

FOAMIX

FOAMING AGENT FOR LIGHT WEIGHT CONCRETE

DESCRIPTION

FOAMIX is an efficient low dosage foaming admixture, which is used to produce light weight foam concrete for a variety of insulation and construction applications.

FEATURES

FOAMIX helps to produce a stable aereated mortar, by entrapping air into prepared cement slurry in the shape of discontinued air bubbles, to form a cellular structure throughout the mass. The cellular structure significantly reduces the thermal conductivity and density of concrete, resulting in a lower dead load imposed on the structure. It provides excellent resistance to freeze and thaw.

USES

FOAMIX can be used for the production of low density foamed mortar and concrete,

- As flat roof insulation screeds.
- Insulated floor screeds.
- As a backfill concrete.
- Fabrication of light weight beams, blocks and panels.
- Fire barrier.
- Sound insulation of walls and ceilings.
- As encasement concrete.

ADVANTAGES

- High efficiency even at low dosage.
- Excellent stability in alkaline conditions.
- A 1% aqueous solution creates stiff white foam with 40 to 50 times increase in volume.
- It can be used with all types of light weight aggregates to produce very low density concrete mixes.

TYPICAL PROPERTIES

Appearance:

Translucent, pale brown liquid.

Specific gravity:

About 1.02 at 25 °C

Solubility:

Infinitely soluble in water.

Chloride content:

Nil to BS 5075.

Water absorption:

Absorption of foamed cement containing 60% voids after 3 months immersion in water, shows only 20% increase in volume.

Toxicity:

Non toxic.

Compatibility with cement:

Compatible with Portland cement.

Shelf life:

At least 24 months if stored in tightly closed containers at normal ambient temperature.

DIRECTIONS FOR USE

The optimum dosage and performance of FOAMIX is best assessed after preliminary tests on site using the actual mix design and the job under consideration.

Pre-foaming method:

FOAMIX is a concentrated material and should be diluted with water to prepare a 1% solution. The diluted solution is used to produce pre-foam by passing through a foam generating machine which produces uniform and stable foam having a volume of 40 to 50 times that of the original solution. As an alternative, the water and foaming agent can be fed separately into the foam generator, which mixes it uniformly to produce foam. Add the pre-foam into the cement or sand-cement slurry within a suitable concrete mixer.

Dosage:

The dosage of FOAMIX REQUIRED will vary due to a number of factors including the final mortar density, mixing method and starting materials.

Overdosing:

FOAMIX is an air entraining agent. The compressive strength of any mix will get reduced with increase in the content of FOAMIX, as the level of entrained air will be increased. Overdosing of FOAMIX WILL normally produce an increase in air content, workability together with loss in compressive strength.

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SAFETY PRECAUTIONS

FOAMIX is nontoxic and non-flammable. Splashes to eyes and skin should be washed off at once with water. It is advisable to use goggles and gloves while handling FOAMIX.

PACKAGING

FOAMIX is supplied in 20 liter cans.

Mix ratios

Typical mix batches to produce approximately 1.0 m³ of foamed concrete

| Dry density Kg/m ³ | Sand Kg | Cement KG | Eater liters | Foam liters | Foamix dosages ltr/m ³ | Thermal conductivity w/m- ⁰ K |
|-------------------------------|---------|-----------|--------------|-------------|-----------------------------------|--|
| 400 | ---- | 330 | 165 | 730 | 0.63 | .07 |
| 500 | -- | 420 | 210 | 657 | 0.45 | 0.09 |
| 600 | -- | 500 | 250 | 591 | 0.31 | 0.11 |
| 800 | 370 | 370 | 192 | 530 | 0.33 | 0.17 |
| 1000 | 500 | 410 | 213 | 478 | 0.32 | 0.22 |
| 1200 | 780 | 350 | 182 | 414 | 0.30 | 0.30 |

The recommended water content is for moderate summer conditions. Water content varies with ambient temperature and humidity. The quality of cement and w/c ratio will mainly determine the quality and strength of concrete .proper curing and age of the concrete, affects the compressive strength.

Foamed concrete made by FOAMIX is of light weight and free flowing. It can be placed easily by pumping and does not require compaction or leveling. Foam concrete Resist water and frost provides a high level of sound and thermal insulation. The thermal conductivity of foamed concrete is only 5 to 20% that of dense concrete.

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TECHNICAL SERVICE:

Our Technical Service Department is available at any time to advise you in the correct use of this product or any other Ahlia products.

Note: The information presented herein is based on the best of our knowledge and expertise for which every effort is made to ensure its reliability. Although all the products are subjected to rigid quality tests and are guaranteed against defective materials and manufacture, no specific guarantee can be extended because results depend not only on quality but also on other factors beyond our control.

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