

RheoMinerals **RHEOSPEND S** is an organically modified high purity sepiolite designed as a high temperature rheological additive for HPHT drilling applications.

GENERAL DESCRIPTION

RHEOSPEND S is an organically modified rheological modifier designed for high temperature drilling applications. This exclusive rheological morphology activates when downhole temperatures exceed 250°F (121°C) and allows low viscosity drilling fluids to attain a higher carrying capacity for solids removal, without adversely increasing viscosity. Once activated, **RHEOSPEND S** assists in suspending drill cuttings and weighting materials, helping to prevent stuck pipe and barite sag in horizontal wells.

FEATURES AND BENEFITS

- Higher thermal stability than conventional organoclays that lose efficiency above 250°F (121°C)
- Enhances low shear rate viscosity without increasing fluid viscosity
- Improves rate of penetration by improving suspension properties
- Compatible with other additives
- Is environmentally non-hazardous

PHYSICAL PROPERTIES AND LIMITATIONS

Appearance/Form	Off White, free flowing powder
Specific gravity	1.7 g/cm ³
Moisture	5.5% maximum
Temperature	450°F (232.2°C) Maximum

APPLICATIONS

RHEOSPEND S is recommended for use in non-aqueous drilling fluids once bottom hole temperatures exceed 250°F (121.1°C). Applicable base oils include: diesel, mineral oils, modified vegetable oils, Distillate 822, Cutter D, and various synthetics. Please refer to the Safety Data Sheet for more information on safe handling.

RHEOSPEND S should always be used in conjunction with standard organoclays. Drilling fluids built with standard organoclays can benefit from **RHEOSPEND S** additions by increasing solids suspension and carrying capacity without an increase in viscosity. **RHEOSPEND S** will aid in the durability of conventional systems in high temperature wells. For similar properties in lower temperature wells, **RM99 PLUS** is recommended.

Recommended concentrations are 2 to 6 lb/bbl (5.7 to 17.1 kg/m³). Pilot testing is recommended to determine actual concentrations of **RHEOSPEND S** before use in the field.

PACKAGING

RHEOSPEND S is packaged in 50 lb. or 25 kg multi-walled kraft paper bags. 1 MT super sacks may be available. This product is moisture sensitive and should be stored in a cool, dry location. Pallet stacking should be no more than two pallets high to prevent compaction.

We believe the information is accurate, however, actual product and product specifications may vary and we cannot guarantee the accuracy of the information. This document does not form part of a contract for sale, and as such: (i) purchasers of products should not rely on any statements made herein; (ii) purchasers are responsible for conducting their own investigations to determine if products are suitable for a particular use; and (iii) there is no warranty, express or implied, including a warranty of merchantability and fitness for use.

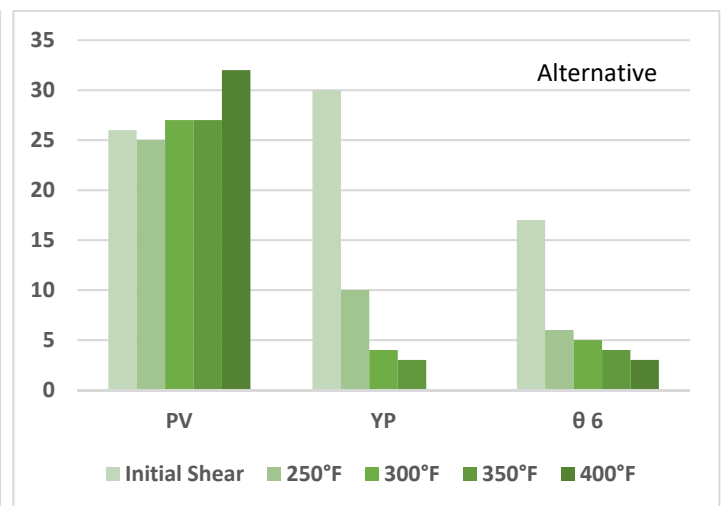
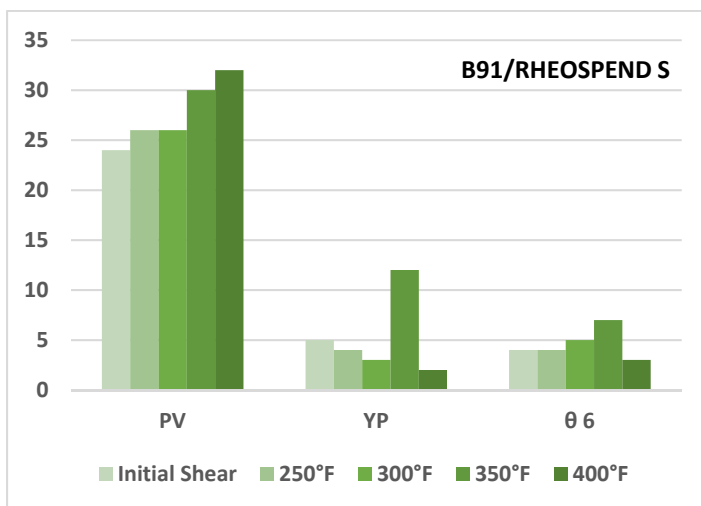
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TECHNICAL DATA

Sample Formulation: 14.0 lb/gal (1.68 g/cm³) 80:20 Diesel-based Fluid

		16 Hour HR 250°F (121.1°C)	16 Hour HR 300°F (148.9°C)	16 Hour HR 350°F (176.7°C)	16 Hour HR 400°F (204.4°C)	
Base Oil, g	170.6	Electrical Stability, volts	894	612	314	400
Primary Emulsifier, g	5.0	θ 600 / θ 300 at 120°F (49°C)	56 / 30	55 / 29	72 / 42	66 / 34
Secondary Emulsifier, g	5.0	θ 6 / θ 3	4 / 4	5 / 4	7 / 7	3 / 3
Lime, g	5.0	0.5 rpm Brookfield, cPs	10,800	10,720	17,200	4,800
28.8% CaCl ₂ Brine, g	65.9	Plastic Viscosity, cP	26	26	30	32
B91, g	2.0	Yield Point, lb/100 ft ²	4	3	12	2
RHEOSPEND S, g	2.0	10-sec Gel, lb/100 ft ²	4	5	8	3
Barite (4.1), g	330.0	10-min Gel, lb/100 ft ²	4	5	9	4

14.0 lb/gal (1.68 g/cm³) 80:20 Diesel-based Fluid – B91/RHEOSPEND S and Alternative Wet-Processed High Temperature Organophilic Clay



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