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DOP 1904.01.EN  
CCH5, CCH8

European Assessment Document: EAD 080009-00-0301  
European Technical Assessment: ETA-19/0086  
Technical Assessment Body: British Board of Agrément  
Notified Body: 0836

System of assessment and verification of consistency of performance of the product is 2+

Intended Uses:

The products are for use in containment applications and the intended uses can be outlined as:

Secondary Containment Bund Lining,  
Channel Lining,  
Lagoon Lining,  
Other Containment (New and Remediation)

Declared Performance:

Essential Characteristic		Unit	Method	Product Performance	
				CCH5	CCH8
<b>Mechanical Resistance and Stability</b>					
1	<b>Thickness (uncured)</b>	mm	EN 1849-2	>5.0	>8.5
2a	<b>Mass per Unit Area (uncured)</b>	kg/m <sup>2</sup>	EN 1849-2	8	13
2b	<b>Density (uncured)</b>	kg/m <sup>3</sup>	EN 1849-2	1500	1500
3a	<b>Initial Flexural Strength</b>	MPa	ASTM D8058	4.0	4.0
3b	<b>Final Flexural Strength</b>	MPa	ASTM D8058	13.0	13.0
4	<b>Static Puncture Resistance</b>				
4a	- Puncture Force	kN	EN ISO 12236	3.5	4.5
4b	- Puncture Displacement	mm		32.7	35.10
5	<b>Dynamic Puncture Resistance</b> <i>Depth of Perforation</i>	mm	EN ISO 13433	0	0
6	<b>Pyramid Puncture Resistance</b>	kN	EN 14574	7.5	10.0
7	<b>Strength of Internal Linking Fibres</b>	kN/m	EN ISO 13426-2	4.0	4.5
<b>Safety and Accessibility in Use</b>					
8	<b>Resistance to Chemicals</b> <i>Retained Initial Flexural Strength</i>				
8a	- Method A <i>Acid (10% solution H<sub>2</sub>SO<sub>4</sub>)</i>	%	EN 14414	79	85
8b	- Method B <i>Alkaline (saturated suspension Ca(OH)<sub>2</sub>)</i>	%		132	138
8c	- Method C <i>Solvation &amp; Swelling (35% vol diesel, 35% vol paraffin, 30% vol lubricating oil HD30)</i>	%		128	110
8d	- Method D <i>Synthetic Leachate</i>	%		133	129
9	<b>Durability</b> <i>Retained Initial Flexural Strength</i>				
9a	- Weathering (UV) Resistance	%	EN 12224	72.4	
9b	- Microbiological Resistance	%	EN 12225	137	
9c	- Leaching Resistance Method A <i>Leaching by hot (de-ionized) water</i>	%	EN 14415	125	
9d	- Leaching Resistance Method B <i>Leaching by aqueous alkaline liquids (saturated Ca(OH)<sub>2</sub>)</i>	%		125	
9e	- Leaching Resistance Method C <i>Leaching by organic alcohols (30% vol methanol, 30% vol isopropanol, 40% vol glycol)</i>	%		110	
9f	- Thermal Ageing	%	EN 14575	66	
<b>Sustainable Use Of Natural Resources</b>					
10	<b>Abrasion Resistance</b> <i>Cementitious Barrier Abrasion Depth of Wear</i>	mm/1000 cycles	ASTM C1353	0.2	
11	<b>Freeze - Thaw - Retained Initial Flexural Strength</b>	%	EN 12467	101	
12	<b>Water Permeability</b>	m/s	EN 14150	1 x 10 <sup>-11</sup>	
13	<b>Gas Permeability</b>	$\frac{\text{cm}^3 \cdot \text{cm}}{\text{cm}^2 \cdot \text{s} \cdot \text{Pa}}$	ASTM D1434	5 x 10 <sup>-12</sup>	

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