

Mechanical Properties

Test	Determination	Standard	Unit	Result
Flexural Strength	-	EN 14617-2	Mpa	45,5 , F ₂
	-	ASTM D790	Mpa	41,7
Breaking Strength	-	ASTM C648	lbf	363
Bond Strength	-	ASTM C482	-	3780 N ; 0,009216 m² ; 0,41 MPa
Impact Resistance	-	EN 14617-9	J	3,73
	-	NEMA LD 3-3.8	inch	15,75 (224 g steel bar with 1-1/2" diameter)
Abrasion Resistance	-	EN 14617-4	mm	18,41 , A ₄
	-	ASTM C1353	lw	528,61

Physical Properties

Test	Determination	Standard	Unit	Result
Dimensional Stability	-	EN 14617-12	-	Class A : Stable and not sensitive to humidity
	-	EN 14617-1	%	0,20 , W ₃
Water Absorption	-	ASTM C97	%	0,072
Apparent Density	-	EN 14617-1	Kg/m³	2017,85
Bulk Specific Gravity	-	ASTM C97	-	2,018
Freeze-Thaw Resistance Coefficient	-	EN 14617-5	-	106,5

Thermal Properties

Test	Determination	Standard	Unit	Result
High Temperature Resistance	-	EN 12722 *	At 180 °C	Class: 4
	-	NEMA LD 3-3.6	At 180 °C	No Effect
Boiling Water Resistance	-	EN 12721 *	At 100 °C	Class: 3
	-	NEMA LD 3-3.5	At 100 °C	Moderate Effect
Thermal Shock Resistance	-	EN 14617-6 (20 cycle)	%	Avg. Mass Change: 0,069%
	-			Avg.Flex. Str. Change: 33%
Linear Thermal Expansion Coeff.	-	EN 14617-11	10 ⁻⁶ /°C	18,12
	-	ASTM E228	10 ⁻⁶ /°C	18,36
Thermal Conductivity	-	EN 12664	W/m-K	2,07

Surface Resistance Properties

Test	Determination	Standard	Unit	Result
Stain Resistance	Contrasting Grout	ASTM C1378-04 **	-	NA
	Carbon Lamp Black			NA
	Waterproof Ink			A
	Washable Ink			NA
	Potassium Permanganate Solution			A
	Methylene Blue Solution			A
Chemical Resistance	Acetic Acid, 3% v/v	ASTM C650 **	-	NA
	Acetic Acid, 10% v/v			A
	Ammonium Chloride, 100 g/L			NA
	Citric Acid Solution, 30 g/L			NA
	Citric Acid Solution, 100 g/L			A
	Lactic Acid, 5% v/v			NA
	Phosphoric Acid, 3% v/v			NA
	Phosphoric Acid, 10% v/v			NA
	Sulfamic Acid, 30 g/L			NA
	Sulfamic Acid, 100 g/L			A

Fire Classification

Test	Determination	Standard	Unit	Result
Reaction to Fire	-	EN 13501-1	Class	C - s2 - d2

* Tests were performed in Sustainable's internal laboratories. All other tests were conducted by accredited third-party laboratories.
** NA: Not Affected , A: Affected