

Expanplast* SP497

High range water reducer superplasticiser for high strength and high workability rheoplastic concrete

Uses

- Specifically developed for use in high strength and high workability concrete at low water content.
- Excellent flow provides good pumpable concrete
- Recommended for high workability concrete such as piling, girders, high-rise building pumping of concrete at height, mass concrete pours with improved cohesion,
- To significantly improve the workability and retention of site mixed concrete without increasing water demand, especially suitable for concrete required long transportation.

Advantages

- High range water reducing property allows the production of high quality concrete without excessive cement contents ensures improved durability
- Higher workability levels are maintained.
- Improved cohesion and particle dispersion minimizes segregation and bleeding and improves pumpability.
- Reduce thermal peaks
- Suitable for hot weather concreting
- Chloride free, safe for use in precast, pre-stressed and reinforced concrete

Standards compliance

Expanplast* SP497 conforms with ASTM C494 as

Type A, B, D, F & G, BSEN 934-2, 2000

Description

Expanplast* SP497 is a chloride free, superplasticising admixture formulated from synthetic polymer specially design to produce high quality rheoplastic concrete

Expanplast* SP497 disperses by electro kinetic action in the concrete mix, enabling the water phase of the concrete to perform more effectively.

Dosage

The optimum dosage of Expanplast* SP497 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 0.50 to 2.50 liters/100 kg of cementitious material, including PFA, GGBFS and microsilica.

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 Fospak for advice in these cases.

Properties

Appearance	: Brown liquid
Specific gravity	: Typically 1.20 ± 0.005 at 25°C
Chloride content	: Nil to BS 5075 & BSEN 934-2
Air entrainment	: Typically less than 2% additional air is entrained at normal dosages.
Alkali content	: Typically less than 5.0 g. Na ₂ O Equivalent / liter of admixture.

Effects of overdosing

An overdose of double the intended amount of Expanplast* SP497 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.

Instructions for use

Mix design

Where the main requirement is to improve strengths, initial trials should be made with normal concrete mix designs. The addition of the admixture will allow the removal of water from the mix whilst maintaining workability. After initial trials, minor modifications to the overall mix design may be made to optimize 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 Fospak.

Compatibility

Expanplast* SP497 is compatible with other 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* SP497 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* SP497 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 Fospak for advice regarding suitable equipment and its installation.

Estimating – packaging

Expanplast* SP497 is available in 250 Kg. drums and bulk supply for large user.

Storage

Expanplast* 497 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 40°C. Should the temperature of the product fall outside this range then contact your local Fospak office for advice.

Freezing point: Approximately - 6°C

Precautions

Health and safety

Expanplast* SP497 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* SP497 is water based and non-flammable.

Cleaning and disposal

Spillages of Expanplast* SP497 should be absorbed into 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.

* 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, Building # 45C,
Block CCA, Phase 5,
Main Boulevard,
Lahore Cantt, Lahore.
Tel # +92-42- 35742888
Fax # +92-42-35742888
Email info.lhr@fospak.com.pk

Rawalpindi Sales Office

Office # 3, Third Floor
Jinnah Boulevard,
West Sector-A, Near Gate #1,
DHA Phase 2, Islamabad
Tel # +92-51-4720280
Fax # +92-51-4720280
Email info.isb@fospak.com.pk

Important note

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 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 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.