

ZCor100 is purposed for highly corrosive environments. ZCor100 is a ceramic epoxy blend designed to provide corrosion protection for injection wells, floods, WAG, CO₂, and H₂S.



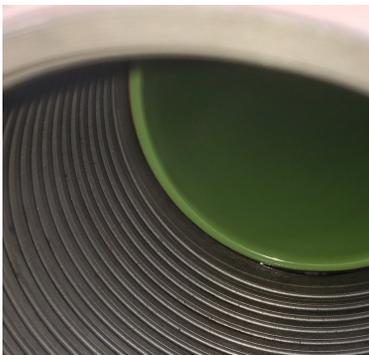
Features

- Applied thickness of 10-12 mils
- Temperature rating up to 204°C
- Proprietary thread coating technology
- Low fluid permeability
- High impact resistance
- Compared to typical epoxies, offers superior corrosion and impact resistance and adhesion and friction reduction



Benefits

- Reduces paraffin, wax, or scale build-up
- Withstands high temperature and pressure
- Low surface friction coefficient
- Resists corrosion and wear, reduced workovers and maintenance
- Withstands multiple wireline runs, reduced replacement expenses
- Over 10 years of proven field performance



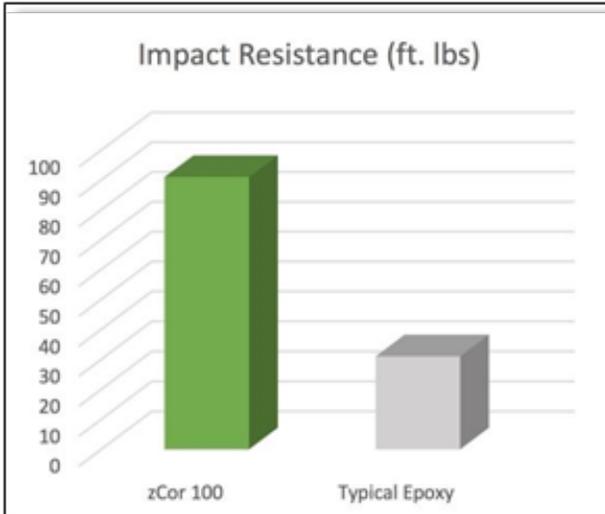
Applications

- Operations struggling with paraffin, wax, or scale build-up
- Maintaining the longevity in a well's productivity
- Reducing the amount of workovers and replacements needed

ZCor100 is corrosion's core solution

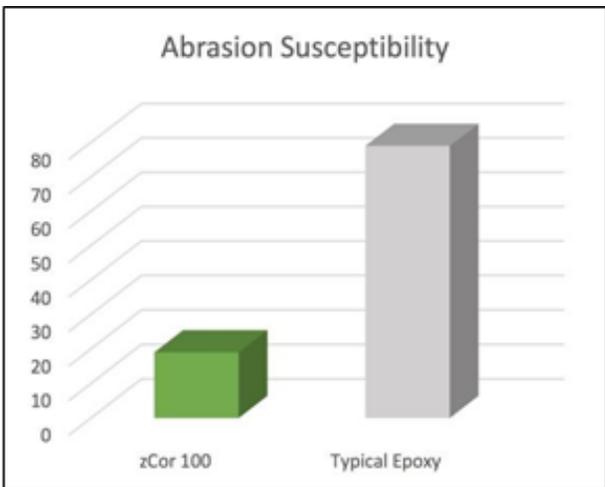
SPECIFICATIONS:

