STUCCO FUTURES

Rainscreen Stucco: Pairing a Drainage Mat with Welded Wire Lath

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What is a Rainscreen?

A rainscreen is a drainage and ventilation layer installed between the water-resistive barrier (WRB) and the stucco assembly. It gives moisture that gets past the finish coat somewhere to go: a continuous drainage plane and air channel that lets bulk water drain and the wall dry to the outside, rather than sitting trapped against the sheathing.

Where It's Required

Code requirements for drainage behind Portland cement plaster continue to tighten. Effective January 2021, IBC Section 2510.6 requires two layers of WRB over wood-based sheathing unless the WRB is separated from the stucco by a non-water-absorbing layer or drainage space, and a ventilated air space is required outright in Climate Zones 1A, 2A, and 3A. Rainscreen is closely associated with 3-coat stucco and is standard practice along coastal and high-moisture regions of the country.

Choosing a Rainscreen Drainage Mat

A rainscreen mat's job is to create a reliable capillary break and a continuous drainage/ventilation channel behind the stucco. Look for an open, entangled-mesh design that maximizes airflow and drainage capacity while still supporting the lath and plaster above it. A well-designed mat lets bulk water drain freely and helps the wall assembly dry to the outside faster than traditional furring-strip methods.

Welded Wire Lath: Built for Rainscreen Performance

Structa Mega Lath and Structa Twin Trac2.5 welded wire lath have an engineered open grid with a strong, self-furring profile that holds standoff dependably over a drainage mat. The engineered open wire geometry provides good stucco embedment for a high-performing stucco wall paired with a rainscreen mat.

Full encapsulation in the alkaline Portland cement matrix (pH 10–11) is the primary long-term protection for the wire. Structa Mega Lath (1.95 lb/yd^2, ASTM C933) is engineered for extra reinforcement up to 24" OC and serves as an alternate to 3.4 lb/yd^2 expanded metal lath. Structa Twin Trac2.5 (1.14 lb/yd^2) serves as an alternate to 2.5 lb/yd^2 expanded metal lath at 16" OC. Both provide strong reinforcing for stucco over a rainscreen assembly.

Corrosion Resistance

All Structa Wire welded wire lath is manufactured from wire with a Class 1 hot-dip galvanized coating (minimum 45 gsm) as per ASTM A 641 for wire products. Reducing standing moisture at the lath plane, which a rainscreen does, reduces the corrosive load on the zinc coating over the life of the wall.

Featured Rainscreen Mat: ClarkDietrich E-Screen

ClarkDietrich E-Screen, our own rainscreen mat within the ClarkDietrich Building Systems line, is a polypropylene entangled-mesh mat with a 95% open design, available in 6mm and 10mm thicknesses to suit different project needs.

Recommended System with E-Screen

For wall assemblies incorporating E-Screen rainscreen drainage in 3-Coat Stucco (Portland Cement Plaster), 3/4" to 7/8" thick:

Stud spacing over 16"	Mega Lath over E-Screen
Stud spacing at 16" or under	Twin Trac2.5 over E-Screen
Drainage / ventilation layer	E-Screen 6mm or 10mm Drainage Mat

Installation

1. Apply the WRB over the sheathing per local code (some jurisdictions require two layers).
2. Install E-Screen after windows and doors are set and flashed. Unroll from the base of the wall with the 4" fabric flap down; the blue polymer matrix faces the WRB. Fasten every 3 sq. ft.
3. On the bottom course, unfold the fabric flap and tuck it between the polymer matrix and the WRB to form an insect screen; on intermediate courses, shingle-lap the flap over the course below.
4. Install Mega Lath or Twin Trac2.5 over the E-Screen per ASTM C1063, with ends of adjoining lath staggered unless otherwise specified.
5. Apply Portland cement plaster (stucco) per ASTM C926 in the specified number of coats and thickness.

Attachment: Pan head or wafer head (7/16 inch head diameter) sheet metal screws. No 10-16; galvanized or zinc coated; self-drilling; length: threads to penetrate metal framing by 1/2 inch. Spacing: vertically along each framing member, nominal 7 inch o.c. maximum per ASTM C1063. E-Screen itself is fastened with staples or nails every 3 sq. ft.

What do you think?

Let us know at www.clarkdietrich.com/stuccofutures, or on LinkedIn, Instagram, or Facebook #stuccofutures. For technical questions, call 1-800-887-4708.