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### Guar-Based Fracturing-Fluid System

TriFrac-MLT is a crosslinked guar-based hydraulic-fracturing-fluid system developed by Trican and Emerald Surf Sciences that exclusively uses flowback and produced water to eliminate the need for fresh water. The fluid system reduces the cost of treating the flowback and produced water to meet conventional reuse standards, simplifies the logistics for reusing produced water, and eliminates the creation of the secondary waste streams generated by some treatment processes. In addition, the fluid system has a broad operating temperature range of 49 to 149°C

and uses common fracturing-fluid additives. The flowback or produced water is combined with chemical additives and proppant to make the fracturing fluid (**Fig. 8**). The fluid-system formula enables rapid hydration of the additives, and crosslinking occurs at temperatures as low as 7°C (45°F). Because the fluid has a delayed crosslinker, and the breaker schedule can be customized, the fluid viscosity can be optimized. Fluid viscosity develops during the pump time to bottom, reaching its maximum at bottomhole conditions. **JPT**

► For additional information, visit [www.trican.ca](http://www.trican.ca).



Fig. 8—The TriFrac-MLT crosslinked guar-based hydraulic-fracturing fluid developed by Trican and Emerald Surf Sciences.