



# PRODUCT DATA SHEET

## Masonry Grade Granulate

Product Code: GBF 004

### Definition

Blast furnace slag is the non-metallic product consisting essentially of silicates and aluminosilicates of calcium and other bases that is developed in a molten condition simultaneously with iron in a blast furnace.

Granulated blast furnace (GBF) slag is a glassy, granular material.

### Process

Molten slag is passed through high volume water sprays, breaking the slag stream up into small droplets and cooling them so quickly that crystallisation is suppressed.

### Description

Granulate is a coarse sand-like material with a porous, amorphous structure and ranging from white to golden brown in colour.

### Applications

- ◆ Block making
- ◆ Roadbase Stabilisation
- ◆ Water Treatment

### Advantages

- ◆ Cementitious properties
- ◆ Bright colour
- ◆ Low chloride content

### Environmental Value

- ◆ Effective utilisation of an industrial by-product
- ◆ Conserves natural resources and preserves natural landscape
- ◆ Reduces the need for landfill sites
- ◆ Reduces greenhouse gas emissions

### Chemical Properties

Blast furnace slag is composed of silicates and aluminosilicates, but for ease of reporting oxide equivalents are used and fall within the relatively narrow limits given below:

CONSTITUENT	SYMBOL	%
Iron Oxide	FeO	<1.3
Calcium Oxide	CaO	38 – 43
Silicon Dioxide	SiO <sub>2</sub>	32 – 37
Aluminium Oxide	Al <sub>2</sub> O <sub>3</sub>	13 – 16
Magnesium Oxide	MgO	5 – 8
Titanium Dioxide	TiO <sub>2</sub>	<1.5
Manganese Oxide	MnO	<1.0
Hydraulic Index	$\frac{CaO+MgO+Al_2O_3}{SiO_2}$	1.7-1.9
Chloride Ion	Cl	<250ppm

### Typical Physical Properties

Bulk Density (Loose)	0.85-1.05 t/m <sup>3</sup>
Glass Content	>85%
Angle of Repose	Approx. 35°

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