



NOCSA TECHNICAL BULLETIN

TOPIC: STUCCO AND ENGINEERED STUCCO

Stucco and engineered stucco are often assumed to be interchangeable. This is often not the case when the application becomes technical, but there are overlaps in product use that can be confusing to those not familiar with stucco. Stucco has many variants in mixing and application that require the designer to make specific choices for the application.

What Is Stucco?

Stucco, often called traditional stucco is a mixture of materials. Most commonly this is cement, sand, and lime. Variations of stucco have been used for centuries.

The benefit of stucco is the longevity, it is indeed traditional. This benefit has been further recognized with building codes, standards, and properties:

- International Building Code, Chapter 25
- International Residential Building Code, Chapter 17
- ASTM C926, *Standard Specification for Application of Portland Cement-Based Plaster*
- ASTM C1063, *Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster*
- Countless tested wall assemblies for fire performance
- It does not burn and also protects other materials from fire

Stucco is mixed at the jobsite using various formulas contained in ASTM C926. The expertise of the person mixing the materials becomes paramount to product quality. Field mixed stucco does not have a warranty and the application must follow the published standards.

National One Coat Stucco Association

P.O. Box 121325 Arlington, TX 76012

E-Mail Us: Nocsa@aol.com

Phone: 817-460-3351

Fax: 817-461-0686



What Is Engineered Stucco?

Engineered stucco has various forms. Some products are packaged ASTM C926 stucco while others are called One Coat Stucco (OCS). NOCSA manufacturer members manufacture their OCS under different trade names.

These stuccos came about because of the need for consistency and performance in the application. Being factory blended, mixes are easier to proportion. The blending process is strictly followed and in the case of OCS, there are regular plant inspections and testing for performance. OCS is recognized as a code alternative to stucco and carries a separate code report demonstrating compliance.

Not all stucco can be applied as OCS, but all OCS may be applied as traditional stucco. This is because they have been engineered for application as thin as 3/8" so thicker applications will not affect the product quality.

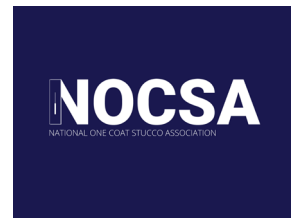
Other Engineered Stucco Benefits

Beyond product quality and consistency, Engineered Stucco has other benefits that help the designer and benefit the owner. This includes the following:

- Verified product quality through third-party plant observations
- Manufacturer involvement in the design
- Manufacturer standard details (stucco must be designed and detailed by the architect)
- Custom details tailored to a specific application
- Product use information
- Manufacturer site visits
- Also verified as noncombustible, same as stucco
- A manufacturer's warranty for the product, ours is up to 20-years!

Product Testing

Engineered stucco excels when verified product performance is a requirement. OCS is typically evaluated to ICC-ES AC11, similar performance criteria and/or the NOCSA standards. Stucco only has tradition without testing while stucco has results. The verified testing is outlined on the attached comparison.



NOCSA OCS TEST RESULTS

TEST	TEST METHOD	CRITERIA	NOCSA OCS RESULTS	ASTM C926 STUCCO RESULTS
Finishes & Coatings	Varies		Reference EIFS & Coatings Data	Not Tested
Accelerated Weathering	ASTM G26/G155	No deleterious effects after 2000 hours	Pass	Not Tested
Freeze-Thaw	ICC AC11	No deleterious effects after 10 cycles	Pass	Not Tested
Compressive Strength	ASTM C109	Average load for cured sample	Varies by manufacturer	Not Tested
Transverse Load ICC	AC11/ASTM E330	Withstand positive and negative wind loads as specified by the building code	Wind Load results vary by manufacturer	Designed per code requirements
Fire Resistance	ASTM E119	No effect on the fire resistance of a rated wall assembly	Tested rated assemblies verified by manufacturer	Rated specific and generic assemblies
Drainage and Drying	ASTM E2273/AC235	Minimum 90% Drainage Efficiency	94%	Not Tested
Material Combustibility	ASTM E136	Rated as noncombustible	Pass	ASTM C926 components are noncombustible