ReAct® Cement

Fiber-Cement Board

Usages
ReAct Cement as a Standalone Binder

Compressive Strengths
High Strength to Weight Ratio

Cement Replacement
100%

ASTM - Specific Board Standards
C1288
C1186
RADCO testing report #RAD-5716

ReAct® Cement is a white calcium carbonate cement, that is a reactive form of calcium carbonate known as vaterite. ReAct Cement is a low CO_2 binder successfully used in the formulation of fiber-cement boards.

+ Business Applications

Indoors for tile backer boards.

Outdoor for sheathing boards, siding, and trim.

+ Key Benefits

100% OPC Replacement

Dramatically Lower (⅔ less) Carbon Intensity of Binder

White Color

Enable Lightweight Formulations

High Strength to Weight Ratio

Improved Dimensional Stability

Compatible with Existing Manufacturing Processes

Reduced Energy Demand in Autoclaves

Fiber-Cement Board

Exceed Strength Requirements While 20% Lighter

Calcium carbonate cement-based fiber-cement boards provide good mechanical performance

Test	ReAct Cement FCB Machine / Cross / Avg. / % Retained	ASTM C1288, C1186 Requirement	Method
Density (g/cm^3)	0.98		ASTM C1185-12
Flexural Strength, Equilibrium (MPa)	11.8 / 7.2 / 9.3	≥4/10/16 (Grade I/II/III)	ASTM C1185-12
Flexural Str., Water Soak (MPa)	7.5 / 4.6 / 6.1 / 65%	≥4/7/13 (I/II/III) / ≥50%	ASTM C1185-12
Flexural Str., Warm Water Soak (MPa)	7.4 / 4.6 / 6.0 / 98%	≥80%	ASTM C1185-12
Flexural Str., Freeze-Thaw (MPa)	7.3 / 4.4 / 5.8 / 96%	≥80%	ASTM C1185-12
Shear Bond Strength, Portland Mortar (kPa)	591	≥344	ANSI-A118.1
Shear Bond Str., Latex Mod. Mortar (kPa)	1027	≥344	ANSI-A118.4
Nail Head Pull Through (N)	913	≥400	ASTM D1037-12

Provide Strong Service Life Performance

Calcium carbonate cement-based fiber-cement boards are durable and safe

Test	ReAct Cement FCB	ASTM C1288, C1186 Requirement	Method
Moisture Content (%)	2.3	Report	ASTM C1185-12
Water Absorption (%)	32.5	Report	ASTM C1185-12
Moisture Movement/Expansion (%)	0.01	≤0.07	ASTM C1185-12
Water Tightness	No Water Droplets	No Water Droplets	ASTM C1185-12
Heat/Rain Resistance	No Damage	No Damage	ASTM C1185-12
Mold Resistance (Rating)	0 / No Growth	≤1	ASTM G21-13
Surface Burning Index	0	≤5	ASTM E84-15
Flame Spread Index	0	0	ASTM E84-15
Smoke Development Index	2 / Class A	≤450	NFPA No. 255

Fortera Lab follows ASTM testing protocols for construction materials