FOAMATE

Foaming Admixture For Lightweight Foam Concrete

FOAMATE is a resin based powerful liquid foaming admixture specifically formulated to produce lightweight foam concrete. FOAMATE is fully compatible with opc, pfa, ggbfs & micro-silica concrete system, it does not contain chlorides in any form.

Foaming process with FOAMATE is extremely economical and viable. FOAMATE foam comprises of millions of minute close air cells which remain stable in the cement/pozzolan/sand system. Its cellular structure is so specifically designed that it enables even distribution of stable air cells in the concrete matrix and allows no bleeding and segregation.

Applications of FOAMATE foam concrete
- floor screeding and leveling
- thermal insulation for roof and wall
- cavity infill, backfilling
- road base
- precast light weight blocks

FOAMATE foam concrete properties
- low thermal conductivity
- high flowability
- high consistency
- no segregation, bleeding free
- light weight, low cost

Technical data

Application	Density (kg/m^3)	Typical Cement : Sand (ratio)	Thermal Conductivity (W/mK)	Compressive Strength (MPa)
Precast, roofing	600 - 1200	1 : 0 to 1 : 2	0.25 - 0.36	0.7 - 3.0
Infill, backfilling	1200 - 1400	1 : 3	0.36 - 0.60	2.0 - 4.5
Screeding	1400 - 1500	1 : 4	0.60 - 0.72	4.0 - 6.0
Others	1500 - 1700	1 : 4	0.72 - 0.85	6.0 - 12.0

- compressive strength increases with the increase of cement content in any concrete mixes.

Method of Use

1. Site Mixing : (Obtain designed mix data and batch weights of each ingredient from your local office of FOAMASTER TECHNOLOGY for your intended application.)
   - Prepare stable foam with FOAMATE at specified concentration with your mixer.
   - Add water to the foam to form emulsion.
   - Steadily and slowly add cement into the emulsion.
     Steadily and slowly add river sand (if any) into the emulsion.
   - Keep mixing until uniformity of the content is observed.
   - Discharge

   Due to mixing efficiency differs from mixer to mixer and type to type, applicator should further adjust/verify FOAMATE dosage in order to accommodate the mix proportions with their specific mixing machines; especially when different brands of cement come into play.

2. Pre-foam FOAMATE thru foaming machine, discharge the foam directly into ready-mixed mortar. Final density of the foamed concrete will be determined by the quantity of foam added. This method is far more predictable in controlling the resultant density of the foamed concrete than method 1. Consult your nearest representatives of FOAMASTER TECHNOLOGY for the information of FOAMATE foam generator.

Engineer's Specification for Foaming Admixture and Application Method

Site Mix

Foam Concrete shall be designed in accordance with a recognised method of mix design such as :

- General Practice for Proportioning of Site Mix Foam Concrete. (FMT 4.88-1993)

The Foaming Admixture shall be FOAMATE as manufactured by FOAMASTER TECHNOLOGY or proved equivalent and shall be used in strict accordance with the manufacturer's recommendations.

Foam produced from FOAMATE solution of 3% strength by mixing paddle shall be at minimum density 80 g/lit. at fresh.

Foamed concrete shall be able to maintain its designed plastic density in the following manners

- within 15 min. or more in the mixer.
- from discharge point to point of placement.
- after placement till hardening.

Ready Mix

Foam Concrete shall be designed in accordance with a recognised method of mix design such as :

- Mix Design of Ready Mixed Foam Concrete by Analytical Method. (FMT 15.21-1993)

The Foaming Admixture shall be FOAMATE as manufactured by FOAMASTER TECHNOLOGY or proved equivalent and shall be used in strict accordance with the manufacturer's recommendations.

Application of foaming admixture shall use pre-foam method. Foam produced from FOAMATE solution of 3% strength by foaming machine shall be at

- density 43±5 g/lit. at fresh.
- output rate not less than 10 lit/sec.

Foamed concrete shall be able to maintain its designed plastic density in the following manners

- within 90 min. or more in the truck mixer under idling revolving speed.
- from discharge point to point of placement.
- after placement till hardening.

FOAMATE 輕質泡混凝土
濕密度 **800kg/m3**
乾密度 **600kg/m3**
運用手提式攪拌器

施工方法

材料：
FOAMATE
水泥
水

工具：
手提式攪拌器（手電鑽型）
大容器（攪拌用，可用一般塑料桶）
量器

配方

產量	水泥 **(**公斤 **kg)**	水 **(**公升 **lit)**	**FOAMATE** **(**公升 **lit)**
每立方米**(m^3)**	**11** 包 **x 45kg**	**310-360**	**4.5-5**
每槽 **91** 公升**(lit)**	**1** 包 **x 45kg**	**28-33**	**0.40-0.45**

註：拌和水用量之浮動視乎不同商標之水泥的需水量

FAMO ATE 用量之浮動視乎不同品種或型號的攪拌器

施工步驟（每槽產量 **9l** 公升 容器和容量最少 **120** 公升）

1. 倒入 **15** 公升水
2. 倒入 **0.4** 公升 **FOAMATE**
3. 攪拌成 **91** 公升穩定泡沫
4. 再倒入 **13** 公升水，繼續攪拌成爲穩定及有質感之泡沫（泡沫成乳漿狀）
5. 保持攪拌，隨後加入 **45** 公斤水泥（加入速度不能太快，否則做成大量水泥瞬間吸水引致泡沫爆破）
6. 保持攪拌直至到達一體之和易性
7. 傾倒灌注