ZEro300

Protection for High-Wear Environments

ZEro300 (Orange Band) is a high-strength Carbon Zirconium coating specifically engineered to extend the service life of tubing in aggressive, abrasive, erosive, and corrosive downhole conditions. When your assets face extreme friction and chemical attack, trust ZEro300 to deliver zero erosion.

Features

The technical edge:

- Optimized Thickness: Applied at a uniform 10 - 12 mils while maintaining **Full API Drift.**
- Full Coverage: J-section is coated to the first threads and end face for seamless protection.
- Thermal Stability: Rate for maximum operating temperatures up to 120°C.
- Advanced Chemistry: Highly resistant to CO_2 and O_2 with enhanced chemical stability.
- Material Integrity: A tough, smooth, and flexible finish that moves with the pipe without cracking.

Benefits

The value to your operations:

- Triple the Service Life: Proven to last three times longer than uncoated tubing in identical conditions.
- Reduced Opex: Dramatically minimizes workover frequency, well servicing, and lost production costs.
- Enhanced Flow Dynamics: The low-friction surface improves hydraulic efficiency over time.
- Failure Prevention: Significantly reduces tubing failures caused by rod wear, side loads, and abrasive fines.

Applications

Where ZEro300 performs best:

- High-Wear Geometries: Horizontal wells (deviation and build sections) and slanted wellbores with aggressive side loads.
- Production Equipment: Rod pumping wells facing chronic wear and corrosion.
- Sand Management: Tail joints exposed to high sand abrasion and fines above the pump discharge.
- Demanding Environments: Any downhole application involving extreme sliding wear or erosive flow.

For zero erosion trust ZEro300

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

ZEROCOR Green Solutions

ZEro300

TECHNICAL SPECIFICATIONS

Physical Properties:	Value	Unit	Method
Colour	Dark Brown	-	-
Density	1.65	g/cm^3	ASTM D792
Maximum Operating Temperature - dry gas (temperature depends on total operating environment, i.e., H_2S, CO_2, pressure, rates)	≤120 (248)	°C (°F)	-
Coating Thickness (Full API Drift)	10 - 12 (250 - 300)	mils (µm)	-
Mechanical Properties:			
Abrasion Resistance, Taber (CS17 Wheel, 1000g, 1000rpm)	<10	mg	ASTM D4060
Adhesion, Pull-Off Strength (not lower than A Class)	>20 (2900)	MPa (psi)	ASTM D4541
Coefficient of Friction (COF)	0.10	-	-
Hazen-Williams	150	C Value	
Hardness, 60 Shore D	80 - 90	-	ASTM D2240
Impact Resistance	≥11 (97.4)	Joules (in.*lbs)	ASTM G14
Bend Resistance (4°)	No Cracking	-	-
Tensile Strength (strength of pipe body)	>80 (11603)	MPa (psi)	ASTM D638
Wear Resistance, Dry Sand	≥4	L/µm	ASTM G65
Pinholes	≤1	pcs/m^2	-
Chemical Resistance:			
Autoclave Test Results: NO swelling, blistering, cracking or detachment from the substrate			
Test 1: 12-hour, 93°C (200°F), 10% HCl, 3% HF Acid, 30-min decompression	PASS	hours	NACE TM0185
Test 2: 16-hour, 148°C (300°F), 70MPa (10150psi), Gas Phase (N_2), Liquid Phase (NaOH), pH = 12.5, 30-min decompression	PASS	hours	NACE TM0185
Test 3: 16-hour, 107°C (225°F), 35MPa (5075psi), ⅓ Gas Phase (100% CO_2), ⅓ Hydrocarbon Phase (Toluene:Kerosene 1:1), ⅓ Liquid Phase (tap water), 30-min decompression	PASS	hours	NACE TM0185
Test 4: 30-day, 105°C (221°F), 35MPa (5075psi), ⅓ Gas Phase (6% H_2S, 6% CO_2, 88% CH_4), ⅓ Hydrocarbon Phase (Toluene:Kerosene 1:1), ⅓ Water Phase (Brine 2% NaCl and 2% $CaCl_2$), 30-min decompression	PASS	hours	NACE TM0185

January 2026

For zero erosion trust ZEro300

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