

Plastit® AW450

Anti-Washout Admixture

Uses

- All types of underwater concreting where conventional concrete or placing techniques would result in a high percentage of material loss due to washout
- Mortar and grouting applications where mixtures are typically more fluid and have a higher potential for washout

Advantages

- Reduction in washout of cement and fines
- Reduction in segregation, even with highly fluid, high water-to-cementitious materials ratio concrete mixtures
- Thixotropic action that provides concrete stiffening after placement
- Reduction or elimination of concrete bleeding

Standards compliance

Plastit AW450 conforms with CRD-C661-06.

Description

Plastit AW450 anti-washout admixture is a patented, ready-to-use, liquid cellulose-based admixture that is specially developed for underwater concrete applications. Concrete containing Plastit AW450 admixture exhibits superior resistance to washout of cement and fines, while impeding the blending of external water into the plastic concrete. Plastit AW450 is suitable for concrete with water-cement ratio is lower than 45%.

Typical dosage

The optimum dosage Plastit AW450 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 0.7 to 1.5 kg/100 kg of cementitious material.

Properties

Appearance	Light Yellow liquid
Specific gravity	1.01 gr/cm ³ at 20°C
Chloride	Nil to BS5075
Air entrainment	Typically less than 2% additional air is entrained at normal dosages.

Instructions for use

Compatibility:

Plastit AW450 is compatible with other CAPCO admixtures 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.

Plastit AW450 is suitable for use with all types of Portland cements, SRC cements and cement replacement materials such as PFA, GGBFS 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 Plastit AW450 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.

Mixing:

For underwater concrete placements, ACI 304R, Chapter 8, "Concrete Placed Underwater" provides certain basic mixture proportions such as:

- A minimum total cementitious material content of 600 lb/ yd³ (356 kg/m³)
 - Use of pozzolans approximately 15% by mass of cementitious materials
 - A maximum water-to-cementitious materials ratio of 0.45
 - Fine aggregate contents of 45-55% by volume of total aggregate
 - Air contents of up to 5% are listed as desirable
 - A slump of 6-9 in. (150-230 mm) is generally necessary and occasionally a slightly higher slump range is needed
- For achieving additional slump, use Plastit AW450 admixture in conjunction with a Plastit SPC10 high-range water-reducing admixture.

This combination will produce a high-performance, flowing concrete that exhibits superior resistance to washout of cement and fines. Plastit AW450 admixture should be added after all other concreting ingredients have been batched and thoroughly mixed, either at the batch plant or at the jobsite.

Packaging

Plastit AW450 is available in 20 kg containers and 200 kg drums.

Storage

Plastit AW450 has a minimum shelf life of 12 months provided the temperature is kept within the range of 5°C to 35°C. Should the temperature of the product fall outside this range then contact CAPCO for advice.

Precautions

Health and safety:

Plastit AW450 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.

Fire:

Plastit AW450 is non-flammable.