Joint Treatment Compounds Method

Scope
- Assess paste consistency of joint compounds and similar materials used in the building and construction industry.

Rapid Visco Analyser
The Rapid Visco Analyser (RVA) is a cooking stirring viscometer with ramped temperature and variable shear profiles optimized for testing viscous properties. The instrument includes international standard methods as well as full flexibility for customer tailor-made profiles. Combining speed, precision, flexibility and automation, the RVA is a unique tool for product development, quality and process control and quality assurance.

Description
This method is applicable to joint compounds (Ready-mix and Quick-set), thin-set mortars, spray textures, grouts and plasters used by the building and construction trade. This method requires an RVA Series 4, or later, model. Paste consistency is measured using the Offset Blade Paddle (Perten Instruments part no. NS102169) to facilitate measurement at high viscosity without cavitations. The height from the bottom of the lower blade to the top of the paddle is set to 65.8 ± 0.2 mm.
**Method**
Ten-minute pasting profile.

**Sample Preparation**
If required, mix powder to produce paste as per manufacturer’s instructions. Use 50 g paste as is. Remove all air bubbles from sample by folding the sample with a spatula and sharply tapping the canister on a hard flat surface. Use the offset blade paddle for the test.

**Profile**

<table>
<thead>
<tr>
<th>Time</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:00:00</td>
<td>Temp</td>
<td>25°C</td>
</tr>
<tr>
<td>00:00:00</td>
<td>Speed</td>
<td>78 rpm</td>
</tr>
<tr>
<td>00:05:00</td>
<td>Temp</td>
<td>25°C</td>
</tr>
<tr>
<td>00:10:00</td>
<td>End</td>
<td></td>
</tr>
</tbody>
</table>

Idle Temperature: 25 ± 1°C
Time Between Readings: 4 s

**Measure**
Record peak viscosity, and the viscosity at which curve has leveled off (viscosity reduction < 1% in 30 s), both in cP. The ‘leveled off’ value is the RVA joint compound index.

The RVA calibration or result should be adjusted to allow for the use of the Offset Blade Paddle (see Technical Bulletin 52).