



HOW MIN-U-GEL® 400 WORKS

Min-U-Gel® 400 is high purity attapulgite mineral. It is uniformly sized and shaped -- acicular rods of about 2 microns by 25 nanometers. They are essentially inert, non-fibrous, non-carcinogenic and safe for human contact.

When dispersed in a liquid, and the system is “at rest”, the particles arrange into a 3-dimensional framework or lattice structure as a result of their electrical charge (end-to-face). High shear dispersion is needed to ensure complete dispersion. This lattice traps or suspends other components in the system, creating a very uniform and stable mix with minimal inconsistencies in the composite. These components remain well dispersed allowing them to function at a more optimal level.

When mixed, pumped or sprayed, Min-U-Gel’s weak electrical charges cannot hold its lattice structure together so it dissociates easily (low yield point). Min-U-Gel particles stay dispersed among the other components keeping them separated. This optimal dispersion provides a lower viscosity and markedly improved flow, pumping, spraying and workability.

When the system returns to “at rest”, the rate of ‘thixotropic recovery’ – or rebuilding of the lattice structure – is exceptionally fast with an immediate return to a stable structure. Forming and un-forming the lattice structure can be repeated endlessly without loss of performance.

Typical Dosage Levels in Aqueous Applications

Application	Concentration of Min-U-Gel® 400		
	lbs/100 gal.	(g/l)	wt%*
Soft settling or suspension	1 – 5	(1.2 – 6)	0.1 – 0.5**
Flat and semi-gloss latex paint***, flexographic ink, shampoo, hair conditioner, adhesive, polish	3 – 10	(4 - 12)	0.3 – 1.0
Ready-mix tape joint compound, liquid dishwashing detergent	10 – 25	(12-30)	1.0 – 2.5
Latex texture paint	15 – 25	(12-30)	1.5 – 2.5
Cinder block surfacer, caulk	20 - 25	(24-30)	2.0 – 2.5

* Based on a 10 lbs/gal. or 1.2 kg/l product.

** Systems with large particles may need up to 2.0 wt.%.

*** Used as co-thickener in latex paints.