

TK™ -34

TK™-34, the original drill pipe coating, is a thin film, epoxy-phenolic coating specially formulated to maximize flexibility while retaining corrosion resistance over a wide pH range. By design, it will remain intact even under repeated stresses imposed during drilling. The coating stops the first step, corrosion pitting, which can lead to stress corrosion cracking, washouts and failure through twist off. Life extensions of three to four times compared to uncoated drill pipe have been documented. A full range of muds can be handled by TK-34, and the coating has been used successfully in geothermal conditions. The surface finish of the coating provides increased hydraulic efficiency. Power reductions of 10% to 25% are commonly realized due to reduction of friction through the drill pipe. The original drill pipe coating remains the industry standard.

Specifications

Type	Epoxy Phenolic (Liquid)
Color	Green
Temperature	Withstands all temperatures commonly encountered during drilling, provided circulation is maintained.
Pressure	To yield strength of pipe
Applied Thickness	5-9 mils (127-229 µm)
Primary Applications	Drill pipe coating for corrosion protection, scale mitigation and hydraulic efficiency.
Primary Service	Natural and synthetic drilling muds and completion fluids



Stimulation Fluids:

When stimulation fluids are charged through coated tubing, there is generally little effect if the fluids are flushed completely through the tubular. However, some organic acids, caustic and solvents may have a detrimental effect on certain organic coating systems and should be evaluated prior to use. If stimulation fluids are left in the tubing, they can reach formation temperature and cause accelerated attack on the coating. A Tuboscope representative should be consulted when stimulation is contemplated.

Sample of Testing Capabilities:

Thermal Analysis

- Differential Scanning Calorimeter (DSC)
- Thermomechanical Analysis (TMA)
- Thermogravimetric Analysis (TGA)

Spectroscopy

- Fourier Transform Infrared Spectrophotometer
- Electrochemical Impedance Spectroscopy (EIS)
- Contact Angle

Chromatography

- Gel Permeation Chromatograph (SEC)
- High Performance Liquid Chromatograph
- Gas Chromatograph

Additional Physical/Chemical Testing

- High Pressure Autoclaves
- Microscope Analysis
- Immersion Testing
- Flow Loop Analysis

Product Development

- Lab Compounding Capabilities