Dosages at the higher end of the ranges recommended will give significant retardation and may only be suitable for use in warmer climates.

Use at other dosages

Dosages outside the typical ranges quoted above may be used to meet particular mix requirements. Contact Expanchem Fospak for advice in these cases.

Effects of overdosing

An overdose of double the intended amount of Expanplast* P211 will result in a significant increase in retardation as compared to that normally obtained at the intended dosage.

This effect is found with most water reducing admixtures, although the degree may vary. Provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired by increased retardation and will generally be increased.

The effects of overdosing will be further increased if sulphates resisting cement or cement replacement materials are used.

An overdose will increase core workability and increased initial workability will tend to extend the working life of the concrete, which will delay finishing and stiffening times to some extent.

Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Brown liquid</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Typically 1.165 @ 20°C ± 0.005</td>
</tr>
<tr>
<td>Chloride content</td>
<td>Nil to BS 5075 &amp; BS:EN934-2</td>
</tr>
<tr>
<td>Air entrainment</td>
<td>Typically less than 2% additional air is entrained at normal dosages.</td>
</tr>
<tr>
<td>Alkali content</td>
<td>Typically less than 5.0 g. Na\textsubscript{2}O equivalent/liter of admixture.</td>
</tr>
</tbody>
</table>

Expanplast* P211 disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The improved dispersion of cement particles enhances the efficiency of hydration. At higher dosage levels retardation of setting will be obtained.

Technical support

Expanchem Fospak provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment.

Dosage

The optimum dosage of Expanplast* P211 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use.

The normal dosage range is from 0.40 to 1.00 liters/100 kg of cementitious material, including PFA, GGBFS and microsilica.
Instructions for use

Mix design

The addition of the admixture will allow water reduction from the mix whilst maintaining workability. After initial trials, minor modifications to the overall mix design may be made to optimise performance. Where the primary intention is to provide high workability concrete, the mix design should be suitable for use as a pump mix. Advice on mix design for flowing concrete is available from Expanchem Fospak.

Compatibility

Expanplast* P211 is compatible with other Expanchem Fospak admixtures in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The trial mixes should assess the resultant properties of concrete containing more than one admixture.

Expanplast* P211 is suitable for use with all types of cements OPC, SRC and cement replacement materials such as PFA, GGBFS, and silica fume.

The use of a combination of admixtures in the same concrete mix and or cement replacements may alter the setting time. Trials should always be conducted to determine such setting times.

Dispensing

The correct quantity of Expanplast* P211 should be measured by means of a recommended dispenser. The admixture should then be added to the concrete with the mixing water to obtain the best results. Contact Expanchem Fospak for advice regarding suitable equipment and its installation.

Estimating - packaging

Expanplast* P211 is available in 210 liter drums and bulk supply.

Storage

Expanplast* P211 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. Should the temperature of the product fall outside this range then contact your local Expanchem Fospak office for advice.

Freezing point: Approximately -6°C

Precautions

Health and safety

Expanplast* P211 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes.

Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately do not induce vomiting.

For further information consult the Material Safety Data Sheet available for this product.

Fire

Expanplast* P211 is water based and non-flammable.

Cleaning and disposal

Spillages of Expanplast* P211 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water.

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.
Important note
Expanchem Fospak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Expanchem Fospak endeavours to ensure that the technical information on this data sheet is correct at the time of printing, it is the customer’s responsibility to satisfy himself, by checking with the company that this information is still current at the time of use, that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended. Because Expanchem Fospak has no control over the conditions of use of its products, all recommendations or suggestions regarding the use of these products are made without guarantee.

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