

Bridging Agent

Description MK, sized-calcium carbonate, is available in seven grades: 5, 25, 50, 100, 150, 300, 600.

Applications/functions

MK 5, 25 and 50 can be used to:

- Increase the density of water-based and oil-based muds.
- Increase the density of brine fluids.
- Bridge for fluid loss control.

MK 50, 100, 150, 300 and 600 can be used as bridging agents for:

- Lost circulation problems.
- Squeeze mixes.

Advantages

- Fully soluble in 15% HCl solution (1 gal of HCl dissolves 1.84 lb of MK).
- Provides effective bridging.

Typical properties

- | | |
|--------------------|--------------------------|
| • Appearance | White powder or granules |
| • Specific gravity | 2,7 (approximately) |

Recommended treatment

Use the following formulas to determine the appropriate concentrations to be added:

1. As a weighting agent add MK 5, 25 and 50 as needed to increase density up to 14ppg (1.68sg):

- For 1bbl starting volume
 $X = 945 (W_F - W_I) / (22,5 - W_F)$
- For 1 bbl final volume
 $X = 945 (W_F - W_I) / (22,5 - W_I),$

Where

$X = MK$ quantity required, lb/bbl

$W_F =$ final desired mud weight, ppg

$W_I =$ initial mud weight, ppg.

2. As a bridging agent, add 5-10 lb/bb. (14.26-28.53 kg/m³) of the appropriate grade(s) of MK. Note: The added MK should have an average particle size at least one third the formation pore diameter to maximize bridging effectiveness.

Package

MK 5, 25, 50, 100, 150, 300, 600 is packaged in 25 kg sacks.