TK™-18TC

The energy industry continues to evolve as seen by the significant growth in alternative energy research, and innovation in new drilling and production techniques. To meet these changing needs requires cutting-edge technologies. For over 80 years, NOV Tuboscope has led the industry in developing and supplying innovative coating products that not only increase the life of tubulars but provide better economic efficiency to ensure the end user gets the most out of their assets.

This effort to continually meet the industry's ever-changing needs has led to the introduction of TK™-18TC, a low thermal conductivity coating designed to provide enhanced levels of insulative properties while still retaining the same downhole performance our customers have come to expect. This is accomplished by reducing the thermal conductivity of the coating, thereby allowing the end user the ability to better maintain the temperatures of the fluid within the pipe. As with all Tuboscope internal coatings, TK-18TC is also designed to extend the life of the customer's asset through corrosion and deposit mitigation while providing enhanced properties specific to their individual goals and needs.

Specifications

Type	Novolac
Color	Green
Temperature	400°F *(204°C)*
Pressure	To yield strength of pipe
Applied Thickness	20–30 mils *(508–762 µm)**
Thermal Conductivity	0.1808 W/mK

***System allows for thicknesses outside this range based on application needs.**

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 temperatureand 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