

TECHNICAL BULLETIN

Sika Facades CI Stucco

Noncombustible (Types I, II, III, and IV) Construction

BACKGROUND

NFPA 285, also referred to as the Intermediate Scale Fire Test (ISMA), is a two story fire test (see Figure 1) that determines flammability characteristics of non-load bearing exterior wall assemblies such as those with a continuous insulation (CI) Stucco cladding that contain a combustible component such as foam plastic insulation (EPS, Neopor®, XPS, etc.). NFPA 285 is used to show compliance with (International Building Code (IBC) section 2603.5.5) if the exterior walls are required to be of non-combustible construction such as the case with buildings classified as Type I, II, III, or IV construction.

CONTINUOUS INSULATED (CI) STUCCO SYSTEMS

Historically, many stucco systems have not incorporated CI and those that did were often times residential dwellings which are generally classified as combustible (Type V) construction. However, more recent Energy Codes and Standards such as the International Energy Conservation Codes (IECC) are driving the use of continuous insulation behind all cladding types. This includes stucco, as it provides a simple solution to comply with many of the new thermal insulation requirements applicable to residential, as well as commercial buildings. Given that many commercial buildings are classified as non combustible, there is growing interest and demand for CI Stucco Systems that have been tested per NFPA 285.



Figure 1 - NFPA 285 Test

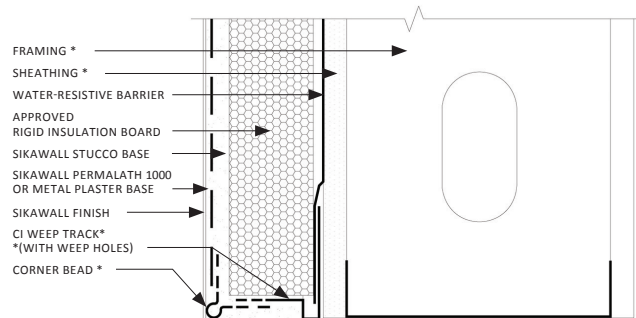


Figure 2 - NFPA 285 Window head detail with CI Weep Track (metal or PVC)

(*NOTE: BY OTHERS)

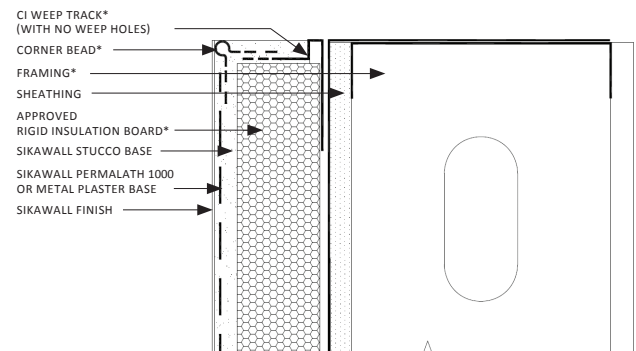


Figure 3 - NFPA 285 Window sill/jamb detail with Amico C-1 Weep Trac (metal or PVC)

(*NOTE: BY OTHERS)

SIKA FACADES CI STUCCO SYSTEM RESULTS

Table 1 lists the Sika Facades CI Stucco wall assembly components that have been tested, evaluated and meet the NFPA 285 criteria. Figures 2 & 3 (on page 1) show detailing/trim accessories used around windows to provide a finished appearance as well as to encapsulate the rigid insulation board.

WALL ASSEMBLY COMPONENT	MATERIAL
Base Wall	Concrete, CMU, or minimum 20 gauge 3-5/8" steel studs 16" or 24" oc, minimum 1/2" thick regular or Type X gypsum
Floorline Firestop	For balloon framed assemblies, 4 PCF mineral wool in stud cavity at floorline attached with Z clips or equal
Cavity Insulation	None or any faced or unfaced non-combustible insulation
Exterior Sheathing	Minimum 1/2" regular or Type X gypsum sheathing
Air/Water-Resistive Barrier	Sika Facades air/water-resistive barriers, Tyvek® StuccoWrap®, Tyvek® CommercialWrap®, WeatherMate or WeatherMate Plus, CertaWrap or No 15 Asphalt Felt (ASTM D 226 Type 1)
Exterior Continuous Insulation (CI)	<ul style="list-style-type: none"> a. Maximum 2.5-inch thickness of ASTM C578 Type II EPS (must be ASTM E84 Class A) b. Maximum 2.4-inch thickness NEOPOR GPS PLUS Type II Rigid Insulation Board c. Maximum 3-inch thickness of ASTM C578 Type XI EPS (must be ASTM E84 Class A) d. Maximum 1.7-inch thickness of ASTM C578 Type IX EPS (must be ASTM E84 Class A) e. Maximum 3-inch thickness XPS, ASTM C578 Type IV or Type X (must be ASTM E84 Class A) f. Maximum 3-inch thickness, Atlas EnergyShield Pro g. Maximum 3-inch thickness, Atlas EnergyShield Pro2 h. Maximum 3-inch thickness, Hunter Xci Class A i. Maximum 3-inch thickness, Hunter Xci CG j. Maximum 4-1/4-inch thickness, Hunter Xci Ply (maximum 3-1/2-inch foam, maximum 3/4-inch plywood) k. Maximum 3-inch thickness, Carlisle R-2+ Sheathe, R2+ Mat or R2+ Silver l. Maximum 3-inch thickness, unfaced
Plaster Base (Lath)	SikaWall® PermaLath 1000, 2.5# or 3.4# Metal Lath, 1-1/2" 20 gauge wire or 1" 17 gauge wire
Stucco	Minimum 1/2" thick SikaWall Stucco Base
Finish Coat	SikaWall Finish

Table 1 - NFPA 285 Assembly Components

