



TECH DATA SHEET

PRODUCT DESCRIPTION: **Clay Force HDD** is a natural chloride product used as a clay stabilizer in drilling, stimulation and completion fluids. Clays contain cations, typically sodium, within their crystalline layers that occupy base exchange positions or sites in the clay structure (lattice). Upon contact with water, these cations are solubilized resulting in clay instability and swelling. When clays swell, the permeability of the formation is diminished, which impedes production. **Clay Force HDD** helps reduce clay swelling through ion exchange, providing a cation to replace the native, solubilized clay cation, sodium.

APPLICATIONS AND USE: Typical concentration range is 1 to 4 gal/Mgal (1 to 4 L/m³), based on clay content. Can be used in all fracturing, drilling, completion, and work over fluids for temperatures in excess of 300°F (149°C)

PRODUCT ADVANTAGES:

- Easy to handle and mix in the field
- Compatible with anionic friction reducers and surfactants
- Effective at typical pH levels

PHYSICAL PROPERTIES:

Appearance:	Colorless to light liquid
Specific Gravity:	1.29 - 1.33
pH:	7.0 - 9.0

PACKAGING: **CLAY FORCE HDD** is available in 5 gallon pails.