

MICRO GEL-R MODIFIED RETARDING SILICA FUME GEL

MICRO GEL-R improves the rheological properties of concrete. It is based on a highly pozzolanic mineral material which significantly reduces water absorption and permeability of concrete, besides increasing workability and controlling retardation.

MICRO GEL-R comprises the following chemicals:

1. Silica fume
2. New generation super plasticizer

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

ASTM C1202

BS EN 12390-8, BS 1881-122

APPLICATION

- Mass concrete
- 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.

ADVANTAGES

- Reduces water-cement ratio
- Increases setting time of concrete
- Increases workability and workability retention of concrete
- Improves pumpability of concrete and reducing depreciation of concreting equipments
- Reduces cement content in concrete
- It can be used with all types of Portland cement
- Increases the compressive strength of concrete about 10%-40%
- Significantly reduces water absorption
- Considerably reduces permeability
- Reduces the potential for AAR (Alkali-Aggregate Reaction)
- Inhibits chloride ion penetration and any other destructive chemicals influence

DOSAGE

The optimum dosage of MICRO GEL-R can be determined by trials in the site. Depending on concrete mix design (concrete type, workability, compressive strength, sizes and types of aggregates, cement content, water/cement ratio, ambient temperature and concreting conditions), a dosage of between 3.0 and 8.0 percent by weight of cement is recommended.

Note: when using MICRO GEL-R, water-cement ratio can be considered around 0.40.

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

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



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DIRECTION OF USE

MICRO GEL-R can be added to concrete in two ways:

- 1- MICRO GEL-R could be added to ready-mix concrete before placing concrete.
- 2- MICRO GEL-R 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

Specific gravity: 1.44+ 0.05 g/cm³

Color: Gray

Chloride content: Nil to EN 934

STORAGE

Shelf life: 1 year in the original package

Storage condition: should be protected from direct sunlight and frost. Keep pail in the temperature range between +10°C and +30°C

Packing: 25 kg pail

HEALTH AND SAFETY

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



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