PAC-R vs PAC-UL vs PAC-LV: Which Grade for Your Mud System?

All three grades are high-purity polyanionic cellulose for fluid-loss control in water-based mud. The difference between them is how much viscosity each one contributes to the system, which determines which grade fits your solids loading and rheology targets.

Grade	Product Code	Viscosity Contribution	Best-Fit System
PAC-R (Regular)	PZT-PAC-R	Moderate	General-purpose WBM where some added viscosity is acceptable or desired
PAC-LV (Low Viscosity)	PZT-PAC-LV	Moderate-low (between UL and R)	Systems needing a controlled, moderate viscosity contribution alongside fluid-loss control
PAC-UL (Ultra-Low Viscosity)	PZT-PAC-UL	Minimal	Already-viscous or high-solids systems where any further thickening is a liability

When to reach for PAC-R

Regular-grade PAC providing efficient general-purpose filtration control with a moderate contribution to system viscosity. This is the default starting point for most WBM programs. Pick a different grade only when the system's existing viscosity or solids content pushes you toward UL or LV instead.

When to reach for PAC-LV

Mid-range PAC grade balancing fluid-loss control with a moderate, controlled viscosity contribution between UL and R grades. A middle-ground choice when you want more predictable fluid-loss performance than UL provides, without the full viscosity contribution of R.

When to reach for PAC-UL

The lowest-viscosity grade in the PAC family: fluid-loss control with minimal added viscosity, for already-viscous or high-solids systems. The right call whenever the mud is already carrying enough solids or viscosity that any additional thickening becomes an operational problem rather than a benefit.

Frequently Asked

Which PAC grade should I use in a high-solids system?

PAC-UL (Ultra-Low Viscosity) is generally the better fit for already-viscous or high-solids systems, since it adds minimal viscosity while still delivering fluid-loss control. Using PAC-R in that same system risks over-thickening the mud.

Can PAC grades be blended or switched mid-well?

All three grades ship under the same PAC product family and are compatible with each other, so a mud engineer can transition between grades (or blend them) as solids loading and viscosity targets change through a well's sections. Contact Petriz for grade-specific TDS/SDS before making a field change.

Source: https://petriz.co/insights/pac-grade-comparison/ | Full TDS and SDS documentation for every product referenced here is available on request from sales@petriz.co, in English, Spanish, and Portuguese. This brief is general technical guidance, not a substitute for product-specific TDS data or well-specific engineering judgement. Confirm dosing and compatibility against the current TDS and your own testing before field application.