

PLASTARD 10

Fluidizer and Retarder of Initial Setting Time of Concrete



PLASTARD 10 is a water based solution of purest organic components. PLASTARD 10 increases the workability of concrete and retards the initial settling time of concrete, depending on the dosage used. The fluidifying effect reduces also the water/cement ratio and increases the mechanical resistance of the concrete. It can be used to improve workability without the addition of extra water, or to allow reductions in the free water content in conjunction with high range water reducing agents.

Uses

PLASTARD 10 is recommended to be used in the following type of applications.

- It can be used whenever there is need for a plastic, concrete with good workability for a longer period and for a good quality concrete.
- Where there is a long time passing between the mixing and the casting of the concrete at normal temperatures but when a long time is needed for casting and finishing of the concrete.
- When there is continuous casting and it is important to have structural continuity and to reduce temperature inside the casting.
- With white cement concrete.

Remarks: It is important to foresee good working conditions to minimize the loss of water by evaporation (especially in dry and windy conditions).

The performance of the products depends greatly on the climatic conditions and the cement used. It is advisable to conduct a series of tests with the same ingredients and at the same conditions, in order to establish the amount of retarder required to achieve the desired result. It is also important to provide perfect curing to the concrete, so that a minimum of hydration water will evaporate, certainly in hot and dry/windy conditions.

Benefits

- A water reduction of 5-8% can be achieved using PLASTARD 10 in comparison to unmodified concrete. This results in an increased mechanical resistance, better impermeability, better durability and adhesion to the reinforcement steel, and better resistance against chemical attack.
- With the recommended dosage, it is possible to retard the initial settling time of concrete by 1 to 4 hrs at 30°C.

- After the retardation of the settling, a normal strength development shall follow, achieving strengths which are higher than that for unmodified concrete.
- The product shall, at a equal w/c ratio increase workability of the concrete from a very thixotropic consistency (slump 0-1 cm) to a plastic consistency with a good workability (slump 8-10 cm) the pumpability is much improved.
- The concrete shall have better waterproofing properties.

Standard Compliance

PLASTARD 10 meets the essential requirements according to EN 934-2.

Normative, classification T8 according to CE marking for concrete admixtures. Chloride free, safe for use in pre-stressed and reinforced concrete.

Properties

Appearance	Brown Liquid
Specific Gravity	1.15-1.2 at 27°C
pH	6-8

Instructions for Use

PLASTARD 10 is a ready to use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and the water reduction are higher if the admixture is added to the damp concrete after 50-70% of the mixing water has been added. The addition of PLASTARD 10 to dry aggregate or cement is not recommended.

Dosage

Field trials should be conducted to determine the optimum addition rates to PLASTARD 10. As a guide to these trials, a dosage range of 300 to 800 gm per 100 kg of cement is recommended as a starting point. Because of variations in the concrete materials, job site conditions, and or applications, dosages outside of recommended range may be required. In such cases, contact your local Thermax representative.

Effects of Over-dosage

Over dosage of the product can lead to a more fluid mix, more entrained air, and consequently a serious reduction in mechanical performance, combined with extreme long hardening time. In serious cases the demoulding of concrete can become problematic. It is important that the retarded concrete shall not lose too much water by evaporation during the hardness process.

Compatibility with Cement

PLASTARD 10 can be used with most common types of cement like portland, pozzolanic or blast furnace available on the market.

Compatibility with Admixtures

Especially interesting is the combination with the air-entraining agent XARLON 21: the mutual effect of the very high water decrease (more than 20%) and the reduction of 20-30% of the dosage of the additive, leads to concrete with very high quality and resistance to freeze thaw action. The two products must always be added separately to the mix.

Rate of Hardening

The temperature of the concrete mix and the ambient temperature (forms, earth, reinforcement, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing. One of the functions of PLASTARD 10 admixture is to retard the setting time of concrete. Within the normal dosage range, it will generally extend the working time of concrete containing normal portland cement approximately 1 hour to 4 hours at 30°C compared to plain concrete mix, depending on materials at site and temperatures. trial mixes should be made with site materials & approximating the job site conditions to determine the dosage required.

Health and Safety Instructions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item.

Storage

If kept between 1°C and 35°C, the product can be stored for at least 1 year in its original packaging. The product stays liquid at temperature above 0°C. In case of freezing heat and remix the product.

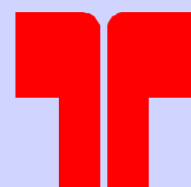
Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

For specific advice consult your local Thermax representative.

Packing

PLASTARD 10 is available in 5, 20ltr and 250kg barrel.

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