

A.C.P HIGH PERFORMANCE SILICA FUME GEL

DESCRIPTION

A.C.P is an advanced concrete admixture used for designing high performance concrete and multipurpose concrete mixtures. A.C.P is based on a highly pozzolanic mineral admixture that eliminates water absorption and permeability of concrete, beside increasing workability. High range water reduction and workability retention are special properties of A.C.P.

A.C.P comprises the following chemicals:

1. Silica fumes
2. New generation super plasticizers
3. Waterproofing agents
4. Catalysts and fillers

This advanced-technology product meets the requirements of the following standards:

ASTM C1202

BS EN 12390-8, BS 1881-122

ADVANTAGES

- Reduces water-cement ratio;
- Reduces cement content in concrete between 15 to 20 percent;
- Increases workability and workability retention of concrete;
- Improves pumpability of concrete and reduces depreciation of concreting equipment;
- It can be used with all types of Portland cement;
- Possibility of replacement of cement type 2 by cement type 5 when applied;
- Increases the compressive strength of concrete about 30%-70%;
- Considerably reduces permeability;
- Increases the abrasion resistance of concrete;
- Reduces the potential for AAR (Alkali-Aggregate Reaction);
- Inhibits chloride ion penetration and any other destructive chemicals influence

APPLICATION

- Enables production and transportation of concrete in long distances and hot weather concreting;
- Produces High Strength Concrete (HSC) and Water Resistant Concrete (WRC);
- Suitable for marine environments or the regions exposed to chemicals attack, e.g. southern and northern parts of Iran and saline regions;
- Docks, deck bridges, tanks, etc.
- Designs of concrete mixes for Water and Wastewater Treatment.

DOSAGE

The optimum dosage of A.C.P can be determined by trials in the site. Depending on concrete mix design (concrete type, workability, compressive strength, sizes and types of aggregates,



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تائیدیه صلاحیت آزمایشگاه همکار



مرکز ملی تایید صلاحیت ایران
ISO / IEC 17025



مجوز صادرات
به اتحادیه اروپا



استاندارد ملی ایران



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cement content, water/cement ratio, ambient temperature and concreting conditions), a dosage between 5.0 and 9.0 percent by cement weight is recommended.

Note: when using A.C.P, water-cement ratio must be considered around 0.4.

For using other ranges of dosage, contact ABADGARAN INTERNATIONAL GROUP Technical Services Department.

Please contact our engineering office in case of simultaneous use of more than one admixture.

DIRECTION OF USE

A.C.P can be added to concrete in two ways:

1-A.C.P could be added to ready-mix concrete before placing concrete.

2-A.C.P could be added to a part or whole of concrete mixing water then added to the concrete mix.

PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Slurry

Color: Dark gray

Specific gravity: $1.43 \pm 0.05 \text{ g/cm}^3$

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: 25 kg container

HEALTH AND SAFETY

This product does not contain any substances hazardous to human health and the environment. However, it should not be swallowed or allowed to be in contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water. For further information, refer to the material safety data sheet.

A.C.P is not flammable. 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.

All data presented in this technical datasheet are based on our last researches in ABADGARAN CONSTRUCTION CHEMICALS laboratories and are just as a guide for choosing appropriate material. Therefore, users should conduct a sufficient investigation to establish the suitability and conformity of any product for intended uses.



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