

TECHNICAL BULLETIN

No. 10
Revised Dec 2022

OUTDOOR PROTECTION OF INSULATION

Exterior Insulation Protection

Insulation installed in exterior applications is subject to damage due to sunlight, moisture, maintenance operations and even animals. These elements will cause damage to all insulation materials resulting in significant cost to replace the insulation sooner than anticipated. As a result, the International Energy Conservation Code (IECC) and ASHRAE standard 90.1 have the following sections designed to protect the insulation from outdoor hazards:

ASHRAE 90.1-2019

5.8.1.7 Insulation Protection Exterior insulation shall be covered with a protective material to prevent damage from sunlight, moisture, landscaping operations, equipment maintenance, and wind.

6.4.4.1.a. Insulation exposed to weather shall be suitable for outdoor service, e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.

IECC- 2018

C403.11.3.1 Protection of piping insulation (Mandatory). Piping insulation exposed to the weather shall be protected from damage, including that caused by sun light, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

R403.4.1 Protection of piping insulation. Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind. The protection shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall be prohibited.

These standards make it clear that exterior insulation must be protected from exterior hazards. Therefore, installing insulation in exterior applications without protection is not in compliance with these standards regardless of the insulation's composition or manufacturer's claims.

Armacell recommends, at minimum, to coat insulation on exterior applications with 2 coats of WB Finish and recoat every 2-4 years. For more substantial protection, with less maintenance, recommendation is ArmaTuff Sheet and Roll insulation and ArmaFlex Shield pipe insulation products. A protective jacket can be applied to the insulation.

For more information, please visit:
www.armacell.us