

## WATER REDUCING PLASTICISING AND RETARDING CONCRETE ADMIXTURE

### DESCRIPTION

**Conmix P4R** is liquid high performance mid range concrete plasticiser and retarder or water reducing agent used to improve the workability of concrete mixes or to allow an effective reduction in free water content to be made. The effect is achieved by its absorption on to the surface of the cement particles in a concrete mix giving a powerful de-flocculating retarding action. It can also be used as a waterproofer to reduce permeability of concrete. **Conmix P4R** is formulated from carefully selected raw materials and is manufactured under controlled conditions to give a consistent product. It is based on a high grade modified lignosulphonic and carboxylic acid derivative, depending on addition rate conforms to Type A and D materials of ASTM designation C494-81 and with BS5075 : Part 1, GB 8076-1997, BS 5075 Part 1, BS:EN934-2:1998, ASTM C1017 as Type 1 and Type 2.

### USES & ADVANTAGES

**Conmix P4R** is used to produce workable and dense concrete in, for example, dams, tunnels, runways, canals, reservoirs, ports, and marine structures etc. It is very effective in R.M.C. applications.

#### Advantages Include:-

- Extension of slump in high temperatures.
- Workability improvement to most types of concrete mixes.
- Increased early compressive & flexural strengths.
- A 10-18% water reducing effect can be obtained.
- Reduced water without loss in workability.
- Can be used for pumped concrete.
- Effective in achieving cement economies.
- Extended setting times in high temperatures.
- Improves surface finishes.
- Particularly effective in mixes containing PFA.

### PROPERTIES

<b>Appearance:</b>	Dark brown liquid
<b>Specific Gravity:</b>	1.23 ± 0.02
<b>Air Entrainment:</b>	1 - 2 %
<b>pH Value:</b>	8.0-10.0
<b>Chloride Content:</b>	Nil

#### Compatibility with Cements:

**Conmix P4R** can be used with all types of Portland Cement, concrete containing fly ash, silica fume or G.G.B.F.S. For use with special cements we recommend that you consult Cormix.

#### Compatibility with Other Admixtures:

**Conmix P4R** should not be premixed with other admixtures. The performance of the material may be affected by the presence of other chemicals and we would recommend that Cormix International be consulted in such circumstances.

### METHOD OF USE / APPLICATION

**Conmix P4R** is supplied ready for use, it should be added to concrete mixes during the mixing process at the same time as the water or the aggregates. It should not be added directly to the cement. No extension of normal mixing time is necessary.

### DOSAGE

The performance of **Conmix P4R** 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 compressive strength, setting times, shrinkage etc., when these are of consequence. As a guide to these trials, an addition rate of 0.2-0.6% by weight of cement, is recommended. This rate of addition can be varied to give different results. For advice and assistance with your trials we would recommend that you consult Cormix.

### EFFECTS OF OVER-DOSING

Over-dosing of **Conmix P4R** will cause an extension of initial setting time. If this happens consult Cormix. If intentional or accidental increases above the recommended addition rate are employed, care must be taken to allow for the effect on the stripping of formwork, in such cases, however, provided the concrete is properly cured, the ultimate strength will generally be higher than for normal concrete.

### PACKAGING

**Conmix P4R** is supplied in 200 litre steel drums. Alternatively bulk deliveries can be arranged.

### STORAGE & SHELF LIFE

**Conmix P4R** should be protected from frost. If frozen remix on thawing. Storage under high temperatures causes no adverse effect. The shelf life is a minimum of 12 months in original packaging.

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### HEALTH & SAFETY

**Conmix P4R** is an aqueous solution of materials which present no serious health hazard. However, as with all organic chemicals, normal industrial hygiene procedures should be adhered to and it is recommended that gloves and eye protection be worn when handling. In case of skin or eye contact, thoroughly irrigate with water and seek medical advice for eye contact or if skin irritation persists. In the case of accidental ingestion, wash mouth out with water and seek immediate medical attention.

**Conmix P4R** is non flammable, but if involved in a fire the dry residue could support combustion and give off fumes. In such a case, keep drums cool with water spray and remain upwards from wind to avoid fumes.

In case of spillage, the floor area may become slippery and should be washed thoroughly with cold water to drain. For further information consult Cormix International Limited.

### TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

### QUALITY ASSURANCE

ISO 9001 : 2008 verified by TUV Nord.

### CONTACT DETAILS

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