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Building Solutions

CemteQ 850DF data sheet

Sustainable lightweight concrete mix that is light on the environment

Product Description

CemteQ 850DF comprises recycled polystyrene aggregate preblended with the correct ratio of cementitious materials, dried silica sand, admixtures and micro fibres to prevent segregation and ensure a homogenous distribution throughout the concrete and to improve pumpability. The composite product is specially formulated to be mixed with water onsite for the perfect lightweight concrete mix for non-structural lightweight screeds, concrete and infill. CemteQ 850DF is supplied as premixed concrete with a cured density of 850-900kg/m^3 and a compressive strength of 6.5 to 7.0MPa. Conventional concrete mixing, placing and finishing equipment is required.

Composition

CemteQ 850DF consists of a blend of cement, recycled polystyrene, silica sand, admixtures and micro fibres.

Features

Recycled aggregate
30-40% of the weight of concrete
Sustainable construction
Excellent void filler
Lightweight concrete for screeds and surface levelling
Lightweight, insulating concrete for roof decks
Screeds to fall on concrete roofs (min 50mm)
Good thermal insulation properties
Non-combustible
Cavity fill
This product has been designed for non-structural, infill use and is not suitable for high wear areas without a suitable wear-resistant covering.

Advantages

Does not shrink during application or curing
Provides total dimensional stability of the mix over time ensuring screeds do not crack nor swell
Can be pumped over long distances without altering its physical or mechanical characteristics
Comparatively lightweight making it easy to transport and install
pH-controlled and non-corrosive ensuring that the mix does not react with other materials
Meets required insulating performance standards

Applications

Lightweight wall infill
Void filling
Floor screeds
Roof screeds with slopes to fall
Precast concrete

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Mass Per Bag	35kg
Volume Per Bag	50 litres
Yield	20-22 bags of CemteQ 850DF = $1m^3$
Bulk Density	In-situ cured = $850\text{-}900kg/m^3$
Compressive Strength	6.5 - 7.0MPa at 28 days.
Conductivity (W/m·K)	Not tested
Application temperature	$+8^0C$ to $+35^0C$.
Product colour	Grey

Preparation and Mixing

(1) Use a conventional drum mixer, place 2/3 of the clean, potable water into mixer

(2) Add all of the contents of the bag/2. It is not advisable to use a portion of a bag as some settlement of the material may have occurred during transit

(3) Add remaining water. For a higher slump, add more water cautiously as too much water will weaken the mix and will lead to segregation of the polystyrene

(4) Mix for 3-5 minutes to a whipped cream consistency and to activate admixtures. Ensure that mix is discharged and pumped within 30 minutes

(5) Place and float to the desired finish

(6) After completion of the surface finishing, cover with plastic sheeting for at least 7 days to prevent loss of moisture. In cold weather, this period should be extended

Health and Safety

CemteQ lightweight concrete products contain cement and other proprietary additives which are alkaline when mixed with water and may cause skin irritation. Always wear suitable protective clothing, boots, gloves, safety glasses and dust masks. If contact with skin or eyes occurs, wash with water immediately. If irritation continues, seek medical advice. Do not ingest.

Environment

To prevent unnecessary waste, please recycle bags where possible.

Technical Support

Email: info@cemteq.com

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Disclaimer For satisfactory results, these instructions need to be followed carefully. CemteQ has no control over how this product will be stored, handled or used and therefore will not be held responsible for its performance.