



PRODUCT DATA SHEET

Cement Grade Granulate

Product Code: GBF 006

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

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

Applications

- ◆ Grinding for Cement Replacement.
- ◆ Block making
- ◆ Roadbase Stabilisation
- ◆ Water Treatment

Advantages

- ◆ Cementitious properties
- ◆ Low iron levels
- ◆ 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 ₂	32 – 37
Aluminium Oxide	Al ₂ O ₃	13 – 16
Magnesium Oxide	MgO	5 – 8
Titanium Dioxide	TiO ₂	<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 ³
Glass Content	>85%
Angle of Repose	Approx. 35°

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