

# Calabar COROD® Continuous Rod

Boosts uptime in corrosive rod lift and progressing cavity pump wells

## Applications

- Mild to aggressively corrosive wells
- Reciprocating rod lift systems
- Progressing cavity pump systems

## Features and Benefits

- Calabar is a high strength low friction coefficient coating that provides a low resistance barrier between rod and tubing, significantly reducing rod tubing wear and drag loads.
- Dual layer, fusion bond epoxy coating minimizes corrosion related rod failures by protecting the rod string from corrosive fluids, eliminating material loss and fatigue initiation locations
- Continuous string design eliminates thread connections on the rod string and their potential for pin and coupling failures, saving costly interventions
- Uniform body design evenly distributes contact loads, reducing severity of tubing and rod wear
- Large, uninterrupted annular tubing space minimizes pressure losses and facilitates laminar, non turbulent flow to the wellhead
- Lightweight design provides improved efficiency over conventional sucker rod strings, allowing for lower pump landing depths

## Product Description

Weatherford Calabar COROD continuous rod provides improved uptime and tubing life with its exclusive, two stage, epoxy coating technology that dramatically reduces corrosion, the leading cause of rod system failures. Harsh well fluids create material loss and produce detrimental pitting, often leading to fatigue fractures. The flexible and strong Calabar epoxy coating also reduces friction coefficients, resulting in less drag load on surface pumping units.

Unlike conventional sucker rods, which are coupled every 25 to 30 feet (7.6 to 9.1 m), COROD continuous rod requires couplings only at the top and bottom of the rod string, regardless of well depth. This innovative solution reduces pin and coupling failures by decreasing the number of threaded connections, thereby minimizing potential for rod string failures and costly well interventions. Uniform contact loads and lighter string weight also reduces motor power requirements for additional power savings.



Calabar COROD features a dual-layer, fusion bond epoxy coating that protects the rod string from corrosive fluids while reducing wear and drag.



# Calabar COROD<sup>®</sup> Continuous Rod

## Specifications

Description	Standard (if applicable)	Criteria (if applicable)	Value or result
Adhesion	CSA Z245.20	194°F (90°C) 24 hr	Rating: 1 to 2
Flexibility	CSA Z245.20	2.5% strain 22°F (30°C)	No cracking
Hardness	ASTM D2240 74	Shore D	80 to 90 average
Taber abrasion basecoat	ASTM D4060	1,000 cycles, CS17 wheel 2.2 lbs (1 kg) load	45 mg removal
Taber abrasion topcoat	ASTM D4060	5,000 cycles, CS17 wheel 2.2 lbs (1 kg) load	52 mg removal
Chemical resistance	Calabar coating provides excellent resistance to crude oil, water, and a variety of chemicals. For more information, please consult Weatherford technical support team.		

## Measurement and Weight

Description	COROD continuous rod*	Total coating thickness	Total change to rod diameter	Total changes to rod weight
Value	Nominal +0.020 in. (0.5 mm)	0.015 to 0.035 in. (0.4 to 0.9 mm)	0.030 to 0.070 in. (0.8 to 1.8 mm)	<2%

\*Refer to COROD continuous rod technical specifications sheet for nominal sizes and weights.

