

DRILL-WELL™ D294 RHEOLOGY MODIFIER (RM)



DRILL-WELL™ D294 Rheology Modifier (RM) is a proprietary product used for rheology control in oil-based drilling fluids including mineral, diesel, and synthetic oils. Once dissolved in an oil based drilling fluid, this modifier displays “flat rheology” characteristics (upon evaluation by typical Fann methodology in Drilling Specialties Company laboratories). “Flat rheology” is nominally understood to be behavior such that values of “yield point” (YP), 6 and 3 rpm values and gel strength remain relatively constant over a wide range of temperature and pressure. “Flat rheology” maintains a fluid with good hole cleaning capabilities reducing the chance for stuck pipe and the formation of cutting beds. The use of rheology modifiers also allows the clay content to be restricted or eliminated altogether such that progressive gels do not cause surge/swab problems. This feature minimizes the fluid’s ECDs from exceeding the fracture gradient in the wellbore which helps to prevent losses of the drilling fluid to the substrata. DRILL-WELL™ D294 RM maybe used over a wide temperature range of 40 °F to ±325 °F (4.4 °C to 162.8 °C). DRILL-WELL™ D294 RM is a liquid product composed of active component (52%) in a diluent compatible with OBM fluid systems.

Advantages:

- Works at low concentrations to increase YP, 6 and 3 rpm readings and gel strengths in oil base muds
- Does not appreciably increase Plastic Viscosity (PV) even at higher concentrations of product or in low temperature environments
- DRILL-WELL™ D294 RM maybe used over a wide temperature range of 40 °F to ±325 °F (4.4 °C to 162.8 °C).
- Works at lower concentrations than other rheology modifiers sold into the market today
- Typical treatments range from 2.0 – 4.0 ppb of this liquid product
- Works in oil muds of any density
- Mixes easily at the mud plant or on the drilling rig no heating or high shear required to activate the product
- Does not increase the HTHP fluid loss of the drilling mud
- Is compatible with most other commonly used drilling mud additives
- Is a stand-alone product
- Is compatible with DRILL-WELL™ D244 Polymeric Fluid Loss additive from Drilling Specialties Company

Cost

Total well cost are often lower as a result of higher product efficiency, fewer mud problems and less rig time. DRILL-WELL™ D 294 Rheology Modifier's high potency results in lower costs for trucking, inventory and handling.

Other information

Pour Point - 7 °C (20 °F)
Freezing Point -68 °C (-90.4 °F)
Flash Point 124 °C (255 °F)

Mud Types

Most invert oil-based mud formulations

Mixing Requirements

Mix through a standard rig mud hopper

Handling

For specific instruction on handling, refer to the MSDS

Packaging

Standard packaging is in 275 gallon non returnable totes, may be special ordered in 5 gallon pails, 40 lb/pail 32 pails to the pallet or 55 gallon drums 4 drums to the pallet

Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the user's specific application. Drilling Specialties Company does not make, and expressly disclaims, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained herein or the product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or the product itself. Further, information contained herein is given without reference to any intellectual property issues, as well as federal, state or local laws which may be encountered in the use thereof. Such questions should be investigated by the user.

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LABORATORY MINERAL OBM TEST RESULTS

| 13.0 ppg 70/30 OWR | Base Mud | DRILL-WELL™ D294 RM 2.0 ppb | Base Mud | DRILL-WELL™ D294 RM 2.0 ppb |
|---|-------------|-----------------------------------|-------------|-----------------------------------|
| Post 16 hour Hot Roll | 300 °F | 300 °F | 300 °F | 300 °F |
| Yield Point, lb _f /100 Ft ² | 120 °F 9 | 120 °F 20 | 150 °F 5 | 150 °F 22 |
| 6 rpm | 4 | 11 | 3 | 12 |
| 3 rpm | 3 | 10 | 2 | 11 |
| Gel Strengths | 4/8 | 6/13 | 4/6 | 15/21 |

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