TK™-505

TK™-505 is a thick-film coating with superior flexibility characteristics for CO_2 and secondary services. This thick-film fusion-bonded epoxy has superior flexibility, abrasion resistance, and excellent temperature characteristics, making it appropriate for CO_2 and secondary service applications.

Recommended Services:

- CO_2 Injection WAG
- Oil/Water/Gas Production
- Brine Injection/Disposal
- Flow Lines
- Line Pipe

Benefits:

- Excellent Adhesion
- Excellent Flexibility
- Moderate Acid/Caustic Resistance

Specifications

Type	Epoxy *(Powder)*
Color	Tan
Temperature	225°F *(107°C)*
Pressure	To yield strength of pipe
Applied Thickness	10–20 mils *(254–508 µm)*
Primary Applications	New and used tubular goods
Primary Service	Subsurface CO_2 and water handling systems, salt solutions, crude oil, and mild mineral acids
Limited Service	Should be limited with aromatic hydrocarbons and H_2S corrosives

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

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