



ITL Reinforced Concrete Roll®

ITL RCR® At Work

ITL RCR® FOR OHIO CULVERT PIPE REPAIR



Culvert Before



Installation



Culvert After

QUICK EASY INSTALLATION – FAST RETURN TO SERVICE

ITL RCR-7® EXTENDS LIFE OF PIPE WHILE REDUCING FUTURE MAINTENANCE COSTS

In July 2021, along SR 66 near Delphos, Ohio, Meredith Brothers and DOT workers scheduled this 60", 24' long culvert pipe for repair. Made of 8 gauge corrugated galvanized steel multi-plate pipe and installed approximately 30 years ago, it had thinned from years of water and sediment flow. ITL Reinforced Concrete Roll®, (ITL RCR®) was selected to repair, protect and extend the life of the pipe while minimizing disruption to traffic from the adjacent highway during installation.

The ITL RCR-7®, or 7mm thick material is ideal for culvert repairs. One roll of 16'4" x 65' 7" was pre-cut to 4' x 6' sheets and Hilti-fastened every 6" along the inside top edges and end of the pipe. Sheets down the length of the pipe were also overlapped by 6" and welded together with a hand-held propane torch. Further adding installation ease as well as pipe strength was ITL RCR's ability to mold well to the pipe corrugations during the hydration process. Tar was applied and sealed the top edges before ITL RCR® was hydrated to start the curing process. As ITL RCR® can be installed and subsequently cured in water, the pipe was returned to service immediately after completion of the installation.

STRONG & VERSATILE

ITL Reinforced Concrete Roll® is a dry powdered cement mix that is needle-punched between two sheets of non-woven polypropylene. When rolled out and hydrated, ITL RCR® takes shape into a durable structure suitable for reinforcement or protective lining.

WHAT OUR CUSTOMER HAD TO SAY:

"We pride ourselves on being solution providers and ITL RCR® was a great solution for the application and ease of installation. It took a half a day to line the 60" pipe. Our customer has indicated they will continue the use of ITL RCR® for future culvert linings."

Jerry Frantz
Technical Sales Manager
Meredith Brothers Inc.



U.S. Distribution Centers

Moses Lake, Washington | Fostoria, Ohio | Odessa, Texas
www.itlRCR.com | 1 (800) 346-7744

ITL Reinforced Concrete Roll®

ITL RCR® At Work

Technical Data	ITL RCR®	RCR-7®		RCR-12®		
		Imperial	Metric	Imperial	Metric	
	Roll Width/Length	16' 4" x 65' 7"	5m x 20m	16' 4" x 65' 7"	5m x 20m	
	Total Coverage	1,076 ft²	100m	1,076 ft²	100m	
Weight	1,700 lbs/roll	770 kg/roll	2,850 lbs/roll	1,290 kg/roll		
Properties of ITL RCR® - Before Hydration	Test Method	Imperial	Metric	Imperial	Metric	
Thickness	ASTM D5199	0.33 inches	8.45 mm	0.51 inches	13.1 mm	
Mass / Unit Area	ASTM D5993	1.5 lb/ft²	7.31 kg/m²	2.76 lb/ft²	13.47 kg/m²	
Tensile Strength	Machine Direction Transverse Direction	ASTM D6768	217 lbs/inch	38.1 N/m	136 lbs/inch	23.9 N/m
			102 lbs/inch	17.9 N/m	191 lbs/inch	TD = 33.5 N/m
Density	ASTM D5993/ ASTM D5199	54 lb/ft³	865 kg/m³	64.4 lb/ft³	1031 kg/m³	
Properties of ITL RCR® - After Hydration	Test Method	Imperial	Metric	Imperial	Metric	
Specimen Preparation per ASTM D8030						
Compressive Strength	ASTM C109	24 hour cure	5,303 psi	36 MPa	5,303 psi	36 MPa
		7 day cure	6,823 psi	47 MPa	6,823 psi	47 MPa
		28 day cure	7,222 psi	50 MPa	7,222 psi	50 MPa
Thickness	ASTM D5199	0.37 inches	9.3 mm	0.54 inches	13.6 mm	
Flexural Strength	Machine Direction Transverse Direction	ASTM D8058	5.31 lb/in	930 N/m	13.6 lb/in	2373 N/m
Initial Breaking Load			3.6 lb/in	630 N/m	14.3 lb/in	2497 N/m
Puncture Resistance	ASTM D5494	2,366 lbs	10.5 kN	3,782 lbs	16.8 kN	
Freeze-Thaw Initial Breaking Load	Machine Direction Transverse Direction	ASTM C1185	4.1 lb/in	717 N/m	13.3 lb/in	2323 N/m
			5.4 lb/in	936 N/m	13.7 lb/in	2400 N/m
Tensile Strength - Final	ASTM D4885	258 lbs/in	36,539.6 kN/m	264 lbs/in	38,332.3 kN/m	
Permeability	ASTM D5887	5.25E-09 ft³/ft²/sec	1.60E-09 m³/m²/sec	Testing only performed on RCR-7		
		3.20E-11 ft/sec	9.74E-12 m/sec			
Abrasion Resistance - per 1,000 cycles	ASTM C8329	Refer to RCR-12 testing values		0.014 in	0.36 mm	
Large-Scale Channel Testing Determination by Trapezoidal Channel	ASTM D6460	Refer to RCR-12 testing values		0.022 Manning's n		
Reaction to Fire	PN EN 12467:5.6	Refer to RCR-12 testing values		B,s1,d0		
ITL RCR® Certifications	Test Method	Acceptance Number				
Mine Safety and Health Administration U.S. Department of Labor	Acceptance of Flame-Resistant Solid Products Taken into Mines	MSHA IC-375/02				

Contact us for a free product sample!

Leo Cortez

Product Manager

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Email: leoc@inlandtarp.com

Learn more at itlRCR.com

PREMIUM QUALITY. BUILT TO LAST.

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