

**CITY & COUNTY OF DENVER  
COMMUNITY PLANNING & DEVELOPMENT  
BUILDING PERMIT POLICY**

**Subject: FOAM PLASTICS WITH REINFORCED RUBBERIZED ASPHALT ROOFING**

**Approved: Scott V. Prisco, AIA, Building Official**

**Drafted by: Renn**

**Number: IBC 1507.19**

**Effective Date: September 15, 2020**

**Page 1 of 2**

**Reference: 2018 International Building Code (IBC) Section 1507.19**

**Scope and intent:**

This policy is intended to clarify the use of foam plastic insulation with hot-applied reinforced rubberized asphalt roofing as allowed by Section 1507.19 of the 2018 IBC that is added in the 2019 Amendments to the Building and Fire Code for the City and County of Denver. Section 1507.19.4 indicates that foam plastic insulation used with pavers and pedestals shall be in an *approved* roof assembly and this policy clarifies what assemblies are *approved* for this section.

This type of roofing system is often installed as a protected membrane roof, with foam plastic insulation installed above the roofing membrane. Where pavers on pedestals are placed directly above the insulation a concealed combustible space is created, which creates an inherent fire hazard. Another concern is that the insulation is often installed with thickness greater than the 4" maximum allowed in typical tests for surface-burning characteristics (ASTM E84 and UL 723). This policy is intended to minimize fire hazards by approving roof assemblies that protect the insulation to avoid a concealed combustible space between the insulation and the pavers; thereby, addressing the topic of concealed combustible spaces in NFPA 13 and avoiding the need to provide fire sprinklers in this space.

**Background and definition:**

**1507.19.4 Foam Plastics.** Foam plastic insulation shall comply with Section 2603. Foam plastic insulation used with pavers and pedestals shall be in an *approved* roof assembly.

**APPROVED.** Acceptable to the *building official*.

**Policy:**

A roof assembly constructed with pavers and pedestals in accordance with IBC Section 1507.19.4 is considered *approved* if all the following conditions are met:

1. Roof assembly complies with fire classification requirements of IBC Section 1505.
2. Foam plastic insulation complies with IBC Section 2603.
3. Foam plastic insulation has a flame spread index of not more than 75 where tested at a thickness of 4 inches in accordance with ASTM E84 or UL 723 and complies with the material standards in IBC Table 1508.2 or is considered limited combustible as identified in condition #5 below.
4. Plastic pedestals comply with Policy IBC 603.1 in Type I & II Buildings.
5. Top of foam plastic insulation is protected with a continuous layer of one of the following items immediately over the insulation or the foam plastic insulation is considered limited combustible

**CITY & COUNTY OF DENVER  
COMMUNITY PLANNING & DEVELOPMENT  
BUILDING PERMIT POLICY**

**Subject: FOAM PLASTICS WITH REINFORCED RUBBERIZED ASPHALT ROOFING**

**Approved: Scott V. Prisco, AIA, Building Official**

**Drafted by: Renn**

**Number: IBC 1507.19**

**Effective Date: September 15, 2020**

**Page 2 of 2**

per NFPA 13-4.10.2 (i.e. has a heat release content of less than 3500 Btu/lb when tested in accordance with NFPA 259 with a flame spread index of not more than 25 (ASTM E84 or UL 723)):

- a. Minimum  $\frac{3}{8}$ " thick cementitious layer
- b. Minimum 10 psf stone layer (#8 pea gravel or smaller in size), generally 1-inch in thickness
- c. Non-combustible material that complies with thermal barrier requirements of IBC Section 2603.4
- d. Non-combustible pavers with pedestals/spacer tabs that provide a maximum  $\frac{1}{4}$ " space between the foam plastic insulation and the underside of the pavers.

**END OF DOCUMENT**