

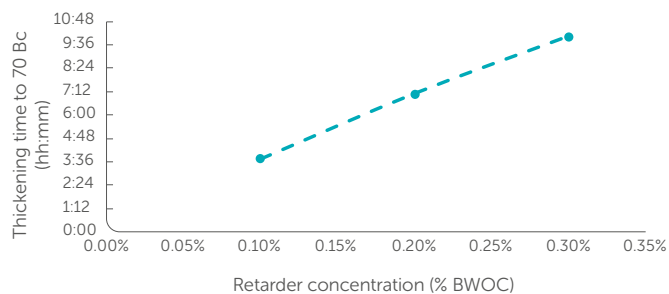
## Alcodrill® CR-100

### Multifunctional synthetic cement retarder for drilling and completion operations applications

Alcodrill® CR-100 multifunctional synthetic cement retarder will delay the setting of cement and also acts as an accelerator once the slurry is in place. Minimizing transition time with a simpler formulation can help reduce the risks of gas migration, poor isolation, and remedial cementing operations.

- Retard cement at 125° F–350° F (52° C–177° C) and address higher temperatures with a co-retarder
- Reduce time waiting on cement with accelerated setting
- Shorten transition time to build static gel strength, decreasing gas migration risk
- Simplify formulation with batch-to-batch performance consistency
- Available as both liquid and powder

#### Thickening time vs concentration at 175° F (79° C)

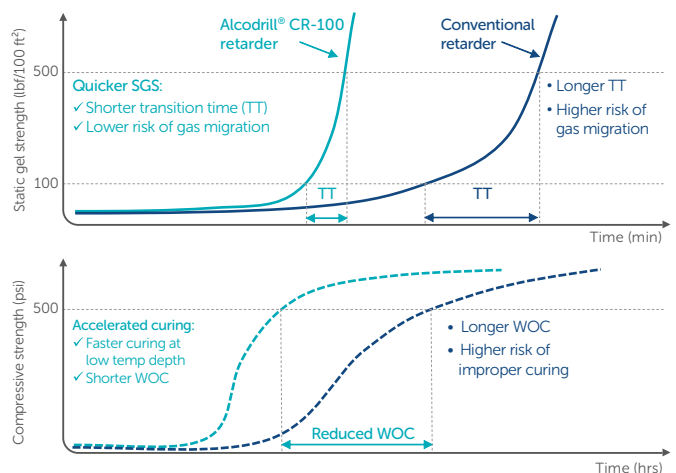


#### The challenge

Working with a wide contrast of temperatures may require cement operators to change out the slurry or supplement with other additives. This often increases waiting on cement (WOC) time and diminishes their control of setting time. Lignosulfonates can also cause job disruptions as they tend to delay setting at all temperatures and are often inconsistent batch-to-batch.

When thickening time is delayed, static gel strength (SGS) develops more slowly and creates a longer transition time (TT) that allows for gas to migrate. This can diminish cement quality and potentially lead to remedial cementing operations, which adds cost, time, and safety risks for crews and assets.

The diagrams below show the theoretical behavior of gel strength and compressive strength when using Alcodrill® CR-100 multifunctional synthetic cement retarder versus a conventional retarder.



#### The solution

Our Alcodrill® CR-100 cement retarder has a simplified formulation with built-in acceleration, eliminating the need to add separate accelerators and gel strength additives. It also contributes to improved cement quality across temperature ranges and well depths, aiding in a reduction of the risk of failures while contributing to enhanced safety, as well as cost and time savings.

When compared to conventional retarders such as other synthetic polymers and lignosulfonates, our solution attains the compressive strength of 500 psi quickly to minimize waiting on cement time. Additionally, the shorter transition time offered by our Alcodrill® CR-100 cement retarder decreases the chance of gas migration and strengthens the cement top section – preserving both cement and wellbore integrity.

## Improve work and cost efficiency with our Alcodrill® CR-100 multifunctional synthetic cement retarder

If a typical oil rig costs an average of \$600,000 a day, using Alcodrill® CR-100 cement retarder could save up to \$100,000 in rig time per casing and up to four hours WOC versus using lignosulfonates.

In shallow, low-temperature wells (175° F–245° F / 79° C–118° C), our Alcodrill® CR-100 cement retarder can deliver consistent performance from batch-to-batch at one-half to one-third lower dosage than lignosulfonates.



## Want to know more?

For more information, please contact our experts.  
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