

CIKOfoam LWC

Foaming agent for light weight concrete

Description

CIKOfoam LWC is an effective foaming agent to produce light weight concrete used as insulation system in construction industry.

CIKOfoam LWC is a blend of selected surfactant and other specialty additives to generate a stable cellular foam matrix. The generated foam is stable under the alkaline conditions of cement slurry. The cellular structure significantly reduces the thermal conductivity and density of the concrete. A dry density of 850 kg/m³ and higher can be achieved with sand-cement-CIKOfoam LWC mix a dry density between 400-800 kg/m³ can be achieved with cement-CIKOfoam LWC slurry mix.

Properties

- Generates ultra-stable air bubbles that are strong, small and evenly distributed in the concrete.
- Stable foam under alkaline condition of cement slurry.
- Increase in resistance of concrete against frost and de-icing salts.
- Suitable to use with all types of light weight aggregates to produce very low density concrete mix.

Application area

- Foam concrete as thermal insulation on roof slabs.
- Concrete for backfilling.
- Acoustic insulation for walls and ceilings.
- Fire barriers.
- To fabricate light weight beams blocks and panels.

Applicable standards

CIKOfoam LWC complies with ASTM C-796.

Physical properties

Form	Liquid
Colour	Light yellow
Specific Gravity	1.02-1.03 at 25 °C
Chloride Content	Nil to BS 5075
Compatibility	Compatible with all types of cement

Dosage

The dosage of CIKOfoam LWC will vary depending on many factors including mix design, type of foam generator, mortar density etc.

CIKOfoam LWC diluted with water at a ratio of 1:14 by volume shall be used for foam generation using a suitable foam generator. A typical mix is as follows.

Dry density kg/m ³	Sand kg	Cement kg	Water Its	Foam generated with CIKOfoam LWC; Its
400	Nil	330	132	764
600	Nil	500	200	642
800	Nil	670	268	520
900	560	280	175	525
1000	500	400	225	460
1200	750	400	235	355

Note: The above presented data is indicative based on lab trials and optimum dosage and mix ratios should be obtained by conducting actual site trials considering all variables.

Application instructions

CIKOfoam LWC should be diluted with water at a ratio of 1:14 by volume. The diluted solution is used to produce foam by passing through a foam generator which is capable of producing uniform stable foam of 40 to 50 times the original volume of the prepared CIKOfoam LWC solution. The generated foam should be mixed with the cement slurry or cement-sand slurry depending on the density requirement.

Compatibility with other admixtures

CIKOfoam LWC should not be used in conjunction with any other admixtures. Please consult CIKO technical service department for assistance.

Packaging

CIKOfoam LWC is available in 20 litre pails and 200 litre drums.

Shelf Life

CIKOfoam LWC has a minimum shelf life of 12 months if stored in accordance with CIKO instructions.

Storage

CIKOfoam LWC should be stored under enclosed shaded area at temperatures between 5 to 40°C.

Precautions

- The quality of cement and the water-cement ratio will mainly decide the quality and strength of the foam concrete.
- Proper curing and age of pour will play an important role in determining the compressive strength.
- Higher temperatures may cause workability loss and increase in water demand.

Health & safety

CIKOfoam LWC should not come in contact with eyes or be swallowed. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice.

CIKOfoam LWC is water based material and non-flammable.

Refer Material Safety Data Sheet for further details.

Technical Support

For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries