

POLYMER CONCRETE

Material Analysis Report

Material Composition:

RESIN: Unsaturated polyester - 19%

Filler: Quartz and CaCO₃ (different size) - 80%

Catalytic and Accelerator: MEKP and Cobalt - 0.5%

Comparative Information:

ITEMS	UNITS	POLYMER CONCRETE	CEMENT CONCRETE
Specific Gravity	g/cm ³	2.3	2.3
Compression Strength	kgf/cm ²	900 ~ 1500	200 ~ 500
Tensile Strength	kgf/cm ²	80 ~ 150	10 ~ 30
Bending Strength	kgf/cm ²	200 ~ 350	40 ~ 80
Elastic Modulus	kgf/cm ²	2.5 ~ 3.5×10 ⁵	1.8 ~ 3.5×10 ⁵
Impact Strength	kgf/cm ²	1.8 ~ 4.0	1.5 ~ 2.0
Breaking Strength	kgf/cm ²	90 ~150	40 ~ 50
Thermal Expansion Rate	10 ⁻⁵ /°C	1.1 ~ 1.7	0.7 ~ 1.4
Thermal Conductivity	kcal/mh°C	1.12 ~ 1.46	1.55 ~ 2.32
Hygroscopicity	%	0.3	8
Water Permeability	%	0	3 ~ 4
Hardness (rubber hardness tester)		88 ~ 92	80 ~ 88
Roughness Coefficient		0.01	0.015
Chemical Resistance		High	-

Testing:

Allproof recommends on-site testing for any applications regarding chemical resistancy.

Please contact Allproof Industries for a sample of Polymer Concrete material for testing purposes.