

POWER PLAST-ES PC HIGH RANGE WATER-REDUCER / SUPER PLASTICIZER ADMIXTURE

POWER PLAST-ES is high range water-reducer and super plasticizing admixture based on modified polycarboxylic (PC) polymers. It acts efficiently to give controlled workability about 105 minutes. POWER PLAST-ES can develop the early compressive strength of concrete. It meets the requirements of the following standards:
ASTM C1017/C1017 M, ASTM C494/C494 M TYPE F,
EN 934-2
ISIRI 2930 Table 3&4.

ADVANTAGES

- Reduces cement content in concrete
- Design of concrete mixes with water-cement ratios in the range of 0.28 to 0.4
- Increases workability
- Prevents bleeding and segregation of concrete
- No needs for vibrators
- Improves concrete consistency
- Eliminates air content of concrete
- Possible to reduce the time of de-moulding (approximately 8 to 12 hours)
- Achieve to early compressive strength of concrete in all ages
- It can be used with all types of Portland cement including Sulphate Resisting.
- Use simultaneously with silica fume, fly ash and other pozzolanic materials
- Increased adhesion between concrete and steel
- Considerably reduces permeability
- Increases the durability of concrete against climatic effects
- Reducing the potential for AAR (Alkali-Aggregate Reaction), due to reduction of cement contents and concrete permeability
- Enables economies in mix designs to be achieved and reducing depreciation of concreting Equipments
- Significant reduction in crack propagation resulting from creep and shrinkage potential of concrete
- Providing great compressive strength of concrete, because of a lower water/cement ratio without increasing the amount of cement

APPLICATION

- Pre-cast concrete
- Concreting in thin and congested steel reinforcement sections
- Concrete slip forming
- Underwater concreting by using Tremie concrete
- Concreting where workability retention is beneficial Produces
- High Performance Concrete (HPC)
- Produces High Strength Concrete (HSC)
- Produces Self-Consolidating Concrete (SCC)
- Produces Water Resistant Concrete (WRC)
- Produces Preplaced Aggregate Concrete (PAC)
- Exposed concretes



DOSAGE

The optimum dosage of POWER PLAST-ES can be determined by trials in the site. Depending on concrete mix design (sizes and types of aggregates, cement content, water/cement ratio, ambient temperature and concreting conditions), a dosage of between 0.3 and 0.9 percent by weight of cement or cementitious material is recommended.

For use with other range of dosage, contact ABADGARAN Technical Services Department.

DIRECTION OF USE

1-POWER PLAST-ES could be added to a part of concrete mixing water then added to the concrete mix.

2- POWER PLAST-ES could be added to the concrete mix during the mixing cycle at the same time as the water or the aggregate or it could be added to ready-mix concrete before placing concrete.

3- Admixtures must be weighed carefully.

PHYSICAL AND CHEMICAL PROPERTIES

Chemical base: modified polycarboxylic (PC) polymers

Specific gravity: $1.08 + 0.05 \text{ g/cm}^3$

Physical state: Liquid

Chloride content: Nil to EN 934-2

STORAGE

Shelf life: 1 year in the original package

Storage condition: should be protected from direct sunlight and frost. Keep container in the temperature range between $+10^\circ\text{C}$ and $+30^\circ\text{C}$

Packing: 22 kg container or 1000 kg tank

HEALTH AND SAFETY

This product does not contain any substances hazardous to human health and the environment. However, it should not be swallowed and allowed to be in contact with skin and eyes. In case of contact with eyes rinse immediately with plenty of water.

POWER PLAST-ES is not flammable. For further information refer to the material safety data sheet. MSDS is available at ABADGARAN website.

TECHNICAL SERVICE

The ABADGARAN INTERNATIONAL GROUP Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

