

NEWS BULLETIN

STRUCTALATH PRODUCTS & ASTM

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ASTM standards state that wire laths be fabricated from cold-drawn, galvanized steel wire, conforming to Specification A 641. There is no tensile strength stated or required. Over the years, industry has used low carbon steel, which has been the least costly and which performs in their various manufacturing machines, and which has performed for the stucco application.

The specification for Structalath products utilizes wire that has a wire strength of 200 to 240 lbs break strength. This compares to mild steel wire used in competitive wire lath products with break loads of 130 to 150 lbs. Structalath line wires are cold drawn to a flattened profile which increases tensile strength and break load. At the same time, the cold forming provides lath flatness and avoids curl back when the lath is unrolled.

Structalath products are designed to provide reinforcement in both directions. Hence, it is reported that utilizing Structalath has reduced cracking by 80% to 90%. To achieve this crack improvement, Structalath resists stress imposed in the stucco, similar to reinforced concrete.

However, there is a limit to the stress that Structalath can withstand. If the stresses exceed the strength of the Structalath wires, they will break. The major causes of stresses in stucco walls is plaster shrinkage, building or structure movement, and thermal stresses.

One general area where stresses can become high is long uninterrupted walls (30 to 40 feet or more). These walls are susceptible to all three stress factors stated above. Therefore, it is important to follow the provisions of ASTM 1063 and provide control joints to delineate stucco areas not greater than 144 sq. ft., or maximum distance of 18 feet between control joints. It is also important to ensure that the lath is cut behind the control joint so that the control joint can function as intended.

We realize that the use of control joints has not been standard practice in residential construction to this point. However, as California and other states have adopted the IBC and IRC (conversion from UBC and CBC), **the use of control joints is now mandated.**

Control joints will limit the stresses imposed on the stucco from the various factors. Control joints in combination with Structalath will provide the best technology to reduce stucco cracking beyond the 80% to 90% level achieved up to now.

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