

Water-Based Polyurethane Dispersions (PUDs) on Fiber Cement Siding

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Abstract:

Traditional wood siding is prone to chipping and peeling of paint, so consumers and contractors have begun to look at fiber cement siding as a better alternative due to the fire resistance, durability, low-cost maintenance and it is very eco-friendly. PUDs are the ideal resins to be used with fiber cement due to excellent properties such as tensile strength, flexibility, high abrasion resistance, excellent color/gloss retention and its exterior durability. Currently this market segment utilizes 100% acrylic based paints because they also have superior durability and great gloss retention as well but are more economical than PUDs. However, the American Architectural Manufacturers Association (AAMA), has strenuous tests for fiber cement that acrylic based coatings have difficulty passing. In this study, water based polyurethane resins have been evaluated according to AAMA to determine the performance advantages and versatility of these resins for fiber cement sidings.