EUNITARD P2

Concrete Retarder / Plasticizer-Set Retarder

Product Description

EUNITARD P2 is a liquid plasticizer, or water reducing agent, for concrete with set retarding properties. It is particularly useful in high quality concrete where requirements of density, durability and high strength must be met with adequate workability. The physiochemical action of EUNITARD P2 ensures efficient dispersion of the cement without the introduction of additional air. EUNITARD P2 is formulated from carefully selected raw materials and is manufactured under controlled conditions to give a consistent product. It is based on a hydroxycarboxylic acid derivative and conforms to Type D materials of ASTM designation C 494 and complies with BS 5075: Part 1.

Advantages

• Effective increase in workability can be obtained in certain circumstances with an increase in strength, without mix adjustments.
• High strength mixes, requiring high cement and low water contents and presenting placement problems, can be made workable without loss in density, durability or strength.
• Where controlled rates of initial set are required, EUNITARD P2 can be used to extend setting times without undesirable side effects.
• Use of its retarding action can also be made with special benefits in concrete where high cement contents, high temperatures or excessive heat evolution are involved.
• At the recommended dosage the effect on setting time is slight and will not normally affect stripping times of formwork.
• After initial retardation of set, rapid hardening of the concrete takes place, normally overtaking control concrete within a few hours.
• The retarding action of EUNITARD P2 can be used to obtain continuous concrete pours, thus reducing the number of construction joints. This action can also be used for long hauls of ready mixed concrete, to reduce or eliminate cracking of semi-hardened concrete due to formwork deflections and to allow for vibration of the concrete.
• Many important concrete qualities such as density, compressive, tensile and flexural strength impermeability and durability are improved by the use of EUNITARD P2.

Typical Properties

Appearance: Straw colored liquid
Specific Gravity: 1.15±0.02 at 20°C
Air Entrainment: Nil
Chloride Content: Nil
Freezing Point: <-5°C
Storage Life in Manufacturer's Drums: 12 months from date of manufacture.
Bulk Storage: 12 months from date of delivery.

Compatibility

With cements: EUNITARD P2 can be used with all types of Portland Cement, including Sulphate Resisting Cement and those containing cement replacement materials.
With other admixtures: EUNITARD P2 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 our technical department be consulted in such circumstances.

Method of Use

EUNITARD P2 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.

Addition Rates Range
0.16% - 0.5% by weight of cement. The performance of EUNTARD P2 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 rate of gain of strength and shrinkage, when these are of consequence. As a guide to these trials, it is recommended that in concrete with a relatively low cement content, EUNITARD P2 should be evaluated at 160ml per 100kg cement, whereas in higher strength mixes a dosage level of up to 240ml per 100kg cement may be employed. These rates of addition can be varied to achieve different results, e.g. increase in workability or retardation of set. It should be noted that the retarding actions of EUNITARD P2 is greater in concretes containing Sulphate Resisting Cement than for those containing Ordinary Portland Cement. For advice and assistance with your trials we would recommend that you consult our technical department, whose experience with the variety of aggregates and mix designs can give the best indication of the optimum level of application for EUNITARD P2.

Effects of Overdosing
Overdosing of EUNITARD P2 will generally produce a considerable increase in workability and a retardation of set without any significant increase in air entrainment. In cold weather this retardation will be further increased. If intentional or accidental increases above the recommended addition rate are employed to obtain retardation of set, care must be taken to allow for the effect on the stripping time of formwork and formwork pressures. In such cases, however, provided the concrete is properly cured, the ultimate strength will generally be higher than for normal 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 can be supplied upon request.

Packaging
EUNITARD P2 is supplied in nominal 1000 liter tanks. Alternatively, bulk deliveries can be arranged.

Health and Safety
For further information see the EUNITARD P2 Material Safety Data Sheet, or consult European Concrete Additives.

Storage
EUNITARD P2 should preferably 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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