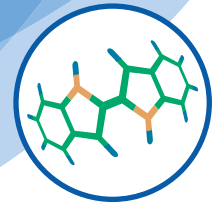


Endura CS™ - The Gold Standard Clay Control Agents

- ▶ **Endura CS™ was engineered to provide the most effective compound to control clay swelling or to increase the viscosity of clay solutions. Designed as a replacement for Potassium Chloride (KCl), Endura CS™ and CSG™ out performs in several areas.**



Benefits

- ▶ Protects formation against clay swelling that occurs when non-connate water is introduced by aqueous fracturing systems or drilling muds
- ▶ A liquid KCl substitute that can be quickly and easily mixed on-site
- ▶ No bags to handle
- ▶ No filtering required
- ▶ 7 times less volume than KCL solutions
- ▶ 1/4th the total cost of using KCl
- ▶ 27 times less corrosive than KCl
- ▶ Readily available from SACHEM's Cleburne, Texas & Wuxi, China manufacturing plants

Meet the Endura CS™ Family

- ▶ **Endura CS™ 7813 - 50% Organic Salt in Water**
- ▶ **Endura CS™ 7814 - 64% Organic Salt in Water**
- ▶ **Endura CSG™ 7815 - 60% Organic Blend in Water**





▶ Product Information:



| | Endura CS™ 7813 | Endura CS™ 7814 | Endura CSG™ 7815 |
|-----------------------|----------------------|-------------------------|----------------------|
| Assay | 50% Aqueous solution | 64-65% Aqueous solution | 60% Aqueous Solution |
| Chemistry | Organic Salt | Organic Salt | Organic Salt |
| Physical State | Liquid | Liquid | Liquid |
| Color | Clear | Clear | Slight amber color |
| Odor | Slight Amine | Slight Amine | Moderate Amine |
| Specific Gravity | 1.02 | 1.02 | 1.06 |
| Ph | 5-10 | 5-10 | 5-10 |
| Boiling Point | 212° F. (100° C.) | 212° F. (100° C.) | 212 °F (100 °C) |
| Freezing Point | -30° F. (-34° C.) | -38° F. (-39° C.) | <-50.0 °C. |
| Vapor Pressure @ 20° | <0.0001 hPa | <0.0001 hPa | <0.0001 hPa |
| Water Solubility | Miscible in water | Miscible in water | Miscible in water |
| Shelf Life | 2 years | 2 years | 1 year |
| Nature of Charge | Cationic | Cationic | Cationic |
| Viscosity | 6 cps @ 25° C. | 15.81 cps @ 25° C. | 6.98 cps @ 25° C. |
| Temperature Stability | 425° C. | 425° C. | 302° C. |