



Rev 0
04/24



FOAMTEK

Non-toxic foaming agent specific for lightweight concretes



DESCRIPTION

FOAMTEK is a product with high foaming power, specifically designed to produce Lightweight Cellular Concrete. FOAMTEK is also a stabilizer in the preparation of Lightweight Concrete with polystyrene expanded beads.

TECHNICAL DATA

| | |
|-----------------------------------|-------------|
| Aspect | Liquid |
| Color | Amber |
| Density 15°C (g/cm ³) | 1.00 ± 0.02 |

LIMITATIONS

It must be used with approved equipment, such as our Compactek.

PRECAUTIONS:

- It must be kept in its original tightly closed container.
- Store in a dry environment.
- It must not be contaminated with oils, gasoline, solvents, detergents, or anything else.
- Avoid exposure to temperatures below 0°C and. Consult the Safety Data Sheet



Fig. 1

CUSTOMS TARIFF

382340000

FOAM PRODUCTION

FOMATEK, mixed with water and air (see section "Dosing"), in a state of "turbulence", by means of a machine (Compactek Foam Generator) Fig.2, produces a white, dense and creamy foam (Fig.1) perfectly miscible with the most common cementitious binders.



Fig. 2

SHEET



TEKNA CHEM S.p.A.

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DOSAGE

FOAMTEK (litres) 2.5
 WATER (litres) 100
 AIR (liters) 1400-1500

CCL (LIGHTWEIGHT CELLULAR CONCRETE) PRODUCTION

The foam produced with FOAMTEK correctly mixed with cement grout or with sand and cement mortar, allows the preparation of a material, called Light Cellular Concrete, in which tiny and countless air bubbles are uniformly distributed.

By varying the ratio of foam, cement and sand, a light cellular concrete of MV varying between 300 kg/m³ and 1800 kg/m³ is obtained, depending on the project specifications.

MIX DESIGN LIGHTWEIGHT AERATED CONCRETE

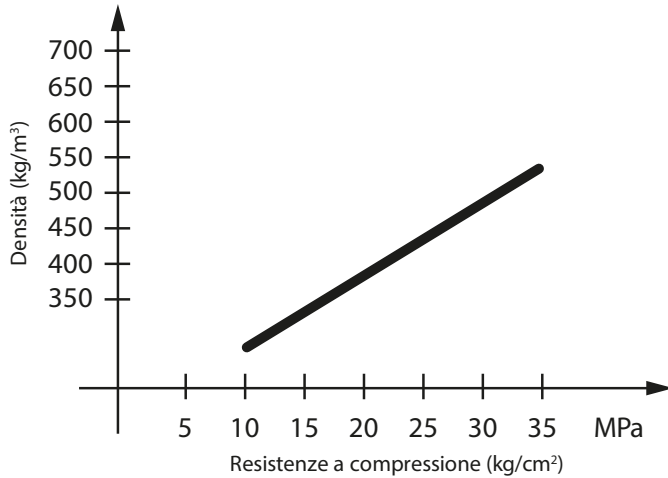
Table 3

| MV Lightweight Concrete Dry | Sand (S) & Cement (C) | | | | | Water | Foamtek | Lightweight MV Wet Concrete |
|--------------------------------------|-----------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|-------------------------|-----------------------------------|
| | S : C 4 : 1 | S : C 3 : 1 | S : C 2 : 1 | S : C 1 : 1 | S : C 0 : 1 | | | |
| Kg/m ³ | Kg/m ³ | Kg/m ³ | Kg/m ³ | Kg/m ³ | Kg/m ³ | Litres / m ³ | Litres / m ³ | Kg/m ³ |
| 1800 | 1400 350 | 1275 425 | | | | 280 – 250 | 0.30 – 0.28 | 1940 – 1930 |
| 1700 | 1320 330 | | | | | 230 | 0.38 | 1835 |
| 1600 | 1250 315 | 155 385 | | | | 250 – 200 | 0.45 – 0.41 | 1745 – 1715 |
| 1500 | | 1080 360 | | | | 250 | 0.49 | 1645 |
| 1400 | | 1020 340 | 880 440 | | | 270 – 305 | 0.56 – 0.51 | 1560 - 1570 |
| 1300 | | | 820 410 | | | 285 | 0.59 | 1465 |
| 1200 | | | 760 380 | | | 265 | 0.67 | 1365 |
| 1100 | | | 690 345 | | | 240 | 0.76 | 1245 |
| 1000 | | | 630 315 | | | 220 | 0.84 | 1145 |
| 900 | | | | 410 410 | | 290 | 0.85 | 1070 |
| 800 | | | | 365 365 | | 260 | 0.94 | 960 |
| 700 | | | | 320 320 | 580 | 230 – 290 | 1.03 – 0.88 | 850 – 915 |
| 650 | | | | | 540 | 270 | 0.93 | 860 |
| 600 | | | | | 495 | 247.5 | 1.00 | 795 |
| 550 | | | | | 455 | 227.5 | 1.05 | 735 |
| 500 | | | | | 415 | 207.5 | 1.11 | 680 |
| 450 | | | | | 375 | 190 | 1.16 | 620 |
| 400 | | | | | 330 | 165 | 1.22 | 555 |
| 350 | | | | | 290 | | 1.28 | 500 |
| 300 | | | | | 250 | | 1.33 | 445 |

The above data can vary greatly depending on the type of cement, sand and water used. They are therefore purely indicative.

