

# Arcrete BFS100

Grade 100 GGBFS Mineral Admixture for Concrete

## DESCRIPTION

**Arcrete BFS100** is a Ground granulated blast-furnace slag (GGBFS), sometimes simply referred to as "slag", is a glassy granular material formed when molten blast-furnace slag is rapidly chilled, as by immersion in water. It is a non-metallic product, consisting of silicates and aluminosilicates of calcium and other bases, developed in a molten condition simultaneously with iron in a blast furnace. It is used as a cementitious material in Portland cement concrete. **Arcrete BFS100** can be used as a supplementary cementitious material in concrete to improve a broad range of concrete performance characteristics.

## USES

**Arcrete BFS100** improves the following concrete characteristics:

- Potentially strength development
- Low heat of hydration; reducing the risk of thermal cracking
- Improvement of Sulphate and chloride resistance
- Improvement of workability, pouring and compacting
- Increase of durability (Long life span for construction)

## TYPICAL PROPERTIES

Color	Off White
Silicon Oxide (SiO <sub>2</sub> )	34.8 %
CaO+MgO+SiO <sub>2</sub> (%)	91.6%
SO <sub>3</sub> Content (%)	0.11 ( 4% Max.)
(CaO + MgO)/SiO <sub>2</sub>	1.4
CaO / SiO <sub>2</sub>	1.2
Fineness Retained on 45um sieve	2.1 %
Specific Gravity	2.9
Moisture (%)	0.5
Bulk Density	1.1
Surface Area (Blaine) Cm <sup>2</sup> /g	4057
Air Content of Slag Mortar (%)	7.2 (12 % Max.)

## ADVANTAGES

Concrete produced with **Arcrete BFS100** may require less water to achieve a specified level of workability when compared to concrete produced with Type GP cement only. Concrete produced with **Arcrete BFS100** may also have extended setting times when compared to concrete produced with Type GP cement only. The proportioning of constituent materials in a concrete mix is influenced by many factors. It is recommended that trials be conducted with the available raw materials to ascertain optimum cement contents for specific grades of concrete. For further guidance please refer:

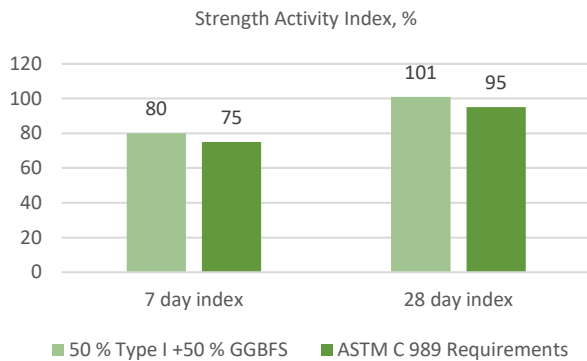
- ASTM C989, "Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars"
- ASTM C595, "Standard Specification for Blended Hydraulic Cements"
- CSA A3001, "Cementitious Materials for Use in Concrete"
- ACI 233, "Slag Cement in Concrete and Mortar"

## CURING

A minimum concrete curing period of seven days is recommended. Concrete should be maintained in a continually moist condition for the curing period wherever practicable. Water sprays, wet sand or moisture retaining techniques such as covering with plastic sheeting or using curing compounds are recommended. Curing should begin as soon as the concrete has been finished or in accordance with manufacturers' instructions where proprietary curing compounds are used.

## STRENGTH ACTIVITY INDEX

Compressive Strength (MPa) 50	50 % Type I +50 % GGBFS	ASTM C 989 Requirements
7 Days Index	80	75
28 Days Index	101	95



## PACKAGING

**Arcrete BFS100** will be in bulk or jumbo bags and generally considered a nuisance dust. Use and handling of GGBFS does not represent a health risk when normal safety rules are observed. Direct contact may cause irritation of eyes. Prolonged contact may cause skin irritation. Inhalation may cause respiratory irritation resulting in coughing and shortness of breath. This product may be harmful if swallowed. Do not get in eyes and avoid prolonged skin contact. Do not take internally. Wash thoroughly with water after handling.

## HEALTH AND SAFETY

For more Safety information you can check Product Material Safety Data Sheet, drop an email to Arkaz Concrete Doctor at [ConcreteDoctor@arkaz.com](mailto:ConcreteDoctor@arkaz.com) or Contact Arkaz Technical Department.

### TECHNICAL SERVICE

The technical service department of Arkaz is available to assist in the correct and best use of our products, these resources and advice are at your disposal entirely without obligation.

Please contact:  
concretedoctor@arkaz.com

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