

SP301

High Range Workability Concrete Admixture



DESCRIPTION

S.S. SP301 is a high performance liquid concrete admixture formulated from selected polymers specially designed to enable the water content of the concrete to perform more effectively. This effect can be used to improve workability and to increase ultimate strengths by the very high levels of water reduction in the concrete mix. S.S. SP301 has strong workability retention which helps in long distance and hot weather concrete deliveries, and is particularly suitable for ready-mix concrete.

APPLICATIONS

- To increase workability retention of fresh concrete.
- To provide increased ultimate strength by reducing water demand in concrete mixes.
- To produce high quality concrete of improved durability by reducing permeability.
- Long distance and hot weather concrete deliveries.

CHARACTERISTICS

Appearance	Brown Liquid
Specific Gravity	1.15 ± 0.02
Freezing Point	= 20C
Cl- Content	Nil

ADVANTAGES

- Higher strength with same cement content.
- Minimising segregation problems by improving cohesion.
- Improved workability reduces placing and compaction problems.
- Cement saving without affecting strength.
- More durable concrete as a result of reduction in permeability and lower water to cement ratio.
- Chloride free.

COMPATIBILITY

S.S. SP301 can be used with all types of Portland cement and cement replacement materials. S.S. SP301 is compatible with other CCC admixtures used in the same concrete mix. If more than one type of admixture is to be used in the concrete mix, they must be dispensed to the concrete separately.

STANDARDS

S.S. SP301 complies with ASTM C494, Type B, D and G, depending on dosage used.

METHOD OF USE

S.S. SP301 should be added to the concrete with the mixing water to achieve optimum performance. An automatic dispenser should be used to dispense the correct quantity of S.S. SP301 to the concrete mix.

DOSAGE

For normal strength concrete, a dosage between 1.75 – 0.80 litre/100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

For high strength concrete dosage between 2.75 – 1.0 litre/100 kg of cementitious materials in the mix.

EFFECTS OF OVER DOSAGE

Over dosing of S.S. SP301 will cause the following:

- Significant increase in retardation.
- Increase in workability.

Ultimate concrete strength will not be adversely affected and will generally be increased provided that proper concrete curing is maintained.

SETTING TIME

Although the setting time is dependent on the dosage of S.S. SP301, the following factors should be considered:

- 1- Retardation is increased with lower levels of tricalcium in the cement.
- 2- Lower temperatures will delay the setting time.