



P-F401

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CEMENTING SERVICE BULLETIN

08/04/90

P-F401 (PETROCHEM - HIGH TEMPERATURE FLUID-LOSS)

TECHNICAL DATA

P-F401 is a powdered high temperature fluid-loss additive intended for use at BHCT between 180° to 400°F and can be either pre-dissolved in the mix water or dry blended in the cement. The concentration range is generally between 0.5 BWOC at 180°F to 2.0% BWOC at 400°F. The liquid version P-F401L is used at a typical concentration range of 0.2 to 1.0 gal/sk where 0.7 gal/sk P-F401L will be equivalent to approximately 1.0% BWOC P-F401.

P-F401 was originally intended for use in cement slurries with a high concentration of salt ranging from 18% BWOC up to saturation. However, it may be used in cement slurries containing low concentration of salt or in fresh water but high viscosities are encountered while mixing.

Most retarders have an adverse effect on P-F401 fluid-loss control and therefore the best fluid-loss results are achieved in slurries which do not contain any retarder.

For example, when a salt cement slurry is prepared without a retarder, a fluid loss value of 20 ml/30 min is achievable, but when a salt cement slurry is prepared with a retarder 200 ml/30 min may be very difficult to achieve. However, by increasing the concentration of P-F401 to 2.0% BWOC, good fluid loss control can be achieved even in the presence of a retarder.

P-F401 has little retarding effect on the setting time. The recommended retarders for use with P-F401 are: P-HTR, P-MTR, P-LTR, and P-SR10. However, the retarders with the least effect on fluid-loss control are: P-SR10 and P-HTR.



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When high concentrations of P-F401 is used in conjunction with 35% P-SF (325 mesh silica flour) mixing difficulties will occur. Therefore, it is recommended to use P-SS (200 mesh silica flour) which will generally improve the fluid-loss value of the slurry. If settling is experienced with the P-SS, it is worthwhile considering a mixture of P-SF and P-SS.

P-F401 can be used in combination with all Petrochem dispersants but care must be taken to avoid settling caused by over dispersion. This may be due to the secondary dispersing effect of retarders, and/or the thinning effect on P-F401 slurries in a high temperature environment.

When P-F401 is used in high salt concentration the preferred Antifoam agent to use is "P-DAL", and when used in low salt concentration "P-AFAL" may be used.

When P-F401 is added to the mix water, generally the best results are had when the salt (if being used) and the Antifoam agent are added to the mix water before pre-dissolving the P-F401. This method actually provides better fluid-loss results over dry blending since proper hydrolysis of P-F401 results in better fluid-loss control.

<u>PRODUCT</u>	<u>FORM</u>	<u>SP.GR.</u>	<u>PACKAGING</u>
P-F401	WHITE POWDER	1.26	50 LB/SK.
P-F401L	YELLOW LIQUID	1.1	55 GAL/DR
P-DAL	WHITE LIQUID	1.0	55 GAL/DR