



P- WAB

CEMENTING SERVICE BULLETIN

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11/29/91

P-WAB (PETROCHEM-WEIGHTING AGENT BARITE)

TECHNICAL DATA

P-WAB is used as a weighting additive for both cement and mud systems. It consists primarily of barium sulfate. P-WAB causes excessive viscosity. As a consequence, it is necessary to place additional water in slurries in order to have better control over viscosity. Additional water slightly alters the weight achieved by the addition of P-WAB and as such reduces compressive strength.

The use of dispersant creates the possibility of an alteration of water requirement. Any slurry using P-WAB should be tested in the laboratory before actual field application.

PHYSICAL PROPERTIES

| <u>PETROCHEM</u> | | | <u>ABSOLUTE</u> |
|-------------------------|--------------------|-----------------------|------------------------|
| <u>MATERIAL</u> | <u>FORM</u> | <u>SP. GR.</u> | <u>VOLUME</u> |
| P-WAB | Powder Tan | 4.33 | .0278 gal/lb |

SAFETY

See Material Safety Data Sheet



CEMENTING SERVICE BULLETIN

P-WAB Continued

SUMMARY

The major hindrance to the use of P-WAB as a weighting additive is that the need for additional water is so much that it tends to be a disadvantage in mixing (inconvenient). However, it should be noted that P-WAB was one of the first weighting agents used in drilling muds as well as cement slurries.

The following table indicated the quantity of P-WAB needed to achieve densities to a maximum of 19.0 lbs/gal. It is based on Class G and/or H cements mixed at 15.8 lbs using 0.024 gals of additional water for each pound of P-WAB. This creates an initial point from which densities for other quantities of water can be calculated.

TABLE I
DENSITIES OBTAINED WITH P-WAB

| Density lb/gal | P-WAB lb/sk | Water gal/sk | Yield ft³/sk |
|---------------------------|------------------------|-------------------------|------------------------------------|
| 15.8 | 0 | 4.97 | 1.14 |
| 16.0 | 4 | 5.07 | 1.17 |
| 16.5 | 17 | 5.38 | 1.26 |
| 17.0 | 32 | 5.74 | 1.36 |
| 17.5 | 48 | 6.12 | 1.47 |
| 18.0 | 52 | 6.21 | 1.50 |
| 18.5 | 95 | 7.25 | 1.80 |
| 19.0 | 131 | 8.11 | 2.05 |

Based on 44% mix water = 0.024 gal/lb P-WAB