Concrete Repair Materials

Overview

The following materials are pre-qualified in accordance with DMS-4655, “Concrete Repair Materials.”

The Department reserves the right to conduct random sampling of pre-qualified materials for testing and to perform random audits of test reports. Department representatives may sample material from the manufacturing plant, the project site, and the warehouse. The Department’s Materials and Tests Division (MTD) reserves the right to test samples to verify compliance with DMS-4655.

Approval and use of the materials listed are limited to the condition under which they were evaluated (neat or extended) by the MTD Concrete Laboratory. Use the listed values for the coefficient of thermal expansion and modulus of elasticity as an aid in choosing the repair material that most closely resembles the original material of the structure being repaired. See product-specific documentation for proportioning, mixing, placement, and curing instructions.

For more information, contact MTD’s Rigid Pavements and Concrete Materials Section at (512) 506-5858.

Table 1: Type A – Rapid Materials

<table>
<thead>
<tr>
<th>Producer</th>
<th>Product</th>
<th>Neat or Extended&lt;sup&gt;1,2&lt;/sup&gt;</th>
<th>Coefficient of Thermal Expansion&lt;sup&gt;3&lt;/sup&gt; (μ-strain/°F)</th>
<th>Modulus of Elasticity (ksi)</th>
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<tr>
<td>ARDEX</td>
<td>TRM</td>
<td>Neat</td>
<td>8.6</td>
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<td>2,650</td>
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<td>Euco Repair SCC Fast</td>
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<td>Product</td>
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<td>Coefficient of Thermal Expansion (μ-strain/°F)</td>
<td>Modulus of Elasticity (ksi)</td>
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<td>Planitop 18TG</td>
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<td>Sikacrete 421 CI Rapid</td>
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<td>RepCon 928</td>
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<td>Highway Patch</td>
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<td>Neat</td>
<td>7.1</td>
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<td>Futura-45 Extended</td>
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<td>Modulus of Elasticity (ksi)</td>
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1. See DMS-4655 for the definitions of neat and extended.
2. Approval and use of the materials listed are limited to the condition under which they were evaluated (neat or extended) by the CST/M&P Concrete Laboratory.
3. Material extended with CRSQC approved aggregates during mixing
4. Material pre-packaged with coarse aggregates
5. Data is currently unavailable.
## Table 2: Type B – Ultra-Rapid Repair Materials

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<td>Neat</td>
<td>8.6</td>
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<td>BASF</td>
<td>TRM</td>
<td>Neat</td>
<td>8.6</td>
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<td>Extended</td>
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<td>MasterEmaco T 545 HT</td>
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<td>CTS Cement Manufacturing Corp.</td>
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<td>CTS Cement Manufacturing Corp.</td>
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<td>CTS Cement Manufacturing Corp.</td>
<td>Rapid Set DOT Repair Mix</td>
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<tr>
<td>CTS Cement Manufacturing Corp.</td>
<td>Rapid Set Low P Cement</td>
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<td>CTS Cement Manufacturing Corp.</td>
<td>Rapid Set Mortar Mix Plus</td>
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<td>Lyons PaveQuick HR</td>
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<td>Lyons PaveQuick HR</td>
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<tr>
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<td>Planitop 18ES</td>
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<tr>
<td>MAPEI</td>
<td>Planitop 18TG</td>
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<td>8.5</td>
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<td>MAPEI</td>
<td>Planitop 18TG</td>
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<td>PCS Highway Repair</td>
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<tr>
<td>Redi-Mix, LLC/ Custom-Crete</td>
<td>QuadraSet</td>
<td>Extended</td>
<td>N/A(^5)</td>
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<td>The Quikrete Companies, Inc.</td>
<td>FastSet DOT Mix Extended</td>
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<td>Sika</td>
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<td>Extended</td>
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<td>Sika</td>
<td>SikaQuick 2500</td>
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<td>8.8</td>
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<td>Repcon 928</td>
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<td>FasTrac 300</td>
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<td>FasTrac 303</td>
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<td>FasTrac 400</td>
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1. See DMS-4655 for the definitions of neat and extended.
2. Approval and use of the materials listed are limited to the condition under which they were evaluated (neat or extended) by the CST/M&P Concrete Laboratory.
3. Material extended with CRSQC approved aggregates during mixing
4. Material pre-packaged with coarse aggregates
5. Data is currently unavailable.
### Table 3: Type C – Vertical and Overhead Repair Materials

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<th>Coefficient of Thermal Expansion (μ-strain/°F)</th>
<th>Modulus of Elasticity (ksi)</th>
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<td>Rapid Set Mortar Mix Plus</td>
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1. See DMS-4655 for the definitions of neat and extended.
2. Approval and use of the materials listed are limited to the condition under which they were evaluated (neat or extended) by the CST/M&P Concrete Laboratory.
3. Material extended with CRSQC approved aggregates during mixing
4. Material pre-packaged with coarse aggregates
5. Data is currently unavailable.
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<th>Producer</th>
<th>Product</th>
<th>Neat or Extended&lt;sup&gt;1,2&lt;/sup&gt;</th>
<th>Coefficient of Thermal Expansion (μ-strain/°F)</th>
<th>Modulus of Elasticity (ksi)</th>
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<td>Euco Repair SCC</td>
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<td>5,500</td>
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<td>GeoKrete Geopolymer Mortar</td>
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<td>SikaTop 111</td>
<td>Neat</td>
<td>9.8</td>
<td>3,850</td>
</tr>
<tr>
<td></td>
<td>SikaTop 122</td>
<td>Neat</td>
<td>9.5</td>
<td>3,650</td>
</tr>
</tbody>
</table>

1. See DMS-4655 for the definitions of neat and extended.
2. Approval and use of the materials listed are limited to the condition under which they were evaluated (neat or extended) by the CST/M&P Concrete Laboratory.
3. Material extended with CRSQC approved aggregates during mixing
4. Material pre-packaged with coarse aggregates
5. Data is currently unavailable.