

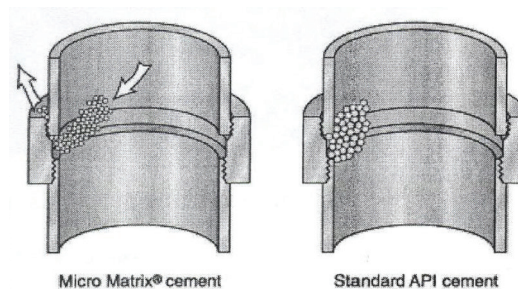
MICRO FINE CEMENT

Finding a small casing or collar leak during MIT testing is a common occurrence. To correct the problem, conventional cement squeeze techniques using API cement slurries are ineffective in plugging small leaks in casing such as collar leaks. This is due to conventional cement particles being larger than the area they are trying to penetrate. When pressure is applied to the slurry, the water is squeezed out, dehydrating the cement and causing squeeze failure.

The development of Micro Fine Cement slurries was based on the premise that smaller cement particles would penetrate small holes and void more efficiently than the larger, conventional cement particles. Micro fine cement consists of finely ground Portland cement. It has an average particle size of four microns, approximately four to eight times smaller than conventional cement particles.

Conventional cement slurries cannot penetrate widths smaller than 0.5 mm, but micro fine slurries can pass through areas 0.05 mm wide using hesitation squeeze procedures.

Illustration



Slurry Properties

Slurry Weight	12.0 lbs/gal
Slurry Yield	1.05 cu ft/sk
Water Requirements	6.05 gal/sk