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REVOKEM RP4

Powder retarder replacement for Tartaric acid for control of setting times in SLU floor screeds based on Portland cement, High Alumina cements and Calcium Sulfoaluminate (CSA) binder systems

Description

REVOKEM RP4 is novel blend of organic and inorganic compounds specifically designed to provide longer open times and delayed initial set of fast setting bagged mortars based on High Alumina cement (HAC) and Portland cement blended with HAC or Calcium Sulfoaluminate (CSA) cement.

REVOKEM RP4 has been developed by CEMKEM's in-house technical development team to provide fast setting products with greater control of initial and final set times without affect early age strengths. REVOKEM RP4 is more tolerant to cement and temperature variations than traditional Tartaric acid.

REVOKEM RP4 has been designed to work synergistically with the LITHKEM range of set accelerators to provide longer working times combined with high early strengths.

REVOKEM RP4 is a fine, free flowing anti-caked powder which provides homogenous dispersion in bagged cementitious and lime or anhydrite binder systems. The fine particle size allows improved dispersion within the powder and higher reactivity when compared against granular grades.

Action

REVOKEM RP4 is an extremely effective retarder providing controlled prolonged set times without affecting early age strengths.

The synergistic blend of ingredients in REVOKEM RP4 have been designed to slow down the hydration process in the early stages after the powder is mixed with water. REVOKEM RP4 has rapidly solubility properties which allows it to become adsorbed quickly onto the surface of the cement grains, retarding the hydration process by reducing water penetration and slowing down the formation rate of hydration products. Conventional retarders are based on granular organic acids and their salts and it's the granular nature which slows down the solubility rate and makes them less effective as a retarder. The granular particle size also may cause problems with homogenous dispersion within the blended bagged mortars and can lead to inconsistent set times from bag to bag and surface imperfections in flowing products. REVOKEM RP4 is a finely milled to allow proper dispersion and this provides greater consistency in performance.

REVOKEM RP4 also contains anti-cake agents to ensure material doesn't form into hard lumps when opened and remains free-flowing.

Applications

REVOKEM RP4 is a set time retarder for use in fast setting cement-based products such as tile adhesives, tile grouts, self levelling floor screeds and concrete repair systems. Predominantly, it's used in cement-based systems where longer open/adjustment times are required without affecting early age strengths.

Benefits

- Cost effective alternative to Tartaric acid
- Provides retardation of set times in HAC, OPC/HAC and OPC/CSA systems
- Does not affect early age strengths.
- Improved performance in high temperatures
- Fine powder providing improved dispersion in dry mortar
- Reduces surface blemishes and spotting generally caused by granular retarder
- Designed to work synergistically with LITHKEM accelerators

Properties

Nature: Powder

Colour: Off white

Bulk Density (Loose) = ??? g/cm³ ±0.02g/cm³

Bulk Density (Tapped) = ??? g/cm³ ±0.02 g/cm³

Addition rates:

Natural variations in cements, aggregates and temperature all affect the addition level required for a given workability and retardation period. Trials should be carried out to determine optimum dosage levels.

As an initial guide, an addition level of 0.1 – 0.2% on formulation is recommended.

This may have to be adjusted depending on the retardation period required, raw materials and application.

High levels of REVOKEM RP4 will result in increased set retardation and excessive addition levels could permanently prevent hydration.

Compatibility:

REVOKEM RP4 is suitable for use with all cement types and hydraulic binders, included ground granulated blast furnace slag, pulverised fly ash, hydrated lime and gypsum.

Storage:

REVOKEM RP4 should be stored in cool, dry conditions. Unopened bags, if stored correctly, have a minimum shelf life of 12 months.

Handling:

Avoid contact with skin and eyes. Protective goggles and gloves should be worn at all times.

Packaging:

REVOKEM RP4 is supplied in a 25kg sack with inner polyethylene liner.
40 x 25kg bags per pallets

Method of use

REVOKEM RP4 should be added to the blender following addition of sand and cement to ensure homogeneous dispersion.

For any queries, please consult CEMKEM technical department.



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