

# Expanplast\* Super25

**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

**Appearance** : Light yellow coloured liquid

**pH** : 6.5

**Volumetric mass** : 1.088 kg / liter @ 20°C

**Chloride content** : <0.1%

**Alkali content** : Typically less than 1.5gm Na<sub>2</sub>O equivalent / liter of admixture

## 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 kg / 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 Expanchem 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 Expanchem 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 kg per cubic meter, in addition of Expanplast Super 25 dosage.



CONSTRUCTION CHEMISTRY

### 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 250 kg drums and bulk packing is also available for large projects.

### 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., Shahr-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-Harmin Plaza,  
Main Murree Road,  
Rawalpindi, Pakistan.  
Tel # +92-51-39290592  
Fax # +92-51-39290590  
Email : info.isb@fospak.com.pk

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