USG OIL WELL CEMENT: W-60 & W-120

USG Oil Well Cement Brand products, W-60 and W-120, are high-strength gypsum cements that have been manufactured to provide a stabilized, controlled set.

<table>
<thead>
<tr>
<th>TYPICAL PHYSICAL PROPERTIES</th>
<th>W-60 Oil Well</th>
<th>W-120 Oil Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Consistency</td>
<td>32 - 36cc</td>
<td>32 - 36cc</td>
</tr>
<tr>
<td>Vicat Set (Target)</td>
<td>60 Minutes</td>
<td>120 Minutes</td>
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<tr>
<td>Vicat Set (Range)</td>
<td>50 - 70 Minutes</td>
<td>100 - 140 Minutes</td>
</tr>
<tr>
<td>Compressive Strength (1 hour after Vicat Set)</td>
<td>3800 PSI</td>
<td>3800 PSI</td>
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<tr>
<td>Compressive Strength Dry</td>
<td>8500 PSI</td>
<td>8500 PSI</td>
</tr>
<tr>
<td>Expansion</td>
<td>0.1% - 0.3%</td>
<td>0.1% - 0.3%</td>
</tr>
</tbody>
</table>

Note: The Typical Physical Properties in the above table were achieved under controlled laboratory conditions with freshly produced material, results may vary.

W-60 and W-120 offer these advantages:
• Setting time can be adjusted in the field
• Has low permeability to inhibit intrusion of well fluids
• Can be pumped through 75% of the setting time
• High strength but easily drillable

W-60 and W-120 have been used for lost circulation, blowouts, split pipe and bridging plugs. In addition, they have found uses for other temporary work where quick set, positive expansion and high strength are necessary.

USG Oil Well Cement Brand products, W-60 and W-120, provide unique flow characteristics and setting properties when added to Portland cement-based down-hole cementing formulas. W-60 and W-120 can also be used as stand-alone products in maintenance (workovers) of existing wells.

Achieving a tight cement bond to both casing strings and formation is critical to controlling gas and fluid migration during cement jobs. The expansive properties and quick set of these gypsum-based products will help the experienced cement formulator produce a high-quality cement job.

W-60 and W-120 add an expansion characteristic to counter Portland cement shrinkage. Both products have right-angle/snap-set behavior that minimizes transition times as well as gas migration during the job.
W-60 and W-120 can also be used as stand-alone products in workover operations. They allow low permeability, yet are easily drillable when used as a plug in workovers. High strength, expansive and fast-setting, W-60 and W-120 are also pumpable through the majority of published set times. For reliable expansion and right angle/snap set during down-hole cementing applications or for high strength and quick-setting workover applications, use gypsum-based USG Oil Well Cement products, W-60 and W-120.

As an additive for altering set characteristics of Portland cement or in workovers, squeeze jobs, bridging plugs and other temporary work requiring quick set, expansion, high strength and easy drill-out.

Note: These products should only be used in down hole applications and by experienced cement formulators. See “NOTICE” below. Please contact your local USG sales rep for more information.

PRODUCT INFORMATION
See usg.com for the most up-to-date product information.

DANGER
May cause cancer by inhalation of respirable crystalline silica. Do not handle until all safety precautions have been read and understood. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. Wear protective gloves/protective clothing/eye protection. If swallowed, inhaled, or skin irritation occurs immediately get medical attention. Dust may cause irritation to eyes, skin, nose, throat and upper respiratory tract. If on skin: Wash with plenty of water. Dispose of in accordance with local, state, and federal regulations. For more information call Product Safety: 800 507-8899 or see the SDS at usg.com.

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SAFETY FIRST!
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.