

# RHEOCELL® 15

## Foaming Agent for Flowable Fill and Lightweight Fill Materials (CLSM)

### DESCRIPTION:

RHEOCELL® 15 is a unique synthetic foaming agent formulated specifically for use in producing flowable fill, lightweight fill materials. RHEOCELL 15 foaming agent meets the requirements of ASTM C 869, "Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete."

### RECOMMENDED FOR:

RHEOCELL 15 foaming agent is recommended for use in the following applications:

- Use in backfill applications including sewer trenches, utility trenches, bridge abutments, retaining walls and conduit trenches.
- Use in structural fill applications including foundation subbase, floor slab base and pipe bedding.
- Use in abandoned underground storage tanks and utility company vaults, mines, sewers and manholes, voids under pavements and slabs, highway barriers and precast panels.

### FEATURES/BENEFITS:

The use of RHEOCELL 15 produced mixtures provides:

- Optimum workability—can be produced in either fluid or plastic consistency
- Stable density (unit weight)
- Easy placement by means of chutes or pumps
- Good thermal insulation
- Reduced bleeding and settlement
- Ability to produce flowable fill and lightweight fill mixtures

### USAGE INFORMATION:

RHEOCELL 15 foaming agent is a ready-to-use solution for producing foamed flowable fill and lightweight fill mixtures. **It is not recommended for use in conventional concrete.** Do not dilute or mix RHEOCELL 15 foaming agent with water or any other admixture.

When needed, set-controlling admixtures (i.e., accelerators or retarders) meeting ASTM C 494 requirements may be used to control the rate of set. However, the set-controlling admixture should be added separately to the mixture.

RHEOCELL 15 foaming agent is introduced to the CLSM mix using a RHEOCELL foam gun or similar foam generating equipment.

There is no standard dosage for RHEOCELL 15 foaming agent. The dosage is dependent upon the required density (unit weight) and end use. A trial evaluation should be conducted to determine the foaming time necessary to obtain the required density (unit weight).



### PERFORMANCE DATA:

RHEOCELL 15 foaming agent can be used with a variation of mix designs: straight cement, cement and fly ash and/or sand mixtures.

<u>Flowable Fill (Regular CLSM)</u>	<u>Mass as Batched*</u>
Type I Cement	575 lb (341 kg)
Class C Fly Ash	500 lb (297 kg)
Sand	2,350 lb (1,394 kg)
Water	320 lb (190 kg)
Unfoamed Density (Unit Weight)	138 lb/ft <sup>3</sup> (2,211 kg/m <sup>3</sup> )

	<u>Mix #1</u>	<u>Mix #2</u>
<b>Foam Time</b> , seconds	76	155
<b>Wet Density (Unit Weight)</b>	91 lb/ft <sup>3</sup> (1,458 kg/m <sup>3</sup> )	54 lb/ft <sup>3</sup> (865 kg/m <sup>3</sup> )
<b>Air Content</b>	35%	58%
<b>Compressive Strength @28 days</b>	440 psi (3.0 MPa)	30 psi (0.2 MPa)

<b>Shrinkage @ 28 days</b>	0.047%	0.03%
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<u>(Lightweight fill)–Straight Cement</u>	<u>Mass as Batched</u>
Type I Cement	700 lb (415 kg)
Water	350 lb (208 kg)

<b>Foam Time</b> , seconds	35
<b>Unfoamed Density (Unit Weight)</b>	114 lb/ft <sup>3</sup> (1,826 kg/m <sup>3</sup> )
<b>Density (Unit Weight) After Foaming</b>	42 lb/ft <sup>3</sup> (673 kg/m <sup>3</sup> )
<b>Compressive Strength @28-day</b>	240 psi (1.7 MPa)

**(Lightweight fill)--Cement & Fly Ash**

Type I Cement  
Class C Fly Ash  
Water

**Mass as Batched**

330 lb (196 kg)  
330 lb (196 kg)  
292 lb (173 kg)

**Foam Time, seconds**

37

**Unfoamed Density (Unit Weight)**

102.0 lb/ft<sup>3</sup>  
(1,634 kg/m<sup>3</sup>)

**Density (Unit Weight) After Foaming**

36 lb/ft<sup>3</sup>  
(577 kg/m<sup>3</sup>)

**Compressive Strength @28-day**

127 psi  
(0.9 MPa)

\*Masses shown are as batched prior to foaming. Proportions for the CSLM mixtures will be different when adjusted to a cubic yard (0.8 cubic meter).

NOTE: Data taken from field evaluations.

**TEMPERATURE PRECAUTION:**

RHEOCELL 15 foaming agent can be stored at 34 °F (1 °C) or above. Lower temperatures may cause flocculation (clumping) of the material. If flocculation occurs, allow product to warm at room temperature 70 ° to 73 °F (21 ° to 23 °C) and reconstitute by gentle agitation.

**Do not use pressurized air for agitation.**

**PACKAGING:**

RHEOCELL 15 foaming agent is supplied in 3 gallon (11.4 liter) pails and 55 gallon (208 liter) drums.

**CAUTION:**

Chemical goggles and gloves are recommended when applying RHEOCELL 15 foaming agent.

For additional information on RHEOCELL 15 foaming agent, please contact your local Master Builders representative.

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