A high performance concrete superplasticiser based on polycarboxylic technology

Uses

Expanplast* Super 25 is a high performance superplasticiser intended for applications where increased early and ultimate compressive strengths are required, and it has been developed for use in:

- Self compacting concrete
- Pumped concrete
- Concrete requiring long workability retention
- High performance concrete
- Pre-cast concrete

Advantages

- Increased early and ultimate compressive strengths
- Increased flexural strength
- Higher E modulus
- Improved adhesion to reinforcing and stressing steel
- Better resistance to carbonation
- Lower permeability
- Better resistance to aggressive atmospheric conditions
- Reduced shrinkage and creep
- Increased durability

Description

Expanplast* Super 25 is differentiated from conventional superplasticisers in that it is based on a unique carboxylic ether polymer with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process electrostatic dispersion occurs but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance which stabilizes the cement particle’s capacity to separate and disperse. This mechanism considerably reduces the water demand in flowable concrete. Expanplast* Super 25 combines the properties of water reduction and workability retention. It allows the production of high performance concrete and/or concrete with high workability.

Expanplast* Super 25 is a particularly strong superplasticiser allowing production of consistent concrete properties around the required dosage.

Technical support

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

Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light yellow coloured liquid</td>
</tr>
<tr>
<td>pH</td>
<td>6.5</td>
</tr>
<tr>
<td>Volumetric mass</td>
<td>1.06 kg / liter @ 20°C</td>
</tr>
<tr>
<td>Chloride content</td>
<td>&lt;0.1%</td>
</tr>
<tr>
<td>Alkali content</td>
<td>Typically less than 1.5gm Na₂O equivalent / liter of admixture</td>
</tr>
</tbody>
</table>

Dosage

The optimum dosage of Expanplast* Super 25 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 between 0.5 to 3.0 liters / 100 kg of cementitious material.

Use at other dosages

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

Effects of overdosing

Over dosage may cause delay in the setting time.

Instructions for use

Compatibility

Expanplast* Super 25 should not be used in conjunction with any other admixture unless prior approval is obtained from your local Epanchem office.

Expanplast* Super 25 is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS, SRC and microsilica.

Mixing

When used at the mixing plant, Expanplast* Super 25 should be added in the mixing water. In some instances, e.g. addition to ready mix concrete on site, Expanplast* Super 25 can be added directly in the truck mixer and mixed at maximum speed for an extra 5 minutes. For self compacting concrete, a viscosity enhancer eg. Expanplast* Super 40 is recommended at a dosage between 1.0 - 4.0 liter per cubic meter.
Dispensing

The correct quantity of Expanplast* Super 25 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 for advice regarding suitable equipment and its installation.

Estimating – packaging

Expanplast* Super 25 is available in 210 liter drums and 1000 liter totes.

Storage

Expanplast* Super 25 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 Epanchem for advice.

Precautions

Health and safety

Expanplast* Super 25 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* Super 25 is water based and non-flammable.

* Denotes the trademark registered.

REGIONAL SALES OFFICES IN PAKISTAN:

Fospak (Pvt) Ltd.
Head Office
702, Business Avenue,
Block-6, PECHS., Shahra-e-Faisal,
Karachi, Pakistan.
Tel # +92-21-34528477, 34529859
Fax # +92-21-34522436
Email : info.khi@fospak.com.pk

Lahore Sales Office
2nd Floor Sarwar Shaheed Plaza,
Cavalry Ground,
Main Boulevard, Lahore Cantt,
Lahore, Pakistan.
Tel # +92-42-36675773
Fax # +92-42-36675838
Email : info.lhr@fospak.com.pk

Rawalpindi Sales Office
1st Floor,
Al-Harmain Plaza,
Main Murree Road,
Rawalpindi, Pakistan.
Tel # +92-51-39290592
Fax # +92-51-39290590
Email : info.isb@fospak.com.pk

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 Epanchem 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.

www.fospak.com