**SmartC8 Grinding Enhancer**

*Aqueous Additives for Grinding of Portland Cement*

**DESCRIPTION**

*SmartC8* series of additives has been specially developed to improve the overall performance for the Portland Cement. These brown liquid additives are water based and non-flammable. Due to its unique design and formulation, these high performance additives are able to improve the grinding efficiency, enhance the physical strength and particle size distribution of Portland Cement.

*SmartC8* series of additives are most suitable for Ball Mill (Tube Mill), from which the OPC produced have blaine in excess of 300m²/kg.

*SmartC8* series of additives have the capability to improve the particle size distribution of the OPC produced using Vertical Roller Mills or High-pressure Roller Press Mills.

**FIELDS OF APPLICATION**

- Ordinary Portland Cement produced by conventional Ball Mill.
- Ordinary Portland Cement produced by Vertical Roller Mills or High-pressure Roller Press Mills.

**ADVANTAGES**

- **Improve grinding efficiency**, where the throughput can be increased by at least 10% with respect to similar Blaine without using *SmartC8* series of additives.
- **Improved size distribution**, where the particle sizes at 45 µm and 90 µm can be reduced.
- **Improved the early compressive strengths**, to have the strength in all ages to improve by 10% are not uncommon.
- **Improved cement flow**, where it will be noticeable when discharging the cement from the silo to tanker and/or vessel.
- **Improved bulk density**, where *SmartC8* will be able to increase the cement storage capacities of the silos and bulk carriers.

**TYPICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Product Names</th>
<th>pH</th>
<th>Specific Gravity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartC8-000</td>
<td>7 — 9</td>
<td>1.13 — 1.18</td>
</tr>
<tr>
<td>SmartC8-111</td>
<td>6 — 8</td>
<td>1.10 — 1.80</td>
</tr>
<tr>
<td>SmartC8-222</td>
<td>6 — 8</td>
<td>1.10 — 1.80</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- **Determination of suitable grade and optimum dosage through analysis**

  A typical dosage *SmartC8* series of additives are as follows:

<table>
<thead>
<tr>
<th>Product Names</th>
<th>Dosage kg per metric tonne of OPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartC8-000</td>
<td>0.03 — 0.06</td>
</tr>
<tr>
<td>SmartC8-111</td>
<td>0.05 — 0.10</td>
</tr>
<tr>
<td>SmartC8-222</td>
<td>0.07 — 0.11</td>
</tr>
</tbody>
</table>

  However, as the OPC clinker from different sources differ greatly in their chemical composition, grindability and reactivity. It is recommended to conduct lab trial test and analysis so as to select the appropriate type of additive and optimize its dosage.

- **Dispensing system to ensure accurate dosage**

  In order to maximize the investment used to incorporate *SmartC8* series of additives, our specialized dispensing system is highly recommended.

- **Keep away from frost**

  *SmartC8* series of additives should be kept away from frost and low temperature during winter. Insulation or heater should be installed where appropriate.

**Disclaimer**

The technical information provides is given to the best of our knowledge and is based on extensive testing. As the information herein is of a general nature, this information given will not expressed or implied as a warranty involving any act of liability in the event of misapplication. A trial should be carried out to ensure that this product confirms to the required conditions for use.
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PACKAGING AND STORAGE

- **SmartC8** series of additives can be supplied in bulk, 205 litre drum and plastic totes at 1.4MT per tote.
- Freezing must be avoided during transportation and storage.
- **SmartC8** series of additives have a shelf life of 12 months.

TECHNICAL SERVICES

Specialists from Shanghai S3 Building Materials Co. are available to render assistance in terms of laboratory analysis e.g. analysis of raw material, selection of the suitable additive as well as in-process site analysis. Shanghai S³ Building Materials Co also provides appropriate hardware systems and training for in-process addition of the additive.

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