**ESA.WH**

High range water- reducer concrete admixture

ESA.WH is a high range water-reducer and superplasticizer admixture based on polycarboxylate acid that cause on high strength at initial and final ages of concrete that can be retarding concrete slump . ESA.WH is also capable of reducing water consumption in concrete up to 40%.

**Application**

* Self- compacting concrete (SCC)
* Producing High pressure concrete(HPC)
* Producing High strengths concrete
* Heavy concrete placement
* Decorative concretes
* Flooring concretes
* Creating injecting mortars
* Producing expose concrete

**Features**

* Reducing water consumption in concrete up to 40%
* Resulting high and early age resistance and go on all ages of concrete
* Reducing concrete’s porosity
* Can be simultaneously used with cement mixtures , micro silica, Fly ash and slag
* Increasing concrete’s concentration and performance
* Possibility of concrete placement at sections with higher armature concentration
* No need to concrete vibration
* Preventing bleeding and air lockout in concrete
* Possibility of making concrete with 0.3-0.4 water to cement ratio

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| **Technical properties** |
| **liquid** | **state** |
| **brown** | **color** |
| **1/09**$\pm $**0/02 g/cm3** | **Specific gravity(25oC)** |
| **1**$\pm $ **5** | **pH** |
| **Non flammable** | **Flammability 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**

The precise dosage of ESA.WH will be determined by mixing pattern and required specifications. It is recommended to perform some tests on fresh and hardened concrete’s properties such as fluidity, staying fluid, setting time, initial and final strengths with your materials in your environment. These tests are advised in order to determine the optimum dosage of this product but generally we suggest a value between 0.2-1.5 percent to cement mixtures’ mass.

**How to use**

* ESA.WH can be directly added to ready-mixed concrete or mixed with water with any ratio and then added to concrete.
* Do not use ESA.WH directly to cement mixtures together with dry aggregates.

**Safety points**

* ESA.WH 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.