CETCO® CIVIL PRO
HIGH-YIELD CIVIL ENGINEERING GRADE BENTONITE

DESCRIPTION
CETCO CIVIL PRO is a high yielding, easy mixing, 200-mesh bentonite drilling fluid made from the highest grade Australian sodium bentonite. CETCO CIVIL PRO meets and exceeds the requirements of EN 1358.

RECOMMENDED USE
CETCO CIVIL PRO exhibits optimal rheological properties designed specifically for use in diaphragm walls, slurry walls, cut-off walls, pilings and similar civil-construction work. Other potential applications include specialized micro-tunnelling, pipe-jacking & horizontal-directional drilling situations that require more turbulent-flow rheology.

CHARACTERISTICS
• Forms a tight, thin filter cake in unstable formations
• Provides superior borehole & trench stability
• Requires less material due to low fluid loss properties
• Suitable for all types of geology and soil conditions
• Mixes quickly and easily
• Compatible with most CETCO polymer additives
• Rheology is designed for easy solids removal and recycling of fluid
• Higher yield than API 13A Section 9 specifications with better filtration control for low-permeability walls

MIXING & APPLICATION
Mixing ratios are based on the use of freshwater. Water purity will affect bentonite performance. For best results, acidic and hard make-up water should be pre-treated with SODA ASH to a pH of 8.5-9.5. Mixing is best accomplished by adding CETCO CIVIL PRO slowly through a jet/hopper mixer.

PROPERTIES
@ 45 kg / 1000 L (45g/L)
Marsh funnel: min. 42 sec
Filtrate: max 17 ml

PACKAGING
25 kg bags, 1200 kg bulk bags, or pneumatic tanker

TYPICAL PROPERTIES

<table>
<thead>
<tr>
<th>Concentration (kg/1000 L)</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mud Density (t/m³)</td>
<td>1.015</td>
<td>1.017</td>
<td>1.020</td>
<td>1.023</td>
<td>1.026</td>
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<tr>
<td>Marsh Funnel (seconds)</td>
<td>31</td>
<td>34</td>
<td>37</td>
<td>42</td>
<td>47</td>
</tr>
<tr>
<td>Filtrate Loss (mL/30 min)</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>16</td>
<td>14</td>
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</tbody>
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