

## Powdered admixture for concrete in ICF Construction

### Description of Product

RHEOCELL<sup>®</sup> ICF is a ready to use, self-contained admixture for use in Insulating Concrete Formwork (ICF) construction applications where reduced densities (unit weights) and air contents are desired.

### Fields of Application

RHEOCELL<sup>®</sup> ICF is a powdered admixture for concrete to be incorporated in ICF construction. When added to the recommended mix specification produces a concrete that is easily placed and achieves the parameters required for ICF construction.

RHEOCELL<sup>®</sup> ICF can be used in the following applications:

- For "Low Rise ICF", up to 2 storeys, a cement content of 220 to 280 kg/m<sup>3</sup>.
- For Structural ICF Applications higher cement content may be required. Advice on the minimum compressive strength required should be obtained from a Structural Engineer then BASF IBC Admixture Systems Limited can provide advice on the appropriate mix design.

### Features and Benefits

RHEOCELL<sup>®</sup> ICF produces stable air contents of 10 to 20%. Concrete produced with RHEOCELL<sup>®</sup> ICF admixture offers the user the following:

- Reduced water content by as much as 30%
- Increases yield.

- Optimum workability can be produced in either fluid or plastic consistency.
- Increases pumpability.
- No bleeding.
- No segregation.
- Reduced shrinkage.
- Reduced settlement.

### Application Procedure

RHEOCELL<sup>®</sup> ICF is a powdered material packaged in a ready to use soluble bag. RHEOCELL ICF is formulated for use in producing flowable, reduced density mixes. It is not recommended for use in conventional concrete.

RHEOCELL<sup>®</sup> ICF performs best when added to mixes with an initial slump of 20 to 40mm. If necessary, the water content of the mix should be adjusted to obtain a maximum 40 mm initial slump. The unopened RHEOCELL<sup>®</sup> ICF bag is simply thrown into the truck hopper and mixed with the previously batched materials for a minimum of 5 minutes at slow mixing speed. It is not necessary to wash down the hopper after adding RHEOCELL<sup>®</sup> ICF admixture.

RHEOCELL<sup>®</sup> ICF may be added at the jobsite or at the ready-mix plant.

### Note:

Setting times may be extended when high air content producing materials are used. If an earlier load bearing (set) time is desired, an accelerating admixture may be used in the ICF concrete.

### Technical Data/Typical Properties

Appearance	White Powder
Specific gravity @ 20°C	0.7 g/cm <sup>3</sup>
Chloride Content (%)	Less than or equal to 0.10
Alkali Content (%)	Less than or equal to 0.10
Chlorine Content (%)	Less than or equal to 0.10
pH-value	9.0 to 11.0

**Test Results**

This mix design yields approximately 1.0m<sup>3</sup> of concrete for Low Rise ICF construction.

<b>Typical Performance data using Type II cement</b>	
	<b>Mix 1 1.0 m<sup>3</sup> Load</b>
Cement kg/m <sup>3</sup>	280
Sand kg/m <sup>3</sup>	835
10 mm Aggregate kg/m <sup>3</sup>	715
Water kg/m <sup>3</sup>	140
<b>RHEOCELL<sup>®</sup> ICF</b>	<b>500 gram sachet</b>
Typical Air Content	18%
<b>Compressive Strength Nmm<sup>-2</sup></b>	
@ 7 days	8.5
@ 28 days	13.0

**Dosage**

One 500 gram sachet per 1.0m<sup>3</sup> of finished concrete.

**Packaging**

30 sachets per re-sealable waterproof tub.

**Coverage**

RHEOCELL<sup>®</sup> ICF is available in 500 gram sachets. The 500 gram sachets will treat 1.0 m<sup>3</sup>. i.e. one tub will treat 30.0m<sup>3</sup>.

**Storage**

RHEOCELL<sup>®</sup> ICF should be stored in a dry area at temperatures below 54°C.

**Shelf Life**

Up to 12 months if stored according to manufacturer's instructions in unopened original packaging.

**Watchpoints**

Gloves and goggles are recommended when handling RHEOCELL ICF.

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RHEOCELL<sup>®</sup> ICF, BASF IBC Admixture Systems Limited, Version 1

**Health and Safety**

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

**Spillage**

Chemical products can cause damage; clean spillage immediately.

**DISCLAIMER**

"BASF IBC Admixture Systems Limited" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.