BASF
The Chemical Company

RHEOCELL® 10 ME

A liquid admixture for the production of lightweight concrete

Description

RHEOCELL 10 ME is a ready to use liquid foaming agent which is used in conjunction with the RHEOCELL Foam Gun to produce rheoplastic lightweight foam concrete for a variety of insulation and construction applications.
RHEOCELL 10 ME lightweight concrete has a very fine cellular structure and optimum workability for a given water cement ratio. This combination offers lower materials weight per unit volume, and therefore a lower deadload imposed on the structure. Significant reductions in heat conductivity will also be achieved.

Primary uses

As thermal insulation

Plastic density approx. 1000kg/m³
RHEOCELL 10 ME rheoplastic lightweight foam concrete is particularly suitable as a light, insulating, levelling layer on roofs and floors. As it can be pumped easily, it offers significant advantages over other lightweight building materials. Placing by pump can be achieved on sites where access would otherwise be difficult, as with the repair and maintenance of buildings.

As encasement concrete

Plastic density approx. 600kg/m³
Pipes can be encased with RHEOCELL 10 ME rheoplastic lightweight foam concrete and held in place. At some later stage should access be required to these encased services, the foam concrete can easily be removed. If conventional concrete had been used this would be difficult.

As backfill concrete

Plastic density approx. 1350kg/m³
RHEOCELL 10 ME rheoplastic lightweight foam concrete can be placed directly from the truck mixer and requires no compaction, unlike granular fill materials, which need careful compaction.

RHEOCELL 10 ME rheoplastic lightweight foam concrete is particularly suitable for filling old sewer pipes and drains which have been taken out of service. Also underground fuel storage tanks, disused cellars or tunnels. It is important in these applications that the cavity is entirely filled with a material that will not settle or shrink. Through the heat of hydration of the cement, the air enclosed in the air pores of the RHEOCELL 10 ME is heated thereby causing the pores to expand. RHEOCELL 10 ME rheoplastic lightweight foam concrete expands against the walls of the cavity through its own internal pressure without imposing any additional load on the wall.
When specifying densities a margin of ± 50kg/m³ should be allowed for.

Advantages

- Self compacting.
- Simple placing by means of chutes, pipes or pumps.
- No additional transfer equipment.
- Pre-selected strength density values.
- High placing performance.
- Extremely economical.

Packaging

RHEOCELL 10 ME is supplied in 193 litre drums.

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Method

A mortar of specific composition is delivered to the site in a truck mixer. Using the compact RHEOCELL foam generator, (which operates using a 2 bar water source) the required volume of foam is produced in a short time.

With a water pressure of 2 bar, each second,
11 litres of foam are produced: 660 litres of foam per minute are produced.
26 litres of water are consumed per minute.
1 litre of RHEOCELL 10 ME is needed per minute.

The foam dosage can be regulated very simply by adding the foam produced by the foam gun in a given time, to achieve a certain density.

Density of required concrete in kg/m³	Foaming time for 1m³ foam concrete
800	58 seconds
1000	52 seconds
1200	42 seconds
1350	39 seconds
1600	29 seconds

The foam, fed directly into the truck mixer with the mixer turning at maximum speed, is rapidly incorporated into the base mix to produce a homogeneous foam concrete. Foaming is enhanced at higher ambient temperatures. Density can be checked using a standard 1 litre plastic density pot. Should the density be low more foam can be added, too high and additional mixing will displace a certain amount of air.

Typically for 6m³ of RHEOCELL 10 ME foamed concrete, 3.6m³ of sand/cement slurry shall be delivered from the readymix supplier. (BASF can assist with mix designs). To this is added 2.4m³ of foam at the site.

Storage

RHEOCELL 10 ME may be stored for 6 months in properly sealed original containers at a temperature of at least +10°C. Should the temperature drop below 0°C the product should be carefully heated and mixed thoroughly before use.

Safety precautions

RHEOCELL 10 ME is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the Material Safety Data Sheet.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.
BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9000, ISO 14001 and OHSAS 18001.

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