



P-EDISL **CEMENTING SERVICE BULLETIN**

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P-EDISL (PETROCHEM - MEDIUM TEMP. FLUID-LOSS LIQUID)

TECHNICAL DATA

P-EDISL provides cement slurries with lower rheologies and improved mixability. This means lower friction pressures and lower critical rates for turbulence. It is intended to complement Liquid P-DISL and not replace it.

P-EDISL is used when P-DISL exhibits unacceptable free water and/or sedimentation due to the nature of the cement and mix water and due to the degree of dispersant efficiency required. Compared to P-DISL, it induces much less free water and/or sedimentation in this type of application, even if largely overdosed.

The same reasoning for using P-EDISL instead of P-DISL can be applied to P-EDISL selection over any other dispersant. However, P-EDISL is not a replacement for other dispersants and if used in the wrong application, high concentrations will be required which may cause gelation problems.

The low free-water characteristic is unique to P-EDISL. Therefore, P-EDISL is especially suited for applications where such problems are critical. This is the case in deviated (or horizontal) wells when fluid-loss control is essential; or more generally, in any situation where the density of the slurry must remain identical all along the cemented string.

P-EDISL is incompatible with Calcium Chloride concentrations greater than 2% BWOC. Cement systems containing P-EDISL and Liquid Retarder P-TCRL will always exhibit high free-water development. P-EDISL can be used in salt solutions up to salt saturation but requires higher concentrations than needed in fresh water.

SLURRY DESIGN

Easy-To-Disperse (ETD) and Easy-To-Disperse in Salt (ETDS) cements are susceptible to the development of very high free water and/or sedimentation in the presence of many dispersants. Liquid P-EDISL is primarily intended for use in ETD or ETDS cements when a dispersant is required.

P-EDISL Concentration

Typical concentrations ranging from 0.05 to 0.10 gal/sk at 85°F (29°C) and 0.01 to 0.02 gal/sk at 185°F (85°C) provide ETD cements with desired dispersibility and acceptable levels of free water and/or sedimentation.

If control of the free water/sedimentation and yield value are critical, the ty should approach zero once the P-EDISL concentration is optimized for yielding a low free water with no sedimentation.

In cases where the sedimentation and/or free-water problem cannot be solved with P-EDISL, the use of Anti-settling Agent P-ASA should be considered.

Secondary P-EDISL Effects

P-EDISL will slightly extend the thickening time of typical cement slurries containing Retarders. However, excellent compressive strengths are obtained in a desirable time frame.

Compatibility

Fluid-Loss Additives

P-EDISL is fully compatible and designed to be used with Liquid P-FLAL. Other fluid-loss agents such as P-FLA/S, P-FLA and P-FLE are not expected to require P-EDISL as they increase the viscosity and yield value of the slurry. P-EDISL is compatible with the P-1000.

At temperatures greater than 200°F (93°C), P-EDISL has been found to be a more potent fluid-loss aid than P-DISL both in Class G and Class H cements, without free-water development.

Retarders

Liquid P-EDISL is compatible with most retarders, except for P-TCRL where free water development is still high. The use of Antisettling Agent P-ASA should be considered in this case. Laboratory testing is required to determine the type and concentration of retarder for optimum slurry design.

Other Additives

P-EDISL never should be used with more than 2% Calcium Chloride. Strength-retrogression additives P-SS and P-SF are compatible with P-EDISL. P-EDISL has proven superior to P-DISL in the design of P-SL40 or P-SL60 slurries.