

# WRDA<sup>®</sup> P29

Water-reducing admixture

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## Product Description

WRDA<sup>®</sup>P29 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<sup>®</sup>P29 is manufactured under rigid control which provides uniform, predictable performance. It is supplied as a clear yellow, low viscosity liquid, ready-to-use as received.

WRDA<sup>®</sup>P29 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; GB 8076-1997.

One Litre weighs approximately 1.09kg ± 0.02kg.

## Application

WRDA<sup>®</sup>P29 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<sup>®</sup>P29 is particularly effective in concrete containing slag or fly ash (pozzolans).

Compared to other water reducers WRDA<sup>®</sup>P29 will typically impart the following additional benefits:

- Higher early compressive and flexural strengths
- Improved concrete finish

## Compatibility with Other Admixtures

WRDA<sup>®</sup>P29 is compatible with all air-entraining admixtures. Due to a synergistic effect of WRDA<sup>®</sup>P29, the quantity of airentraining agent added to WRDA<sup>®</sup>P29 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<sup>®</sup>P29 contains no calcium chloride but is compatible in concrete with calcium chloride. Again each admixture should be added separately.

## Dispensing Equipment

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

## Chemical Action

As a dispersing agent, WRDA®P29 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®P29 effects a more complete hydration of the cement, beginning immediately after the cement and water come together at the lower additions of WRDA®P29 or immediately after a period of designed and controlled hydration at the higher additions. WRDA®P29 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®P29 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®P29 to be used will typically range from 200 to 400mL / 100kg of cementitious material depending upon job requirements (for dosage rates above 400mL / 100kg cementitious material, please consult your local GCP representative).

## Health and Safety

See WRDA®P29 Material Safety Data Sheet or consult GCP Applied Technologies.

## Packaging

WRDA®P29 is available in bulk, and 205L drums. WRDA®P29 contains no flammable ingredients. It will freeze at about -2°C but will return to full strength after thawing and thorough mechanical agitation.

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Last Updated: 2023-07-06

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