Physical Properties:	Measurement	Unit	Method
Density	1.8	g/cm ³	ASTM D792
Operating Temperature	204 (400)	°C (°F)	-
Volume of Organic Content, (VOC)	2.2 (264)	lbs/gal (g/liter)	-
Coating Thickness (recommended)	8-12 (200-300)	mils (µm)	-
Mechanical Properties:			
Impact Resistance	118	Joules (in. lbs)	ASTM G14
Taber Abrasion (loss)	64	mg	ASTM D4060
Static Coefficient of Friction	0.187	-	-
Hazen-Williams Coefficient	150	C Value	-
Pull-Off Strength (Adhesion)	45.2 (6555)	MPa (psi)	ASTM D4541
Three-Point Bend and Flexural Test	PASS	-	ASTM D790
Hardness, Barcol	68	-	ASTM D2583
Hardness, Shore D	95	-	ASTM D2240-74
Salt Spray and Salt Fog Test, 2000+ hours	PASS	hours	ASTM B117-97
Chemical Resistance:			
Cathodic Disbonding (30 days, 23C)	1.5	mm	ASTM G8-96
Autoclave Tests Results: No swelling, blistering, cracking, or detachment from the substrate			
Test 1: 7 days, 5000 psi, 50% each phase 3.0% CO ₂ , 96.8% CH ₄ , 0.2% H ₂ S, Formation Water (Brine)	PASS	hours	ASTM G42-96
Test 2: 7 days, 204°C, 5000 psi, 50% each phase 3.0% CO ₂ , 96.8% CH ₄ , 0.2% H ₂ S, Formation Water (Brine)	PASS	hours	ASTM G42-97
Test 3: 7 days, 149°C, 6500 psi, 50% each phase 3.0% CO ₂ , 92.0% CH ₄ , 0.2% H ₂ S, Formation Water (Brine)	PASS	hours	ASTM G42-98
Test 4: 120 days, 150°C, 70 psi 100% Water	PASS	hours	ASTM G42-99
Test 5: 30 days, 65°C, 285 psi 50% CO ₂ , 50% Wasia Water	PASS	hours	ASTM G42-100
Test 6: 30 days, 65°C, 3000 psi 50% CO ₂ , 50% Wasia Water	PASS	hours	ASTM G42-101



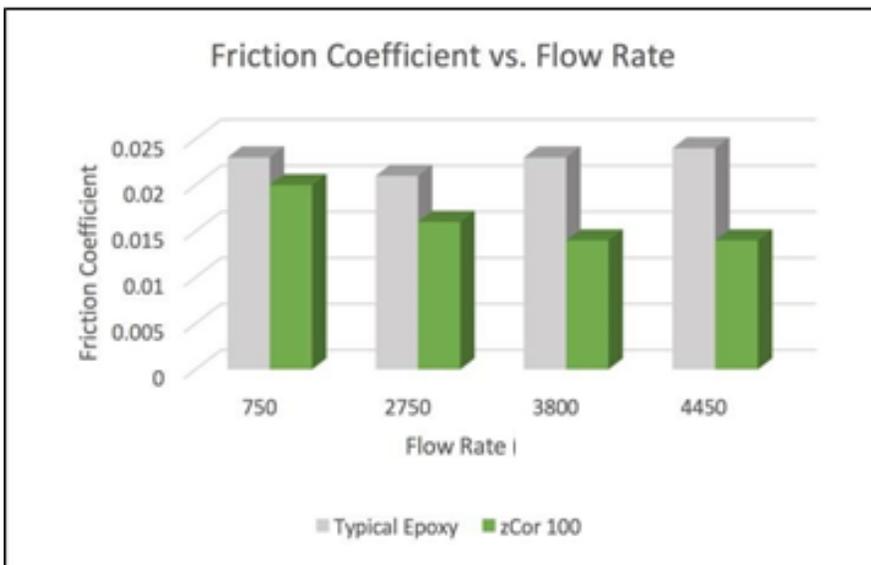
Impact Resistance

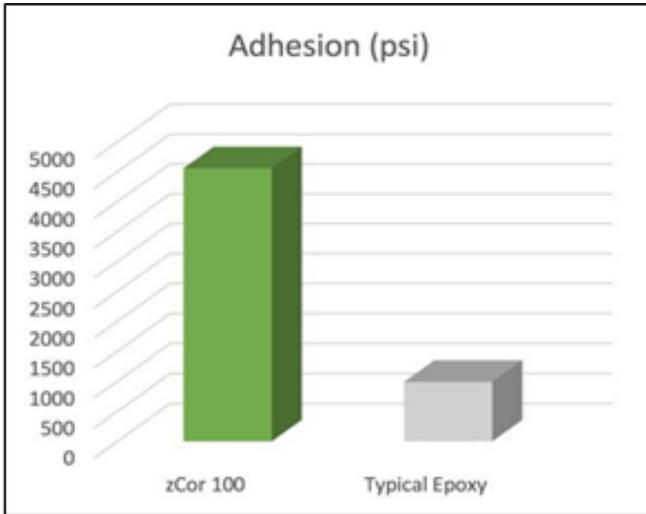
Impact resistance testing involves the use of a known weight, from a calculated height, that is released to impact a sample until it ruptures the coating. Based on the energy required to cause penetration of the coating film, its impact resistance is determined. The units are the force accepted by the coating, per unit of thickness.



