

# EUNICEM P7

Concrete Plasticizer



### Description

EUNICEM P7 is a high performance, liquid concrete plasticizer or water reducing agent used to improve workability of concrete mixes or to permit effective reductions in the free water content. It is extremely versatile in application and is effective over a wide range of mix designs from low through to high cement contents. A special feature of this product compared to conventional plasticizers such as those based on lignosulphonic acid derivatives, is its ability to increase ultimate compressive strengths, even at constant water: cement ratio. When used as a water reducing agent, both early and ultimate strength development, is markedly improved. EUNICEM P7 can be used to reduce permeability of concrete. EUNICEM P7 functions by adsorbing onto the surface of the cement particles in a concrete mix, resulting in a powerful deflocculating action and hence a more uniform dispersion of cement grains throughout the mix. This in turn leads to a higher degree of lubricity and a consequential increase in workability. EUNICEM P7 is formulated from a carefully selected blend of both synthetic and naturally derived raw materials and is manufactured under controlled conditions to give a consistent product which depending on addition rate conforms to Type A and D materials of ASTM designation C494, and complies with BS 5075, Part 1.

### Advantages

- Superior to conventional lignosulphonic acid derivatives, particularly in relation to water reduction and compressive strength development.
- Can be used to improve workability and simultaneously increase compressive strength.
- Can be used to extend workability and thus the period of time within which the concrete can be

placed and compacted.

- Will increase workability of most types of concrete mix. Harsh mixes, such as those containing crushed rock aggregates, are considerably improved in the plastic and hardened states.
- Permits water reductions in the region of 10%-15% with a corresponding increase in strength, impermeability and durability.
- Can be employed to modify mix designs in order to achieve cement economies.
- Is effective over a wide range of cement contents. Maintains effectiveness even at very low cement contents.

### Typical Properties

Appearance: Dark brown liquid

Specific Gravity: 1.19 at 20°C

Air Entrainment: Increase in air content of concrete mixes is minimal and will rarely exceed 0.5%.

Chloride Content: Nil

Freezing Point: 0°C

Storage life in Manufacturer's Drums: 12 months from date of manufacture.

Storage Life Bulk Storage: 12 months from date of delivery.

### Compatibility

With cements: EUNICEM P7 can be used with all types of Portland, Pozzolanic and Blast Furnace cements. It can also be used with cement containing fly ash and microsilica.

With other admixtures: EUNICEM P7 should not be premixed with other admixtures prior to addition to the mix. The performance of the material may be affected by the presence of other chemicals.

### **Method of Use**

EUNICEM P7 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 mix. No extension of normal mixing time is necessary.

### **Addition Rates Range**

0.16% - 1.5% by weight of cement.

EUNICEM P7 is a versatile, high performance product which gives benefits in a wide variety of applications. As with most products of this type, the magnitude of the effect obtained with EUNICEM P7 is governed, within limits, by the quantity of product used and the specific nature of the concrete under consideration. It is necessary, therefore, to assess performance under site conditions, bearing in mind the particular requirements of the situation, in order to determine the optimum dosage. As a guide to these trials, an addition rate of 160ml-1500ml EUNICEM P7 per 100kg cement is recommended.

### **Effects of Overdosing**

Overdosing of EUNICEM P7 will generally produce a considerable increase in workability and in certain circumstances, a slight increase in air entrainment. This particularly in cold weather, will be accompanied by a retardation of the initial and final set of the cement. In such cases, however, provided the concrete is properly cured, the ultimate strength will generally be higher than for normal concrete. The effects of overdosing will also be exaggerated when sulphate resisting cement is used in place of ordinary Portland cement.

### **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 on request.

### **Health and Safety**

For further information see the EUNICEM P7 Material Safety Data Sheet, or consult our technical department.

### **Packaging**

EUNICEM P7 is supplied in nominal 1000 liter returnable containers. Alternatively, bulk deliveries can be arranged.

### **Storage**

EUNICEM P7 should be stored in sealed conventional containers and protected from the elements.

### **Technical Service**

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

### **Contact Information**

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