**Dosage**

The optimum dosage of Expanplast* R 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 0.3 to 0.6 litres/100 kg of cementitious material, including PFA, GGBFS or microsilica.

**Use at other dosages**

Dosages outside the normal range quoted above can be used to meet particular mix requirements. Contact Epanchem Fospak for advice in these cases.

**Effects of overdosing**

An overdose of double the intended amount Expanplast* R will result in a significant increase in retardation as compared to that normally obtained at the intended dosage. 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 sulphate resisting cement or cement replacement materials are used.

**Properties**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Clear Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity</td>
<td>1.14 @ 22°C + 2°C (BSEN 934-2)</td>
</tr>
<tr>
<td>Water soluble chloride</td>
<td>Nil (BSEN 934-2)</td>
</tr>
<tr>
<td>Alkali content</td>
<td>Typically less than 30g. Na₂O equivalent/litre of admixture (BSEN 934-2)</td>
</tr>
</tbody>
</table>

**Instructions for use**

**Retardation**

The level of retardation obtained may be varied by altering the dosage of Expanplast* R used, this will also alter the level of water reduction obtained. Retardation is also affected by factors other than the admixture, depending on the mix details and conditions involved. Major factors include the following:

a) Cement replacement materials and SRC cements will usually give greater levels of retardation than concrete mixes made with ordinary Portland cement at the same admixture dosage. Trials need to be conducted to establish the required dosage.
b) High temperatures will require increased dosages to obtain the same change in stiffening time compared to a control mix.

c) Changes in cement content, source or chemistry may lead to variations in the retardation obtained. The amount of tri-calcium aluminate in the cement has been identified as being one of the main contributory factors in this respect, with a lower level leading to greater retardation.

d) 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.

Compatibility

Expanplast* R is compatible with other Epanchem Fospak admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be premixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by trial mixes.

Expanplast* R is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS and microsilica.

Dispensing

The correct quantity of Expanplast* R 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 Epanchem Fospak for advice regarding suitable equipment and its installation.

Estimating – packaging

Expanplast* R is available in 210 litre drums and bulk supply. For larger users, storage tanks can be supplied.

Storage

Expanplast* R has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. Storage of material in metal drum slightly change the color of product from clear to light brown.

Should the temperature of the product fall outside this range then contact Epanchem Fospak for advice.

Freezing point: Approximately -4°C

Precautions

Health and safety

Expanplast* R 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* R is water based and non-flammable.

Cleaning and disposal

Spillages of Expanplast* R 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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