

**NC Department of Insurance  
Office of the State Fire Marshal - Engineering Division  
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**Exterior Metal Wall Panels with a Foam Plastic Core**

**Code:** 2012 Building Code  
**Section:** 1407

**Date:** February 3, 2012

**Question:**

Is a factory-manufactured panel consisting of metal skins bonded to both faces of a foam plastic insulation core considered a Metal Composite Material (MCM) panel as described in Section 1407 of the NC Building Code?

**Answer:**

No. Section 1407.1.1 of the code does not allow MCM panels to have a foam plastic core.

The panels described in the question above actually fall under the requirements of Section 2603 for the foam plastic insulation and are allowed to have foam plastic in them if they meet the requirements of that section.

**Additional Information:**

Section 2602.1 defines "foam plastic insulation" as:

*A plastic that is intentionally expanded by the use of a foaming agent to produce a reduced-density plastic containing voids consisting of open or closed cells distributed throughout the plastic for thermal insulating or acoustical purposes and that has a density less than 20 pounds per cubic foot (pcf) (320 kg/m<sup>3</sup>).*

Metal panels as described in the question above containing a plastic core with a density of 20pcf or greater would be considered a MCM panel because the plastic would not be "foam plastic".

**Keywords:**