TIPC 50

TEXAS INTERNAL PIPE COATING, LLC

TECHNICAL DATA

TIPC 50 INTERNAL PIPE COATING SYSTEM

Primary Service: Saltwater disposal/Injection wells, low temperature and pressure, sweet oil and gas production. Primary Application: New and used tubular goods and line pipe, flow lines hydraulic improvement.

SPECIFICATIONS-TEST STANDARD		
COLOR	TAN	VISUAL COLOR-PASS
Gel Time at 204° C (400° F)	Standard Gel: 50-100 seconds Long Gel: 75-125 seconds	
Thermal Properties	Tg_1 58° C -65° C (136.4° F-149.0° F) Tg_2 100° C -110° C (212° F-230° F)	CSA Z245.20-10 (12-7)
Moisture Content (%)	0 – 0.5	
Particle Size	D_{10} 9-13 µm D_{90} 90-110 µm	
150-250 m Sieve Retention (%)	35-45	
Plate Flow at 300° F (149° C)	55 – 85 mm	

ADDITIONAL INFORMATION	
Recommended Service:	Characteristics:
CO_2 injection WAG	Primer: Phenolic Primer
Oil/water/gas production	Thickness: 250-500 µm
Brine injection/disposal	Use Temperature to 121° C (250° F)
Flow lines / Line Pipes	

POWDER PROPERTIES	
Specific Gravity	1.65
Coverage	0.607 m^2/kg per mm
Shelf Life at 25° C & 50% Relative Humidity	12 months

APPLIED FILM PROPERTIES	SPECIFICATION	TEST METHOD
Abrasion-Taber	Average weight loss: 61 mg	ASTM D4060 (CS-17 wheels & 1000g load at 1000 cycles)
Coefficient of Friction	28° (Slide Angle) 0.44 / 0.42 (Kinetic / Static)	ASTM D202 ASTM D1894
Flexibility (23° C / 74° F)	> 5.5° / PD	
Gouge Resistance (SL-1 Blank Bit) Coating Loss (%) / Retention (%)	21 / 78 (0kg), 53 / 47 (10kg) 67 / 33 (20kg)	

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AUTOCLAVE PERFORMANCE TESTS*

TEMPERATURE
149° C (300° F)

PRESSURE
5,000 psi

MEDIUM
10% CO_2 / 90% CH_4
Hydrocarbons
Tap water

DURATION
16 hours

RESULTS
Pass

TEMPERATURE
149° C (300° F)

PRESSURE
6,500 psi

MEDIUM
27% CO_2 / 73% CH_4
Hydrocarbons
5% brine

DURATION
16 hours

RESULTS
Pass

TEMPERATURE
107° C (225° F)

PRESSURE
4,000 psi

MEDIUM
Alternating 3X (WAG)
5% brine
(H_2S-saturated)
100% CO_2

DURATION
6 days

RESULTS
Pass

TEMPERATURE
66° C (150° F)

PRESSURE
2,000 psi

MEDIUM
3% CO_2 / 97% CH_4
5% brine
(H_2S-saturated)
Rocker arm test

DURATION
28 days

RESULTS
Pass

TEMPERATURE
95° C (203° F)
09-SAMSS-091
APPENDIX 3.5

PRESSURE
3,000 psi

MEDIUM
Gas phase: N^2
Liquid phase:
Treated sea water

DURATION
24 hours

RESULTS
No loss of adhesion, no swelling, softening and blistering

TEMPERATURE
95° C (203° F)
09-SAMSS-091
APPENDIX 3.5

PRESSURE
3,000 psi

MEDIUM
Gas phase: 3% CO_2, 3% H_2S, 94% CH_4
Liquid phase:
Formation water brine

DURATION
24 hours

RESULTS
No loss of adhesion, no swelling, softening and blistering

TEMPERATURE
95° C (203° F)
09-SAMSS-091
APPENDIX 3.5

PRESSURE
3,000 psi

MEDIUM
Gas phase: CO_2
Liquid phase:
Wasia water

DURATION
24 hours

RESULTS
No loss of adhesion, no swelling, softening and blistering

TEMPERATURE
50° C (122° F)
09-SAMSS-091
APPENDIX 3.5

PRESSURE
Covered Vented Container

MEDIUM
10% Vol. HCl

DURATION
24 hours

RESULTS
No loss of adhesion, no swelling, softening and blistering

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