

## CELLCRETE 2080 MBS

### *Admixture For Cellular and Pre-Foamed Lightweight Concrete*

#### DESCRIPTION:

**CELLCRETE 2080 MBS** is a concentrated solution of selected surfactants. When used with a Foam Generator and a suitable water supply, **CELLCRETE 2080 MBS** produces a consistent pre-foam that is stable under alkaline conditions and suitable for use in the production of foamed concrete. Foamed concrete is the industry term used for the product produced by the controlled addition of a pre-foam to a cement grout or sand/cement mortar. A range of densities can be produced, typically from 20 to 100 lb/ft<sup>3</sup>. Foamed concrete is lightweight and highly mobile, able to flow for long distances under its own hydraulic head, and is an ideal material for uses such as void filling, roof screeds and trench reinstatement.

#### APPLICATIONS:

Typical applications for foamed concrete include but are not limited to:

- Controlled low strength materials
- Trench filling for permanent, non-sink reinstatement
- Elimination of fire risks, health hazards and control of progressive collapse in areas such as underground fuel tanks, below railway platforms, old mine workings, sinkholes, industrial remediation, nuclear decommissioning and abandoned sewers
- As a lightweight thermal insulating material for roof screeds, suspended floors and basements
- As a semi-structural support in embankments, bridge abutments, tunnels and arches

#### SPECIFICATIONS:

Conforms to ASTM C 869 "Standard Specification For Foaming Agents Used In Making Preformed Foam For Cellular Concrete"

#### ADVANTAGES:

- Produces a consistent, stable pre-foam when used with a Foam Generator
- Easily controlled addition of pre-foam to pre-batched mortar allows close control of finished density
- Expensive blending equipment is not required as mixing can be carried out in the drum of a ready mix truck
- Produces a highly mobile foamed concrete which is easily placed without compaction
- Foamed concrete retains its volume and does not sink during or after hardening

#### DOSAGE:

The dosage of **CELLCRETE 2080 MBS** depends upon the original starting materials and the desired final density of the foamed concrete. Typical dosages are in the range of 16 to 64 ounces per cubic yard of finished foamed concrete over a density range of 20 to 100 lb/ft<sup>3</sup>. The optimum dosage of **CELLCRETE 2080 MBS** to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. Dosages outside the typical range suggested on this data sheet may be used if necessary and suitable to meet particular mix requirements. Contact your local RussTech technical service representative for advice in these cases.

#### TECHNICAL NOTE:

**CELLCRETE 2080 MBS** does not contain calcium chloride or any chloride-based components. It will not promote or contribute to corrosion of reinforcing steel in concrete.

## INSTRUCTIONS FOR USE:

A pre-foam is produced by feeding **CELLCRETE 2080 MBS** through a Foam Generator. Either a water or air foam generator may be used. No pre-dilution is required with water foam generators. Air foam generators require a pre-dilution ration of 1 part **CELLCRETE 2080 MBS** to 15-35 times water. Foam generators should be fitted with a proportional feeder unit set to correctly dispense **CELLCRETE 2080 MBS**.

Only potable water should be used for the pre-foam. Concrete wash water or water from other sources containing high levels of calcium ions should not be used. Refer to the RussTechnical Notes sheets on Foam Generator Operating Procedures and Suitable Mix Designs to generate desired unit weights. Instructions from the RussTechnical Notes should be followed to produce the pre-foam.

## YIELD:

Unless extremely tight control is exercised, the density of a foamed concrete is likely to vary by  $\pm 20 \text{ lb/yd}^3$ . This variability should be considered when estimating the possible volume of material required. Some factors may affect density and yield. Losses will not always occur but the possibility should be considered. Possible causes of loss include:

- Transportation of foamed concrete over long distances, such as when pre-foam is added at a batch plant instead of on-site
- Delays in placing and pumping
- Foamed concrete placed against a dry substrate causing foam collapse due to the suction of water out of the foamed concrete. If this occurs, wet substrate before placing the foamed concrete to reduce the likelihood of the problem.

## COMPATIBILITY:

**CELLCRETE 2080 MBS** is compatible with all types of Portland cement, class C and F fly ash, silica fume, calcium chloride, fibers and approved air entraining, accelerating, retarding, superplasticizing, and water-reducing admixtures. **CELLCRETE 2080 MBS** can be used in white, colored, and architectural concrete. For best results, each admixture must be dispensed separately into the concrete mix.

## LIMITATIONS:

Trials should be made using relevant materials and conditions in order to determine the optimum mix design and admixture dosage to meet specific requirements. Compressive strength is proportional to its density and also to the cement content of the original mortar. A number of factors, such as water to cement ratio and the materials used, can affect the unit weight and compressive strength.

**CELLCRETE 2080 MBS** is not intended for direct addition to the mortar and use in this manner will not produce foamed systems.

**CELLCRETE 2080 MBS** may not be suitable for use with certain sands, in particular coarse sands. Sands containing a significant amount of particles greater than a #16 sieve should be avoided. Pre-foam should not be made using concrete wash water or water from other sources containing high levels of calcium ions.

## STORAGE:

**CELLCRETE 2080 MBS** may freeze at temperatures below 32 F (0 C). Although freezing does not harm **CELLCRETE 2080 MBS**, precautions should be taken to protect it from freezing. If it should happen to freeze, thaw and reconstitute with mechanical agitation. **Do Not Use Pressurized Air For Agitation.**

## PACKAGING:

5-gallon pails, 55-gallon drums, and 275-gallon tote tanks.

## SHELF LIFE:

12 months

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