

WRDA[®]

Water-reducing admixture

Applications

WRDA[®] 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.

Chemical Action

As a dispersing agent, WRDA[®] lessens the natural interparticle attraction between cement grains in water. It does this by colloidal action, 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[®] effects a more complete hydration of the cement, beginning immediately after the cement and water come together at the lower additions of WRDA[®] or immediately after a period of designed and controlled hydration at the higher additions. WRDA[®] 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.

Addition Rates

WRDA[®] 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.

WRDA[®] contains amines at a level which is below 0.025% S/C when used at the typical dosage level (450mL per 100kg of cementitious material). The amount of WRDA[®] to be used will typically range from 400 to 800mL / 100kg of cementitious material depending upon job requirements. However, higher addition rates may be used due to variations in cement, aggregate and other job site conditions.

Compatibility with Other Admixtures

WRDA[®] is compatible with all air-entraining mixtures. Due to a synergistic effect of WRDA, the quantity of air-entraining agent added to WRDA[®] 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[®] contains no calcium chloride but is compatible in concrete with calcium chloride. Again each admixture should be added separately.

Packaging

WRDA[®] is available in bulk and 205L drums. It 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® Material Safety Data Sheet or consult GCP Applied Technologies.

Dispensing Equipment

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

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Last Updated: 2023-07-06

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