

## *Ductal Architectural White with organic fibers*

Mechanical Properties at 28 days		(in MPa)	
Ductal Architectural White with 3% PVA Fibers (no thermal treatment)	Mean (m)	Std. Deviation	Characteristic (k)
Compressive Strength - $f_c$ (per ASTM C39 w/ C1856 modifications)	120	5	110
Compressive Strength <b>Design Value</b> ( = $0.6 * f_{ck}$ )	70		
Limit of Elasticity in Bending - $f_{ct,fl}$ (per ASTM C1609 w/ C1856 modifications)	8.5	0.5	7.5
Flexural Strength <b>Design Value</b> ( = $f_{ctk,fl} / 3$ )	2.5		
Limit of Elasticity in Tension - $f_{ct,el}$ (estimated using Eq. D.2 in NF P 18-470)	5.3	-	4.7
Tensile Strength <b>Design Value</b> (not appropriate for PVA only elements)	N/A		
Static Modulus of Elasticity - $E_{cm}$ (per ASTM C469 w/ C1856 modifications)	45 GPa		
Chloride Ion Penetrability (per ASTM C1202 w/ C1856 modifications)	<100 coulombs (negligible)		
Notes:			
- these design values are for elastic design only at service limit state (SLS)			
- the post-cracking tensile strength is substantially reduced with PVA fibers (i.e. strain softening)			
- these flexural values are not applicable for <b>thin-plate</b> elements ( $t < 4$ cm )			

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