STUCCO FUTURES

Continuous Insulation, Fire, and Moisture Design for Stucco

October 23, 2026

The October 23, 2026 Stucco Futures Exchange featured two manufacturer presentations on continuous insulation (CI) systems under stucco: DuPont on its Armor Wall panel and RMAX on polyiso sheathing and moisture design. Building-envelope consultants, contractors, architects, and other manufacturers joined the discussion. Performance figures below are as reported by the presenting manufacturers and have not been independently verified.

Why This Matters

Stucco is increasingly one layer in a tested system, shaped by continuous insulation, demanding fire requirements, and climate-specific moisture design. The better the industry understands these assemblies, and the more stucco-specific testing and guidance exists, the easier stucco is to specify, detail, and build with confidence. Fire resilience and energy performance are where stucco can compete.

The Question

As CI becomes standard behind stucco, what does it take to make the assembly fire-safe, dry, and buildable in every climate?

DuPont Armor Wall

- **The panel:** a factory-assembled 4x8 panel combining polyurethane insulation (about R6.5 per inch), a ½" magnesium oxide (MgO) board, and a pre-applied WRB. It comes in 2" (R10), 2¾" (R15), and 3¾" (R21) thicknesses, and attaches directly to studs.
- **The stucco assembly:** studs, panel, fluid-applied sealant at joints and fastener heads, a $^{3}/_{16}$" drainage and drying layer, lath on tested fasteners, then stucco or other mortar-based cladding. Drainage is required over absorptive claddings, and a conventional wrap cannot serve as the drainage layer.
- **Lath attachment:** the structural MgO face lets lath be screw-attached to the panel without hitting studs, using 1" of embedment. Third-party engineering supports cladding loads up to 25 psf and wind pressures up to 90 psf, and installers do not have to locate studs.
- **Thermal:** with fasteners no longer bridging to framing, DuPont reports retaining up to 93% of rated R-value in clear-field analysis, versus the 25 to 30% loss many assemblies see.
- **Fire:** reported NFPA 285 compliance with no opening protection, based on 20+ tests. It is listed as ignition-resistant and is gaining use in wildfire zones, mostly in the Mountain West. One-hour assemblies are possible with limited gypsum, and exterior DensGlass can usually be dropped on steel stud walls.
- **Fasteners:** only approved fasteners are allowed because of historic MgO corrosion concerns, with 300-series stainless always an option and a process to approve others.

RMAX

- **Products:** aluminum-faced polyiso that can act as the WRB and air barrier when joints are treated and openings flashed, and coated-glass-faced panels used under thin-coat systems with a separate WRB. Typical values are about R6 at 1", R10 at 1.5", and R13.1 at 2".

- **Least permeable layer on the exterior:** most CI is not vapor permeable, so walls should dry to the interior. Pairing an impermeable exterior CI with a high-grade vapor retarder inside creates a moisture trap.
- **Climate matters:** dry climates can use two layers of Grade D paper or one 60-minute layer, while moist and marine climates add a drainage plane or air gap. In California, 30 miles inland can change climate zones.
- **Field tips:** run butyl tape on the stud line to gasket fasteners through foil facers, add a slip sheet so cement paste does not bond to the facer, and avoid filling a cavity beyond its design, which can leave sheathing cold enough to condense.
- **Design tool:** the foam sheathing committee's wall calculator (continuousinsulation.org) applies code moisture provisions, though it does not include California's energy code.

What the Discussion Revealed

- Joint durability is a core concern. DuPont uses a fluid-applied sealant rather than tape, and is exploring a tape option because of market demand.
- Stucco itself has not been NFPA 285 tested over Armor Wall. Testing used fiber cement because stucco needs a 28-day cure, and school projects under state fire marshals may want a specific test rather than an engineering judgment.
- High-wind and missile-impact approval for hurricane regions is targeted for Q1 2027.
- There is no R5 option. Some projects use R10 as a complete warm wall in place of R5 CI plus R13 cavity insulation.
- Most Armor Wall projects are in the Northeast and Southeast, and use in the Los Angeles fire rebuilds is unconfirmed.
- A California case study using Structa Wire lath over Armor Wall reported time savings from fastening anywhere without locating studs.

Concerns

- Stucco-specific fire test data is still lacking.
- One detail does not fit every climate, and wrong assumptions have forced costly rework.
- Moisture traps are easy to create when layers are added without checking permeability.

What It Means in Practice

Stucco over CI must be treated as a complete system. Fire, drainage, vapor control, and fastening each depend on the others, and on the climate where the building sits. Specifiers and installers should use tested assemblies, check moisture design with the available tools, and avoid mixing components without evidence.

Next Steps

- DuPont will provide links to its NFPA 285 guidance and installation guide, and a follow-up on labor and schedule data from the field.
- Links, test reports, and articles from the session will be added to the Stucco Futures resource library.
- The November 20 session will focus on stucco cracking, presented by a building-envelope consultant.
- Participants are invited to suggest 2027 topics, ways to make the sessions more valuable, and who else should be in the room.

What do you think?

Let us know at www.clarkdietrich.com/stuccofutures, or on LinkedIn, Instagram, or Facebook #stuccofutures