COREV AMERICA PRODUCT TESTING SUMMARY

PRECOR™

Maintaining the highest standards within the industry is Corev America's highest priority. Corev's Research and Development Program includes extensive testing to assure its customers of top performance in every product.

EXTENSIVE FIRE TESTING

Test	Method	Description	Results
Full Scale Multi Story Fire Test for PRECOR Assembly over 4" EPS.	UBC 26-4 (Formerly UBC 17-6)	Severe fire exposure of a two story structure with PRECOR System	No flame propagation through core or exterior face of system.
Surface Burning Characteristics For PRECOR Assembly	ASTM E 84 (UL 723, UBC 42-1)	Smoke Development Flame Spread Index (Assembly over 4" EPS)	165 25
Surface Burning Characteristics for FINISH COATINGS	ASTM E 84 (UL 723,UBC 42-1)	Smoke Development Flame Spread Index Fuel Contribution	5 5 0
Large Scale Vertical Fire Spread Test for PRECOR (4" E.P.S.)	Modified ASTM E 108	Fire simulation of PRECOR assembly on vertical wall	No significant vertical or horizontal flame spread. Limited smoke production.
Fire Performance Evaluation of 1 hour and 2 hour Wall Assembly with PRECOR System	ASTM E 119-95	PRECOR System over gypsum sheathing and steel studs	Wall assembly received 1hour and 2 hour fire resistance rating.
Burning Characteristics (FINISH COATINGS ONLY)	Military Spec. MIL-M1014G	Bellstein Test Smoke Development Flame Spread Ash	Negative Light 5" Light
Potentially Hazardous Gas Emissions Upon Burning (FINISH COATINGS ONLY)	Military Spec. MIL-M-14G Results expressed in PPM.	Chlorine Hydrogen Chloride Phosgene Ammonia Carbon Monoxide Cyanides as HCN Sulfur Dioxide Aldehydes as HCHO Carbon Dioxide Nitrogen Oxides	0 0 0 0 140 0 0 2 9125 28
Ignitibility Using Radiant Energy Heat Source (3/4" and 4" EPS)	NFPA 268	Radiant Heat Ignition Resistance for Exterior Wall	No ignition

STRUCTURAL TESTING

Test	Method	Description	Results
Wind Load Resistance	ASTM E 330	¾" EPS over 20g. 16" O.C. Studs; 5/8" gypsum sheathing	Tested to negative 120 psf loads without failure.
Impact Resistance	ASTM D 2794	15 lbs. cup 2" dia. / 2.5" radius nose	Mean Failure Energy: 56.6 ft/lbs
	EIMA 101.86	PRECOR with Standard Mesh Medium Mesh High Impact Mesh Ultra High Impact Mesh	Pass Pass Pass Pass
Hardness	Rockwell R Scale	Corevsand Decorplast	25.5 24.2
Bond Strength Test (ICBO Freeze/Thaw)	ASTM C 297	PRECOR over 1" EPS ¼" fiberboard substrate	No evidence of cracking or other damage.
Wall Assembly Impact Resistance	ASTM E 695 (Formerly E 72)	1" to 4" EPS over various assembly configurations	Pass with no damage to finish.

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RESISTANCE TO ELEMENTS

Test	Method	Description	Results
Accelerated Weathering	ASTM G 23	2000 hours Carbon Arc Method	No deterioration or color change.
Salt Fog Resistance	ASTM B 117	500 hours of 5% salt fog	No change.
Humidity Resistance	ASTM D 1735	500 hours of 100% water fog	No change.
Wind Driven Rain	Fed. Spec. TT-C-555B	24-hour exposure	0.35% weight gain. No water penetration.
Freeze Thaw Stability	ASTM C 67 ICBO AC24, Sec. 6.5	Repeated cycles exposing PRECOR sections to severe soaking/freeze/thaw	No delaminating, cracking or other deterioration.
Abrasion Resistance	ASTM D 969 (1000Lts.)	Resistance to wear	No perceptible change.
Chemical Resistance	ASTM D 1308	Hydrochloric acid 10% Ammonia hydroxide Turpentine fuel oil Fuel oil #2	No change. No change. Moderate softening. Slight softening.
Mildew resistance	Military STD.810B	Method 508	No fungus growth.
Water Penetration	ASTM E 331	Resistance to water	No water penetration.
Water Resistance	ASTM D 2247	Resistance to water	No water penetration.
Water Vapor Transmission	ASTM E 96	Permeance through 1" EPS Assembly at 75 F/50%R.H.	1.036 grains/hour-ft² 2.368 perms

INSULATION BOARD TESTING

The insulation board used by Corev America meets or exceeds requirements of ASTM C 578-92. All tests relate to boards of 1.0 lb./cu. ft. density.

Test	Method	Description	Results
Thermal Conductivity	ASTM C 177, C 518	K Factor	0.23@25 F 0.24@40 F 0.26@75 F
Thermal Resistance	ASTM C 177, C 518	R value for 1" board	4.35@25 F 4.17@40 F 3.85@75 F
Strength Properties Compressive Flexural Tensile Sheer Sheer Modulus Modulus of Elasticity	ASTM C 165/1621 ASTM C 203	10% deformation Values in psi Values in psi Values in psi Values in psi Values in psi	10.0 - 14.0 25.0 - 30.0 16.0 - 20.0 18.0 - 22.0 230 - 320 180 - 220
WVT	ASTM E 96	Values in perms-inches	2.0 - 5.0
Water Absorption	ASTM C 272	Maximum volume in %	4.0
Dimensional Stability	ASTM D 2126	Change in dimension expressed in maximum %	2.0
Coefficient of Thermal Expansion	ASTM D 696	in(in.)(F)	0.000035
Surface Burning Characteristics	ASTM E 84(UBC 42-1)	Flame spread Smoke development	Less than 25 Less than 450

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