

WRDA[®] P92

Water-reducing admixture

Product Description

WRDA[®]P92 is an aqueous solution of complex organic compounds combined with other chemicals which increase its beneficial effects on the quality and plasticity of a concrete mix. It does not contain calcium chloride. WRDA P92 is manufactured under rigid control which provides uniform, predictable performance. It is supplied as a dark brown, low viscosity liquid, ready-to-use as received.

WRDA P92 is a chemical admixture meeting the requirements of the following chemical admixture specifications for concrete: ASTM C 494 as a Type A and Type D; BS 5075: Part 1.

One litre weighs approximately 1.11kg ± 0.02kg

Application

WRDA P92 makes a workable mix with up to 15% less water and yields a stronger, less permeable and more durable concrete. It is used in ready mix plants, job site plants and concrete pavers, for normal weight and light weight concrete, in block, precast and prestressed concrete plants. It should be noted that WRDA P92 is particularly effective in concrete containing slag or fly ash (pozzolans).

Compared to other water reducers WRDA P92 will typically impart the following additional benefits:

- Higher early compressive and flexural strengths
- Improved concrete finish

Chemical Action

As a dispersing agent, WRDA P92 lessens the natural inter-particle attraction between cement grains in water. It does this by colloidal action and by absorption on the cement particles, thus reducing their tendency to clump together and makes the mix more workable with less water. As a cement catalyst, WRDA P92 effects a more complete hydration of the cement, beginning immediately after the cement and water come together at the lower additions of WRDA P92 or immediately after a period of designed and controlled hydration at the higher additions. WRDA P92 increases the gel content of the concrete, the paste or binder that “glues” the concrete aggregates together. The increased gel content adds to the water retention and internal cohesiveness of the mix, reducing bleeding and segregation as it increases workability and placeability.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.



Addition Rates

WRDA P92 will provide water reduction with no retardation. At higher dosage rates, it will provide some retardation. However, after the period of initial retardation, hydration continues rapidly and completely. The amount of WRDA P92 to be used will typically range from 200 to 600mL / 100kg of cementitious material depending on job requirements. For dosage rates above 600mL / 100kg cementitious material, please consult your local GCP representative.

Compatibility with Other Admixtures

WRDA P92 is compatible with all air-entraining admixtures. Due to the synergistic effect of WRDA P92, the quantity of air-entraining agent added to WRDA P92 admixed concrete may be reduced by 25–50%. By combining the separate effects of air entrainment and dispersion, the water requirement of concrete may be reduced up to 20%. Each admixture should be added separately. WRDA P92 contains no calcium chloride but is compatible in concrete with calcium chloride. Again each admixture should be added separately.

Packaging

WRDA P92 is available in bulk, and in 205L drums. WRDA P92 contains no flammable ingredients. It will freeze at about -2°C but will return to full strength after thawing and thorough mechanical agitation.

Health and Safety

See WRDA P92 Material Safety Data Sheet or consult GCP Applied Technologies.

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