



ENVIROSOL USF04

'OIL BASED' UMBILICAL STORAGE FLUID

USF 04 is an environmental oil based umbilical storage fluid offering maximum mixed fluid stability towards wellbore chemicals in aggressive HPHT (and less demanding) environments.

USF 04 can offer significant savings during umbilical commissioning due to its superior compatibility with SURF Chemicals and allows Operators increased flexibility to perform SURF Chemical commissioning while off the critical path to first oil/gas.

USF 04 can also negate the need for Topside or Subsea intervention for the interface requirements to First Oil or for Future Extensions.

This high level of compatibility combined with outstanding stability, excellent Health & Safety properties and impressive environmental credentials makes USF 04 a compelling choice as a storage fluid across both thermoplastic and steel line umbilicals.

USF 04 has undergone chemical compatibility testing far beyond any previous industry standard for USF's, including a wide range of temperatures & mix ratios and extended service related testing. Testing includes blockage flow tests and HPHT testing of mixtures to ensure stability in extreme situations and minimisation of potential issues in service.

USF 04 customers gain access to an extensive compatibility database which can offer further project cost savings by accessing data on chemicals previously tested.

USF 04 is designed to have the lowest viscosity profile possible for an 'oil based' product with the key physical properties outlined below.

PHYSICAL PROPERTIES

Appearance	Colourless/Yellow
Pour Point (°C)	< -40°C (-40°F)
Upper Temperature (°C)	200°C (392°F)
Specific Gravity	0.820
Viscosity @ 5 °C	10.8 cSt
Viscosity @ 20 °C	6.5 cSt
Viscosity @ 40 °C	4.1 cSt
Water Solubility	Insoluble
Oil Solubility	Miscible



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Subsea Range