CCL COMPRESSIVE STRENGTH

Table 4



CCL THERMAL INSULATION

| MV (kg/m ³) | λ (c.c.t.) W/m ² K |
|-------------------------|-------------------------------|
| 400 | 0.09 |
| 480 | 0.10 |
| 560 | 0.11 |
| 640 | 0.13 |

| MV (kg/m ³) | Conductance (K) in W/m ² K as a function of thickness | | | | |
|-------------------------|--|-------|-------|-------|-------|
| | 5 cm | 10 cm | 15 cm | 20 cm | 25 cm |
| 400 | 1.32 | 0.76 | 0.54 | 0.41 | 0.34 |
| 450 | 1.43 | 0.83 | 0.59 | 0.45 | 0.37 |
| 500 | 1.53 | 0.90 | 0.64 | 0.50 | 0.40 |
| 550 | 1.62 | 0.97 | 0.69 | 0.54 | 0.44 |
| 650 | 1.78 | 1.08 | 0.78 | 0.61 | 0.50 |

MAIN APPLICATIONS

They refer to Lightweight Cellular Concrete by MV 400 - 500 kg/m³ and are mainly made of:

- 1) Slope insulating screeds for flat roofs
- 2) Insulating screeds

CCL FIRE BEHAVIOUR

| Proof | Index |
|----------------------|-------|
| Inflammability | 0 |
| Flame Spread | 0 |
| Flue gas development | 0 |

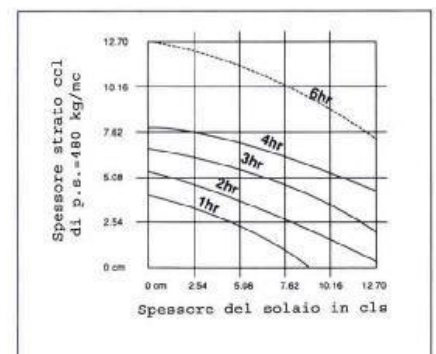
OTHER APPLICATIONS

They refer to Light Cellular Concrete of MV between 300 and 1800 kg/m³:

- filling cavities (exhausted wells, disused cisterns, fractures in the ground, etc.)
- Fire Barriers
- Road rehabilitation
- Landfill Covers



Fire resistance of the cls+ccl package



- Land reclamation
- Foundations on unstable soil
- embankments on low-bearing soils
- Filling for the restoration of land at risk of landslides
- Explosion barriers
- Emergency airport runways

FEATURES

The characteristics of Light Cellular Concrete vary with the specific weight of the same.

MECHANICAL RESISTANCE

For Lightweight Aerated Concrete of 400 kg/m³ see Table 4.

For characteristics related to MV other than 400 kg/m³, ask the TEKNA CHEM technical department.

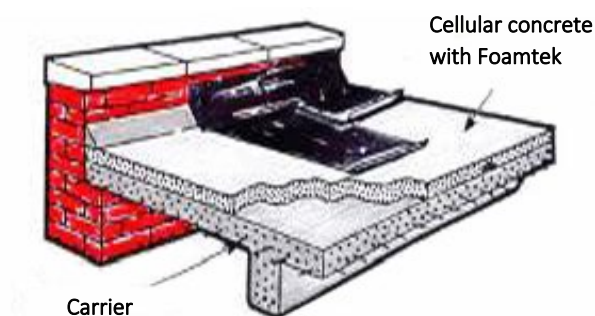
THERMAL INSULATION

For Lightweight Cellular Concrete of MV 400 kg/m³ see Table 5.

For characteristics related to MV other than 400 kg/m³, ask the TEKNA CHEM technical department.

FIRE BEHAVIOR

See Table 6 and Diagram 1.



MECHANICAL EQUIPMENT

Lightweight Aerated Concrete must be produced with equipment approved by TEKNA CHEM SpA:

- Compactek Slim
- Compactek (Fig. 2)

DOUGHS WITH CEMENT ONLY

For the installation of cement-only screeds, i.e. MV between 300 and 650 kg/m³, we recommend the complete Compactek set, consisting of:

- n. 1 Automatic Continuous Foam Generator
- n. 1 Mixer,
- n. 1 Cement Loading Screw,
- n. 1 Pump
- n. 1 Control Unit
- n. 1 Roll x 50 m of rubber hose rinf
- n. 1 Roll x 50 m of plastic pipe rinf.
- Joints, connections and Instruction Manual.



MIXTURES WITH CEMENT AND SAND

For the installation of lightweight screeds (sand-cement), with MV greater than 650 kg/m³, traditional mixers can also be used.

PACKAGING

FOAMTEK is available in the following packages:

- 20 kg jerry cans
- 200 kg drums
- 1000 kg tanks

LEGAL

The information contained in this data sheet, although it represents the most advanced stage of knowledge, does not exempt the user from carrying out accurate preliminary tests in his own conditions of use and operation. We therefore decline any responsibility for improper use of the product.

