

WRDA[®] P9

Mid-Range Concrete Plasticiser

Product Description

WRDA[®]P9 is a liquid concrete plasticiser, or water-reducing agent, used to improve workability of concrete, or permit effective reductions in free water content. It is an extremely versatile product, producing excellent slump retention properties, over a wide range of cement contents.

WRDA[®]P9 is effective over a wide range of dosage levels, giving the desired effect in concrete without producing any detrimental retardation results.

WRDA[®]P9 is formulated from carefully selected raw materials and is manufactured under controlled conditions to give a consistent product. It is based on a high performance lignosulphonic acid derivative and depending on dosage rate, WRDA[®]P9 meets the requirements of Type A and D materials of ASTM designation C-494 and complies with EN 934-2.

Product Advantages

- WRDA[®] P9 can be utilised to modify concrete mix designs to give improved slump retention and allow more time for placement and compaction.
- Permits excellent water reduction, resulting in improved concrete strengths and durability.
- Effective over a wide range of cement contents
- At both low and high addition rates, WRDA[®] P9 exhibits excellent retention of workability while giving limited set retardation properties. This is particularly prominent under hot weather conditions.
- WRDA[®] P9 aids cohesion, especially when harsh mixes are used. This improves the surface finish of the concrete.
- Reduces bleeding and enhances the pumpability characteristics of the concrete.
- Effective over a wide range of dosage levels producing moderate to high compressive strength increases

Typical Properties

Appearance	dark brown liquid
Specific Gravity	1.20 at 20 °C
Air Entrainment	Air content will normally be increased by between 1% and 2%.
Chloride Content	Nil
Freezing Point	0 °C

Method of Use

WRDA[®]P9 is supplied ready for use. It should be added to concrete mixes during the mixing process, at the same time as the water. It should not be added directly to the cement. No extension of normal mixing time is necessary.

Compatibility with Cements

WRDA®P9 can be used with all types of Portland, Pozzolanitic and blast furnace cements. It can also be used with concrete containing fly ash and silica fume.

Compatibility with other Admixtures

WRDA®P9 should not be premixed under any circumstances with other admixtures. While some admixtures can be usefully combined within the same mix the performance of this product may well be affected by the presence of other chemicals and we recommend that GCP Applied Technologies be contacted for advice in all such circumstances.

Addition Rates

Range: 0.2%–1.2% volume by weight of cement

The performance of WRDA®P9 is best assessed after preliminary tests on site using the actual concrete under consideration to determine the optimum dosage and effect on properties such as ultimate compressive strength, early rates of strength, and shrinkage when these are of consequence.

As a guide to these trials, an addition rate of 200 ml–1200 ml WRDA®P9 per 100 kg cement is recommended.

Effects of Overdosing

Overdosing of WRDA®P9 will generally produce a considerable increase in workability and in certain circumstances, a slight increase in air content. This particularly in cold weather will be accompanied by retardation of the initial and final set characteristics of the concrete. In such cases, however, provided the concrete is properly cured, the ultimate strength will generally be higher than that of normal concrete. The effects of overdosing will also be exaggerated when sulphate resisting cement is used to produce the concrete.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into a mixer by means of automatic dispensing equipment details of which are available upon request.

Health and Safety

For further information see WRDA®P9 SDS (Safety Data Sheet) or consult GCP.

Packaging

WRDA®P9 is supplied in nominal 210 litre free, non-returnable containers.

Alternatively, 1000 litre IBCs or bulk deliveries can be arranged.

Storage

WRDA®P9 should be stored in original containers or suitable closed tanks, preferably out of direct sunlight and protected from extremes of temperature.

Storage Life in Manufacturer's Drums:

12 months from the date of manufacture

Storage Life in Bulk Storage:

12 months from the date of delivery

Technical Service

The Technical Service Department of GCP is available to assist you in the correct and best use of our products. These resources and advice are at your disposal entirely without obligation. Please contact:

GCP

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