Taber Abrasion

Coatings on substrates can be damaged by abrasion during its service life. This accelerated test method is useful in evaluating the resistance of the coating to abrasion produced, utilizing the Taber Abraser on the coating which has been applied to a rigid surface, such as a metal pipe.

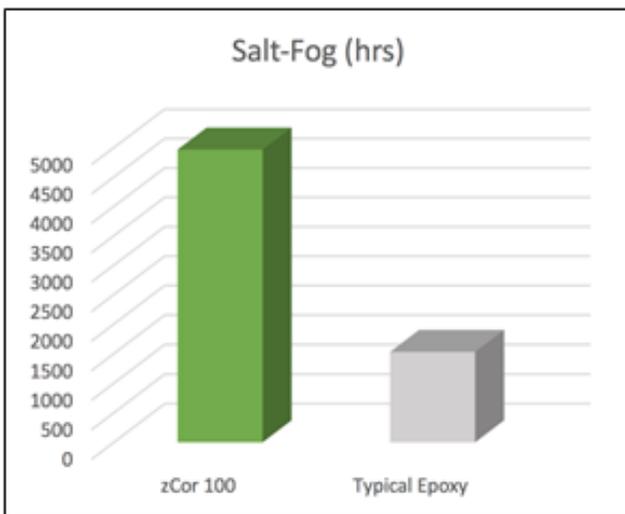




Pull-Off Strength (Adhesion)

This test is used for evaluating the pull-off strength of the coating.

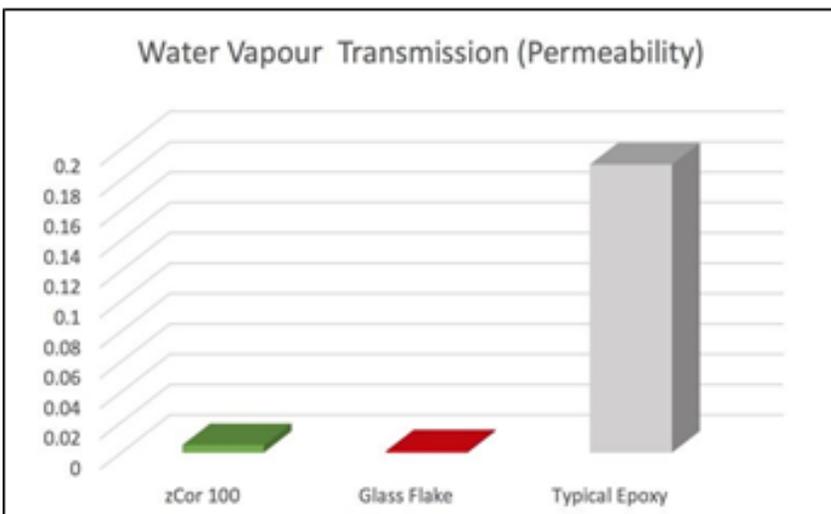
Coated test panels are soaked in hot water and the adhesion of the coating is consequently assessed by cutting a rectangle into the coating. The cut is then pried with a utility knife to determine if the coating can be lifted from the metal surface.



Salt Spray and Salt Fog

The salt spray and salt fog test provide a controlled accelerated corrosive environment, to evaluate the coating's corrosive resistance.

Test duration depends on the evaluation of the coating's corrosive resistance. The more corrosion resistant the coating is, the longer it will remain in the chamber of salt solution to detect product failure.



Water Vapour Transmission Rate (WVTR)

The data from this test represents the coating's ability to resist the infiltration and permeation of water vapour transfer from the coating to the surface of the steel. A lower value indicates better moisture protection.