CCX® Innovation on a Roll

DATA SHEET

CCX® Properties 2605.01.EN

Pre-set (Uncured)	Test Method	Unit	Typical Values	
			CCX-U®	CCX-M®
ASTM D8364 'Standard Specification for GCCM Materials' Classification				
GCCM Classification	ASTM D8364	Type	II	II
Dimensions				
Total Thickness	BS EN 1849-2	mm	10	10.3
Membrane Thickness	BS EN 1849-2	mm	N/A	0.3
Roll Sizes - W x L**	*	m	1.95 x 50	1.90 x 50
Area of CCX® per Roll	*	m^2	97.5	95
Physical Properties				
Mass per Unit Area	BS EN 1849-2	kg/m^2	13.5 - 15.5	14.0 - 15.5
Density	BS EN 1849-2	kg/m^3	1400-1600	
Density Increase on Curing	*	% Increase	20-25	
Other Properties				
Working Time from Hydration - refer to the CCX® Hydration Guide	*	Minutes	<30	

Post-set (Cured) - at 28 Days from Hydration Unless Specified (Hydrated by full immersion in accordance with ASTM D8030)	Test Method	Unit	Typical Values	
			CCX-U®	CCX-M®
Mechanical Performance				
Compressive Strength of Cementitious Mix (water/cementitious materials ratio to ASTM D8329)	ASTM D8329	MPa	60	70
Flexural Strength - at 24 Hours from Hydration				
- Initial Breaking Load	ASTM D8058	N/m	2500	
- Initial Flexural Strength	ASTM D8058	MPa	4	
- Final Flexural Strength (MD/CD)	ASTM D8058	MPa	6 / 4.5	10 / 6
Dynamic Puncture Resistance (depth of perforation)	BS EN ISO 13433	mm	0***	
Pyramid Puncture Resistance	BS EN ISO 14574	kN	15	
Differential Ground Movement (strain to exposure of geomembrane)	*	%	N/A	>10
Environmental Durability				
Freeze - Thaw Resistance - retained Initial Flexural Strength after 100 cycles	BS EN 12467	%	100	
Weathering (UV) Resistance - retained Initial Flexural Strength	BS EN 12224	%	90	
Microbiological Resistance - retained Initial Flexural Strength	BS EN 12225	%	85	
Permissible Long Term pH Immersion Range	*	pH	6-9	
Root Resistance	DD CEN/TS 14416	-	Passed	
Hydraulic Performance				
Abrasion Resistance - cementitious barrier depth of wear	ASTM C1353 / D8364	mm/1000 Cycles	0.2	
Manning's Roughness Coefficient - refer to CCX® Manning's test report	ASTM D6460	n	0.010-0.015	

The above values are typical and provide an indication of product performance based on testing by BICS Laboratories Ltd or TRI Environmental. Values marked with an asterisk (*) are based on Concrete Canvas Ltd laboratories internal assessments and testing. For design values, contact Concrete Canvas Ltd. **CCX® Rolls are supplied by area so the listed length and width dimensions are typical values and tolerances are typically +5%/-2.5% . ***Probe did not make a full penetration through the product, therefore the depth of penetration is zero.

The primary function of the geosynthetic top surface is to constrain the cementitious material fill during installation. The top surface geosynthetic may degrade in high UV exposure or abrasive conditions, but the CCX® material will continue to provide its in-service armouring and erosion control functions as these functions are provided by the cured cementitious material and bottom geosynthetic layer(s). Information is provided based on current test data and may be subject to change as new information becomes available. The versatile nature of CCX® means that all application conditions cannot be anticipated. Concrete Canvas Ltd makes no warranties and assumes no liability in connection with this information. Project specific testing may be required to determine the suitability for CCX® material use in a particular application.

Further Info

CCX® DoP

Sustainability

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289 ISO 14001 ENVIRONMENTAL MANAGEMENT

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289 ISO 9001 QUALITY MANAGEMENT

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