Spherelite™ Cement Additive

When combined with the proper type of cement, Spherelite™ cement additive can provide slurry densities of 9.5 to 12 lb/gal. The 24-hour compressive strength of these slurries can range from 100 to 700 psi at curing temperatures of 28° to 140°F (-2.2° to 60°C).

Features

Spherelite cement additive consists of hollow, fused, pressure-resistant mineral spheres that are competent up to a total exposure pressure of 12,000 psi. Lightweight slurries prepared with Spherelite cement additive generally have significantly higher 24-hour compressive strength development than equivalent-density slurries prepared with bentonite, gilsonite, or silicate extenders.

At any given pressure, the slurry density of a cement blend can be regulated by the quantity of Spherelite cement additive incorporated into the blend. Some of the hollow spheres are pressure-sensitive, and once the resistance of the individual spheres is exceeded, liquid is forced through the pores of the beads to fill the hollow interior space. This action gradually increases the slurry density as the total pressure on the slurry is increased.

Benefits

In addition to improving early compressive-strength development, Spherelite cement additive slurries have very good thermal insulation properties and are ideally suited for geothermal cementing applications. Set cements prepared with Spherelite cement additive also have improved heat insulation properties; the Spherelite cement additive functions as a lost-circulation aid. It also increases slurry volume yields because of its bulk density (25 lb/ft³).

Spherelite Cement Additive—Product Specifications

<table>
<thead>
<tr>
<th>Part No.</th>
<th>516.00002</th>
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<tbody>
<tr>
<td>Form</td>
<td>light-gray, solid powder</td>
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<tr>
<td>Specific Gravity</td>
<td>0.700 lb/gal</td>
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Bulk Density 25.00 lb/ft³
Packaging 50-lb bag

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