

NTPEP



NATIONAL TRANSPORTATION
PRODUCT EVALUATION PROGRAM

Submittal Year: 2018
 NTPEP Number: RSCP-2018-01-007
 Manufacturer Name: ART Concrete Solutions Inc.
 Product Name: ART 30 Minute Repair
 Product Category: Polymer Modified
 Product Use: Horizontal
 Product Application: Extended (Concrete)
 Chloride Ion Content Test Method (AASHTO T260): Both Acid and Water Soluble
 Curing: Air Cure
 Number of Extender Aggregates: One
 AASHTO T161 Requested: Procedure A & B
 Product Description: Hybrid Aggregate Polymer Concrete Repair System
 Summarized Installation Instructions: [Mixing and Curing Directions](#)

Polymer Modified - Extended (Concrete)					
Test Methods	Unit	Rep1	Rep2	Rep3	Average
Compressive Strength (AASHTO T106/ASTM C 109) - 1 hour	psi				
Compressive Strength (AASHTO T106/ASTM C 109) - 3 hours	psi	4500	4390	4360	4420
Compressive Strength (AASHTO T106/ASTM C 109) - 1 day	psi	7080	6670	7230	6990
Compressive Strength (AASHTO T106/ASTM C 109) - 7 days	psi	7660	7430	8100	7730
Compressive Strength (AASHTO T106/ASTM C 109) - 28 days	psi	8350	8000	7960	8100
Length Change (AASHTO T160/ASTM C 157) modified - 28 days in air	%	-0.036	-0.04	-0.037	-0.038
Length Change (AASHTO T160/ASTM C 157) modified - 28 days in water	%	0.014	0.008	0.002	0.008
Thermal Compatibility (ASTM C 884) - 5 cycles (Pass=1 / Fail=0)		1	1	1	1
Chloride Ion Penetration (AASHTO T277/ASTM C 1202) - 28 days	coulombs	12887	12846	12953	12895

Test Methods	Unit	Rep1	Rep2	Rep3	Average
Surface Resistivity (AASHTO T 358) - 28 days	kΩ-cm	11.1	10.9	12.7	11.6
Bond Strength by Slant Shear (ASTM C 882) - 1 day	psi	115	148	151	138
Bond Strength by Slant Shear (ASTM C 882) - 7 days	psi	305	282	380	326
Bond Strength by Direct Tension (ASTM C 1583) - 28 days	psi	71	94	76	80
Freeze Thaw (AASHTO T161/ASTM C 666) (Procedure A) - Number of cycles completed		300	300	300	300
Freeze Thaw (AASHTO T161/ASTM C 666) (Procedure A) - Expansion @ completion	%	0.001	0.007	0.002	0.003
Freeze Thaw (AASHTO T161/ASTM C 666) (Procedure A) - Durability Factor @ completion	%	100	94.9	96.7	97.2
Freeze Thaw (AASHTO T161/ASTM C 666) (Procedure A) - Mass loss/gain @ completion	%	-0.3	0.3	0	0
Freeze Thaw (AASHTO T161/ASTM C 666)(procedure B) - Number of cycles completed		300	300	300	300
Freeze Thaw (AASHTO T161/ASTM C 666)(procedure B) - Expansion @ completion	%	0.025	0.015	0.027	0.019
Freeze Thaw (AASHTO T161/ASTM C 666)(procedure B) - Durability Factor @ completion	%	96.4	97.7	98.1	97.4
Freeze Thaw (AASHTO T161/ASTM C 666)(procedure B) - Mass loss/gain @ completion	%	0.8	0.6	0.3	0.6
Initial Setting (ASTM C 403)	minutes	74	75	76	75
Final Setting (ASTM C 403)	minutes	78	76	77	77
Chloride Ion Content (AASHTO T260) Water Soluble	%	0.005			0.005
Chloride Ion Content (AASHTO T260) Acid Soluble	%	0.009			0.009