



## PRODUCT BULLETIN

### CLAY STAY 410

#### For Reduction of Shale Hydration (Liquid KCL Substitute)

##### General Description

**CLAY STAY 410** is an environmentally safe, cationic low to medium molecular weight organic polymer, designed specifically as a replacement for bagged potassium chloride (KCL). The product provides excellent clay control and shale stabilization, without the logistics, handling and storage problems associated with large volumes of bagged KCL. **CLAY STAY 410** has been found to be uniquely effective in a variety of completion and well stimulation applications that call for protection of fresh water sensitive clay containing formations and shale bearing zones. **CLAY STAY 410** is a proven, effective suppressant for clay swelling for liquid and air drilling.

**CLAY STAY 410** is compatible with all typically used completion and well stimulation additives Such as acid corrosion inhibitors, non-emulsifiers, HEC, PHPA, guar, xanthan and other viscosifiers. The product is not a surface-active agent or surfactant and does not alter formation pH. Unlike sack KCL the product mixes easily and is well suited for application, "on the fly." This product functions in a similar fashion as KCL in generation of a high ionic charge medium. (effective swelling prevention of sheet clays such as montmorillinite, bentonite, attapulgitite etc.) The product also offers the advantages of polymeric clay stabilizers in helping to prevent the break-off and migration of clay "fines" which can occur from the presence of the finger like clays such as smectites which often line formation pores.

##### Application

**CLAY STAY 410** is typically applied at a concentration of 0.5 to 6 gallons per 1,000 gallons (GPT) of fluid depending on the type and quantity of clays that are present. Application rate of the product may also be adjusted depending on the loading rate of KCL being replaced.

##### Properties

Appearance	Clear Red to Red-Amber Liquid
Density	8.90 - 9.00
Pour Point	- 20° F
pH	6.5 - 7.5
Solubility	
Fresh Water	Soluble
High TDS Brine	Soluble
Hydrocarbon	Insoluble

##### Availability

**CLAY STAY 200** is available in UN approved 55 gallon drums and in bulk.

##### Handling

Observe warning label on product container. Normal precautions for industrial chemicals apply.