# P-TCRL



# CEMENTING SERVICE BULLETIN

11/93

## P-TCRL (PETROCHEM - HIGH TEMP. RETARDER LIQUID)

## TECHNICAL DATA

**P-TCRL** - Liquid Retarder can be used to provide cement systems with optimum thickening times from 175° to 300°F (79° to 149°C) BHCT. This BHCT limit can be extended to 375°F (191°C) when used in conjunction with a "retarder aid" such as P-RT.

P-TCRL effectively retards all API cements and is compatible with all cement additives. It has a slight dispersing action with most cements, which results in some thinning of the cement slurry. P-TCRL can be used in slurries prepared with either fresh water or seawater.

## SLURRY DESIGN

Concentration

The normal concentration range of P-TCRL is from 0.05 to 0.5 gal/sk of cement.

Specific thickening time for slurry design must be determined in the laboratory. The specific brand of cement along with the additives to be used on the job must be made available for these tests. If free water or sedimentation is encountered during laboratory testing, Anti-settling Agent P-ASA can be used to cure the problem.

**Fluid-Loss Control**

The laboratory should design the cement slurry to have the desired degree of fluid-loss control using the brand of cement to be used on the job.

**P-TCRL Extended Temperature Range**

The P-TCRL temperature range can be extended to 375°F (191° C) using P-RT as a retarder aid.

# FIELD MIXING PROCEDURES

In some operations, it may be desirable to blend two liquid additives so they can be metered with one pump. P-TCRL can be blended with all liquid additives except for P-EXTL and P-TTCL. A gel results when P-EXTL contacts P-TCRL, and P-TTCL causes a precipitate to form. These agents must be added to the mix water separately.

Up to 0.7 lbm of P-RT can be dissolved in one gallon of P-TCRL concentrate by using agitation. If additional amounts are required, they must be added to the mix water.

P-TCRL concentrate becomes slightly viscous when its temperature drops to 32°F (0°C). At 25°F (- 4°C), it will freeze. Repeated freeze/thaw cycles may cause P-TCRL separation: ice tends to float on top, and the retarder settles to the bottom. After thawing, the drums must be rolled to mix the solution before using it.

P-TCRL disperses readily in water with moderate agitation. Dilution with water will increase the freezing point somewhat. Solutions that are a few degrees warmer than the freezing point will mix and pour readily.