**ESA.W 301**

High range water- reducer concrete admixture

ESA.W301 is a high range water-reducer and superplasticizer admixture based on polycarboxylate ether that cause on high strength at initial and final ages of concrete. The product is also capable of reducing water consumption in concrete up to 30%.

**Application**

* Producing expose concrete
* Improve Pumpability of concretes
* high strength concretes
* Concrete with pozzolanic materials
* Decorative concretes
* Flooring and paving concretes
* Self-compacting concrete
* placing concrete in special cast for making different shapes

**Features**

* Reducing water consumption in concrete up to 30 % in equal fluidity
* Preventing bleeding or segregation in Super fluid concrete
* high strength at initial and final ages of concrete
* Decreasing permeability to water, Chloride and sulphate due to drastic decrease in water consumption in concrete
* Use simultaneously with other pozzolans , Fly ash and slag
* Decreasing concrete’s porosity
* slender components whit densely packed reinforcement

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| **Technical properties** |
| **liquid** | **state** |
| **brown** | **color** |
| **1/1**$\pm $**0/02 g/cm3** | **Specific gravity(25oC)** |
| **1**$\pm $ **7** | **pH** |
| **-2 oC** | **Freezing temperature** |
| **Not containing Chloride ion (BS 5075)** | **Chloride ion** |

**With accordance to these standards**

**ASTM C 494- TYPE F**

**EN 934-2 –Table 3.1 /3.2**

**ASTM C 1017**

**Dosage**

For The optimum dosage of ESA.w301 advise to carry out trial mixes. It is recommended to perform some tests on fresh and hardened concrete’s properties such as fluidity, staying fluid, setting time, initial and final strength with your materials in your environment. In generally we suggest a value between 0.4-1.3 percent by weight of cement.

**How to use**

* ESA.w301 can be added to fresh mixed concrete or mixed with water with any ratio and then added to concrete.( on the batching plant or on site into the truck mixer )
* Do not use ESA.w301 directly to cement mixtures together with dry aggregates.

**Safety points**

* ESA.w301 isn’t in the category of hazardous material. And causes no harm to the body or the environment. However, wash with water before drying if contacted with skin.
* If contacted with eyes or swallowed immediately wash with a lot of water and consult a doctor.