

RCR® (REINFORCED CONCRETE ROLL)

RCR® offers an innovative solution for quick, cost-effective, and versatile erosion control and structural reinforcement. This advanced concrete composite, encapsulated between two layers of non-woven geotextile, is designed to deliver superior protection in a fraction of the installation time required by conventional concrete solutions.

RCR® is ideal for applications like erosion control, irrigation canals, and containment ponds, or for temporary roads and drive-over swales. Its flexible, roll-out design allows for rapid installation without the need for concrete trucks, mixing, or rebar, making it perfect for remote sites or projects with time constraints.

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RCR® (Reinforced Concrete Roll)

Properties	Imperial	Metric
Roll Width	~16 ft 4 in	5 m
Roll Length	~65 ft 7 in	20 m
Total Coverage	~1,076 ft ²	100 m ²
Roll Weight (RCR® 7)	~1,750 lbs	~790 kg
Roll Weight (RCR® 12)	~2,900 lbs	~1,300 kg

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RCR® – Before Hydration

Properties Before Hydration	Test Method	RCR® 7	RCR® 12
Thickness	ASTM D5199	>0.3 in >8.5 mm	>0.45 in >12 mm
Mass / Unit Area	ASTM D5993	>1.5 lbs/ft ² >7.5 kg/m ²	>2.6 lbs/ft ² >12.5 kg/m ²
Tensile Strength (Machine Direction)	ASTM D6768	>90 lbs/in >15 kN/m	>85 lbs/in >15 kN/m
Tensile Strength (Transverse Direction)		>145 lbs/in >25 kN/m	>200 lbs/in >35 kN/m
Density	ASTM D5993 / ASTM D5199	>50 lbs/ft ³ >850 kg/m ³	>60 lbs/ft ³ >1,000 kg/m ³

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RCR® – After Hydration

Properties After Hydration	Test Method	RCR® 7	RCR® 12
Compressive Strength	ASTM D8329 <i>cured 28 days</i>	>3,100 psi >21.5 MPa	>3,950 psi >27.5 MPa
Thickness	ASTM D5199 <i>cured 24 hours</i>	>0.35 in >9.1 mm	>0.50 in >14.5 mm
Tensile Strength (MD Initial Flexural)	ASTM D4885 <i>cured 28 days</i>	>27 lbs/in >4.5 kN/m	>40 lbs/in >7 kN/m
Tensile Strength (MD Final Flexural)		>160 lbs/in >28.5 kN/m	>170 lbs/in >30 kN/m
Tensile Strength (TD Initial Flexural)		>20 lbs/in >3.5 kN/m	>45 lbs/in >8 kN/m
Tensile Strength (TD Final Flexural)		>190 lbs/in >33 kN/m	>250 lbs/in >45 kN/m
Flexural Strength (MD Breaking Load)	ASTM D8058 <i>cured 24 hours</i>	>3 lbs/in >600 N/m	>3.5 lbs/in >680 N/m
Flexural Strength (MD Initial Flexural)		>150 psi >1.0 MPa	>95 psi >0.6 MPa
Flexural Strength (MD Final Flexural)		>215 psi >1.4 MPa	>265 psi >1.8 MPa
Flexural Strength (TD Breaking Load)		>2 lbs/in >360 N/m	>3.5 lbs/in >645 N/m
Flexural Strength (TD Initial Flexural)		>85 psi >0.6 MPa	>100 psi >0.6 MPa
Flexural Strength (TD Final Flexural)		>250 psi >1.7 MPa	>250 psi >1.7 MPa
Freeze / Thaw Resistance (MD Breaking Load)	ASTM C1185 <i>cured 28 days</i>	>95 Percent Retained	>95 Percent Retained
Freeze / Thaw Resistance (MD Initial Flexural)			
Freeze / Thaw Resistance (MD Final Flexural)			
Freeze / Thaw Resistance (TD Breaking Load)			
Freeze / Thaw Resistance (TD Initial Flexural)			
Freeze / Thaw Resistance (TD Final Flexural)			
Permeability (Index Flux)	ASTM D5887 <i>cured 28 days</i>	8.2 e-07 m ³ /m ² /sec	5.3 e-08 m ³ /m ² /sec
Permeability (Hydraulic Conductivity)		2.5 e-07 cm/sec	3.5 e-08 cm/sec
Puncture Resistance	ASTM D5494 (Method B) <i>cured 28 days</i>	>1,000 lbs >4.5 kN	>2,700 lbs >12 kN
Manning's <i>n</i>	ASTM D6460 <i>cured 28 days</i>	0.018	

Notes:

1. RCR® Certifications – MSHS IC#-375/01 (Mine Safety and Health Administration U.S. Department of Labor).
2. Information is provided based on current test data and may be subject to change as new information becomes available. Project specific testing may be required to determine the suitability of RCR® material used in a particular application.

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