Product Data Sheet

S-ES HYB HS

Sirius-ES drilling fluids

1. CHEMICAL DESCRIPTION

S-ES HYB HS is a complex compound based on polyamines.

2. MAIN USE

S-ES HYB HS is a clay inhibitor for drilling, workover and completion fluids.
S-ES HYB HS is an effective clay inhibitor for water sensitive formations and shows excellent shale stabilization properties.

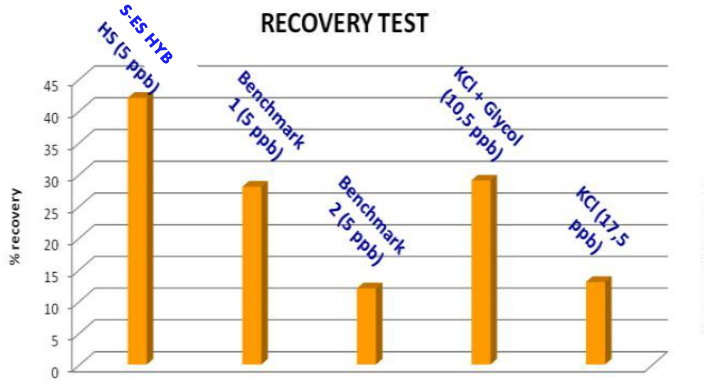
3. TYPICAL VALUES

Appearance:	liquid
pH (at 5% solution):	9.3
Specific gravity:	1.08
Pour point:	-25°C
Water solubility:	soluble

Properties are typical and subject to manufacturing tolerances.

4. PRODUCT PROPERTIES

Recovery test made in accordance to API RP 13-I.
Dosages of shale inhibitors showed on the labels.
Shale type: Oxford Clay.



5. APPLICATIONS

S-ES HYB HS prevents clay swelling caused by water molecules invasion and limits cuttings dispersion.

S-ES HYB HS can be used in conjunction with common water-based additives. By inhibiting shales or gumbo clays, S-ES HYB HS also minimizes the accretion potential and consequently bit - and BHA- balling.
Drill cuttings tend to be non- sticky, firm and easily removed from the shale shakers when using S-ES HYB HS. It has no adverse effects on viscosity and filtration properties of the mud.

S-ES HYB HS is designed to be used at any pH of the fluid. Its recommended treatment is in the range of 1-3% v/v depending on shale reactivity.
S-ES HYB HS may be used in freshwater, seawater, saltwater, low-solids, or weighted systems. It can be added directly to the mud system. Possible foam formation during mixing should be controlled by a proper antifoam.

Pilot testing is suggested to determine the actual treatment required to obtain the desired result.

6. PACKAGING

55 US gal non-returnable plastic drums, palletized, strapped and stretch-hooded (4 drums per pallet) and plastic IBC tanks.

7. REGULATORY INFORMATION

S-ES HYB HS is an environmentally friendly product and is registered into the CEFAS List of Notified Chemicals suitable for use by the offshore oil and gas industry in the North Sea.
S-ES HYB HS is ranked “Gold, Gold, Gold” with no Substitution Warning.