

IGNITION BARRIER FREE ATTIC APPLICATIONS

This document summarizes the testing and approvals associated with the use of UPC 500 Max as attic insulation under specific conditions.

Advances in spray foam technology and greater understanding in the use of spray applied polyurethane foams has resulted in changes and allowances for the use of foam in applications which had previously not been considered. The unvented attic assembly is one such application.

Extensive research by the recognized leaders in fire performance, Priest & Associates Engineering Evaluations, has resulted in allowances by the Authority Having Jurisdiction (AHJ) for UPC 500 Max to be used in unvented attics. Specific conditions must be met in order for the allowance to be granted. The AHJ must consider the intended assembly specification and insulation specifications with supporting documentation before granting approval. These assemblies are code compliant provided they meet the specific criteria outlined in the code and supporting evaluation documentation. UPC provides such information on its website and upon request.

The following paragraphs are extracted directly from the UPC current Code Compliance Research Report, dated April 5, 2024.

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION

Section: 07 21 00 – Thermal Insulation

Section: 07 21 19 – Foamed-In-Place Insulation

REPORT HOLDER:

General Coatings Manufacturing Corp.

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ADDITIONAL LISTEE:

Universal Polymers Corporation

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REPORT SUBJECTS:

Ultra-Thane 050, Ultra-Thane 050 MAX, Ultra-Thane 050

MAX PRO, UPC 500, UPC 500 MAX and UPC 500 MAX PRO

Spray-applied Polyurethane Foam Plastic Insulation

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5.4.3 Unvented Attics: General Coatings has conducted end use configuration testing (per IBC Section 2603.9 and IRC Section R316.6) and analysis to qualify the use of Ultra-Thane 050, Ultra-Thane 050 MAX, Ultra-Thane 050 MAX PRO, UPC 500, UPC 500 MAX and UPC MAX PRO insulation without a prescriptive ignition barrier or intumescent coating in unvented attics conforming with IBC Section 1202.3 or IRC Section R806.5. The testing and analysis are described in Intertek Report 104294990SAT-010, dated July 31, 2020. The conclusions of that evaluation are as follows: When the insulation is applied in unvented attics conforming to IBC Section 1202.3 or IRC Section R806.5, the insulation may be applied to the underside of roof sheathing and/or rafters, and to vertical surfaces to a minimum thickness of 3-1/2 in. Maximum thickness on the underside of roof sheathing or on vertical wall surfaces is 16 in. The insulation may be left exposed to the attic without a prescriptive ignition barrier or an intumescent coating. The attic must have attic access complying with IRC Section R807, horizontally placed in the attic floor and opening outward toward the living space. For items penetrating the roof deck or walls, such as skylight wells or vents, the annular space must be covered with a minimum of 3 in. of insulation.

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6.4 When Ultra-Thane 050, Ultra-Thane 050 MAX, Ultra-Thane 050 MAX PRO, UPC 500, UPC 500 MAX or UPC 500 MAX PRO insulation is installed under the conditions of Section 5.4.3 of this report, the following conditions apply:

6.4.1 Since the performance of the insulation, when installed in unvented attics without a Code-prescribed ignition barrier or an intumescent coating, is based on fire performance of an unvented attic, the installation must be approved by the Code official. The installation must conform with the provisions of Section 5.4.3 and Conditions a through c, and Condition f of Section 5.4.2. A copy of the Intertek report (referenced in Section 7.0) must be provided to the Code official upon request.

6.4.2 Signage shall be permanently affixed in the attic and shall be visible from all points within the attic. The sign shall state “Caution, this is an unvented attic by design. No modification may be made to this unvented condition. The attic shall not be vented. Holes into the unvented attic shall be immediately repaired and sealed. Penetrations of the ceiling or wall membrane between the unvented attic and living space, other than the horizontal access hatch, must be protected in an approved manner. This unvented attic shall not be used for storage. See Intertek Code Compliance Research Report CCRR-0358 on the Intertek Website.”

A key criterion to the performance of the assembly is the establishment of an “unvented attic”. Venting to the outside of the building structure is the meaning here. Common penetrations of the floor (ceiling of the space below) DO NOT matter. Common penetrations include, but are not limited to, pot lights, electrical boxes, ventilation components, stacks and skylights tubes. If these penetrations exit the building envelope, either

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through the roof or wall, each must be sealed in a manner recommended by the approval holder (UPC). If UPC 500 Max is used to seal penetrations, the foam must be applied to a minimum depth of 3 inches as stated in section 4.4.2.1

The fire consultants Priest and Associates offered this statement when asked for their interpretation:

“Whatever is normally done in attic floors is allowed – lights, etc. No need to seal lights and other items penetrating the attic floor. The amount of leakage of the attic floor does not affect unvented fire performance – the attic will extinguish with the hatch open or other leaks as long as there is no hole in the roof.”

The installation of UPC products must, at all times, be code compliant. We strive to provide the most advanced formulations and test our products in full compliance with building codes. At UPC our mission is to educate the consumer and those individuals having authority, in order that they may make fully informed, safe decisions.

Should you have any questions regarding UPC 500 Max or other UPC products, please do not hesitate to call.

Sincerely,

Jason Spillers

Jason Spillers
Vice President
Universal Polymers Corporation