawings showing skylight layout within panels, and overall skylight arrangement on roof.

DELIVERY, STORAGE, AND HANDLING

Store products indoors and protect from moisture, construction traffic, and damage.

PART PRODUCTS

MANUFACTURER

Provide insulated plastic skylight domes factory bonded to metal roof panels by Sequentia Incorporated; 4545 Pine Timbers; Suite 320; Houston, TX 77041. ASD. Tel: (800) 231-4565 (800-833-8355, Texas), Fax: (713) 462-3530.

Substitutions will not be permitted.

FABRICATED UNITS

"Sealbrite" insulated plastic domes, factory-bonded to architectural metal roof panels.

MATERIALS

Acrylic plastic:

Flame spread (ASTM E 84): 140.
Smoke developed (ASTM E 84): 385.
Burning rate (ASTM D 635): Less than 1.5 inches per
minute.
Ignition point (ASTM D 1929): 750 degrees F.
R-value of dome: 2.5.
Glazing class (UBC Std. 52-4): CC 2.

Polycarbonate plastic.

Color: Clear.

Light transmission (ASTM D 1003): 85 percent.

Color: White.

Light transmission (ASTM D 1003): 52 percent.

Color: Gray.

Light transmission (ASTM D 1003): 26 percent.

Color: Bronze.

Light transmission (ASTM D 1003): 25 percent.

FABRICATION

Fabricate domes in sizes indicated.

Opening size: 11 x 48 inches.

Form insulated domes with interior dome and exterior dome
encapsulating dead air space.

Bond domes under factory conditions to metal roof panels
specified elsewhere in Division 7.

Seal domes to metal roof panels.

Provide weep path.

Secure with chemically bonded anodized aluminum
retainer.

PART EXECUTION

EXAMINATION

Verify that construction is completed, approved, and
ready to receive roof panels.

Correct any deficiencies before installing panels.

INSTALLATION

Lay out domed roof panels in accordance with approved drawings.

Install panels in accordance with panel installation requirements specified elsewhere in Division 7.

ADJUST AND CLEAN

Remove scraps and debris from the project site, and leave in clean condition.

END OF SECTION