ZEROCOR Green Solutions

ZCor100

ZCor100 is a fusion-bond AksoNobel epoxy powder specifically designed for the internal coating of tubing and casing to protect it from salt water, petroleum products, and other oil and gas production chemicals.

Features

- Applied uniform coating thickness of 10 - 14 mils, Full API Drift.
- Maximum operating temperature rating up to 149°C.
- Proprietary thread and coupling coating technology, enables complete tubing string protection.
- Low fluid permeability, high impact resistance and bond adhesion.
- Low surface friction coefficient, improves flow efficiency.
- Compared to typical epoxies, offers superior corrosion protection.

Benefits

- Prevents paraffin, wax, and scale deposition.
- Withstands high temperature and pressure conditions.
- Resists corrosion and wear, reduced workovers and maintenance.
- Withstands multiple wireline runs, which consequently reduces the expense incurred due to the need for frequent replacements.
- No ID restriction, therefore no special running tools required.
- Over 15 years of proven field performance.

Applications

- Brine injection and disposal wells, gas lift, WAG, CO_2 injection and H_2S gas producing wells.
- Operations struggling with paraffin, wax, or scale build-up.
- Used in wells with highly corrosive acid gases in combination with abrasive dissolved salts.
- Wells where longevity and productivity are compromised, reduces the amount of workovers and replacements.

ZCor100 is corrosion's core solution

ZEROCOR Tubulars | 1950, 639 5 Ave SW | Calgary, AB | (403) 234-7473
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PRODUCT SPECIFICATIONS

Physical Properties:	Value	Unit	Method
Density	1.8	g/cm^3	ASTM D792
Operating Temperature	149 (300)	°C (°F)	-
Volume of Organic Content (VOC)	2.2 (264)	lbs/gal (g/L)	-
Coating Thickness	10 - 14 (254 - 355)	mils (µm)	-
Mechanical Properties:			
Abrasion Resistance, Taber	<40	mg	ASTM D4060
Pull-Off Strength (Adhesion)	45.2 (6555)	MPa (psi)	ASTM D4541
Static Coefficient of Friction (COF)	0.187	-	-
Hazen-Williams Coefficient	150	C Value	-
Hardness, Shore D	>90	-	ASTM D2240-74
Hardness, Barcol	68	-	ASTM D2583
Salt Fog, Salt Spray Test (1700+ hours)	PASS	hours	ASTM B117-97
Three-Point Bend and Flexural Test	PASS	-	ASTM D790
Chemical Resistance:			
Autoclave Test Results: NO swelling, blistering, cracking or detachment from the substrate			
Test 1: 16-hour, 150°C (300°F), 45MPa (6500psig), Gas Phase (3% CO_2, 97% CH_4), Hydrocarbon Phase (50:50 Toluene:Kerosene), Liquid Phase (Brine)	PASS	hours	ASTM G42-96
Test 2: 16-hour, 135°C (275°F), 34MPa (5000psig), Gas Phase (1% H_2S, 20% CO_2, 79% CH_4), Hydrocarbon Phase (50:50 Toluene:Kerosene), Liquid Phase (Brine)	PASS	hours	ASTM G42-96
Test 3: 72-hour, 135°C (275°F), 45MPa (6500psig), Gas Phase (3% H_2S, 3% CO_2, 10% CH_4), N_2 Lime Mud	PASS	hours	ASTM G42-96
Test 4: 16-hour, 150°C (300°F), 69MPa (10000psig), Gas Phase (3% CO_2, 97% N_2), instant decompression	PASS	hours	ASTM G42-96
Test 5: 96-hour, 107°C (225°F), 11.7MPa (2000psig), Gas Phase (3% H_2S, 6% CO_2, 91% CH_4), Hydrocarbon Phase (50:50 Toluene:Kerosene), Liquid Phase (15% NaCl)	PASS	hours	ASTM G42-96
Test 6: 96-hour, 150°C (300°F), 25.5MPa (4000psig), Gas Phase (4% H_2S, 7% CO_2, 90% CH_4), Hydrocarbon Phase (50:50 Toluene:Kerosene), Liquid Phase (4% NaCl)	PASS	hours	ASTM G42-96
Cathodic Disbonding (30 days, 23°C (73°F))	1.5	mg	ASTM G8-96

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