



CONSTRUCTION CHEMISTRY

Expanplast* SP561AEA

High performance, high workability slump retaining water reducing superplasticizer, and air entraining admixture

Uses

- To improve the effectiveness of the water content of a concrete mix.
- To produce air entrained concrete for increased durability and resistance to damage by frost and de-icing salts. Typical applications include concrete roads, bridge decks, airport runways, taxiways, etc.
- Suitable to use in mass concrete, provides excellent workability retention.
- To improve cohesion and workability of concrete mixes where poorly graded aggregates must be used and bleeding, segregation or sand runs occur.

Advantages

- Allows specified strength grades to be met at reduced cement content or increased workability
- Air entrainment increases the resistance of concrete to attack by frost and de-icing salts, reducing problems of surface scaling and concrete failure
- Water reduction significantly improves compressive strength at all ages and enhances durability through the production of concrete.
- Minimizes the risk of segregation, bleeding and assists in the production of a dense, close textured surface, improving durability.
- Chloride free, safe for use in pre-stressed and reinforced concrete.

Standards compliance

Expanplast* SP561AEA conforms with BS 5075 Part 1, ASTM C494 as Type B, D, & G, ASTM C260, BS 4887

Description

Expanplast* SP561AEA is a chloride free and water reducing and air entraining admixture based on specially selected and blended organic polymers materials. It is supplied as a brown solution which instantly disperses in water.

Expanplast* SP561AEA disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively and improve the consistency of concrete. This produces higher levels of workability for the same water content, allowing benefits such as water reduction, air entrainment, slump retention, retardation, and increased strengths by reducing water cement ratio.

Dosage

The optimum dosage of Expanplast* SP561AEA 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 0.40 to 2.20 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 Fospak for advice in these cases.

Effects of overdosing

An overdose of double the intended amount of Expanplast* SP561AEA will result in a significant increase in retardation and air contents in concrete, 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.

Over dosage may also cause increased air entrainment, which will tend to reduce strength. The degree of this effect will depend on the particular mix design and overdose level.

Properties

Appearance :	Brown liquid
Specific gravity (BSEN 934-2) :	1.16 - 1.17 @ 20°C



Instructions for use

Compatibility

Expanplast* SP56AEA is compatible with other 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 performance of concrete containing more than one admixture should be assessed by trial mixes.

Expanplast* SP561AEA is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS, SRC and microsilica. 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* SP561AEA 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* SP561AEA is available in 210 liter drums and bulk supply. For larger users, storage tanks can be supplied.

Storage

Expanplast* SP561AEA 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 Fospak for advice

Freezing point: Approximately - 3°C

Precautions

Health and safety

Expanplast* SP561AEA 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* SP561AEA is water based and non-flammable.

Cleaning and disposal

Spillages of Expanplast* SP561AEA 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.

* Denotes the trademark registered

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