

# GROUND GRANULATED BLAST FURNACE SLAG

## PRODUCT DESCRIPTION

Cockburn Cement markets Ground Granulated Blast Furnace Slag (GGBFS). It is often referred to as Neat Milled Slag (NMS).

GGBFS is manufactured by the grinding of dried granulated iron blast furnace slag (a by product of the iron making process). The resultant powder produced from the milling process is light coloured in appearance and has bulk and relative density properties similar to Portland cement.

## SUPPLY

GGBFS is supplied exclusively in bulk from our Kwinana and Munster works.

## SPECIFICATION

GGBFS conforms to AS3582.2 Supplementary Cementitious Materials for use with Portland Cement. Part 2: Slag – Ground granulated iron blast furnace.

## APPLICATIONS

GGBFS combines with lime liberated during the hydrated of Portland cement to form cementitious compounds.

GGBFS is widely used as a cementitious material in premix concrete, mortars, cement based preformed products and grouts.

Depending on the mix design, GGBFS may impart the following benefits into a suitably designed concrete, when compared to mixes containing Type GP cement only:

- Improved workability and finishability.
- Superior durability.
- Reduced heat of hydration.
- Increased resistance to sulfate and chemical attack.
- Higher long-term strength.
- Lighter colour.
- Enhanced resistance to alkali aggregate reaction.

## TYPICAL PROPERTIES

### Chemical Properties

Test	Units	AS 3582.2 Specification	Typical Values
Loss on Ignition	%	3.0 max	0.2
Sulphide Sulphur (S)	%	1.5 max	0.7
Silicon Dioxide	%		33.5
Aluminium Oxide	%	18.0 max	13.0
Iron Oxide (Total)	%	1.5 max	0.8
Calcium Oxide	%		42.9
Magnesium Oxide	%	15.0 max	5.9
Sodium Oxide	%		0.2
Potassium Oxide	%		0.3
Manganese Oxide (MnO)	%	2.0 max	0.1
Sulfur Trioxide	%		1.3
Insoluble Residue	%	2.0 max	0.3

### Physical Properties

Surface Area (m <sup>2</sup> /kg)	Fineness	410
Passing 45 µm sieve (%)	No Requirement	96.4
Specific Gravity	No Requirement	2.9

## HANDLING AND STORAGE

Transportation is in bulk road tankers or in bulk bags. GGBFS can be stored in concrete or steel silos and in bulk bags for at least one year. Protection against ingress of moisture must be observed throughout the handling and storage.

## SAFETY INFORMATION

For safety information refer to the Safety Data Sheet for GGBFS.

## CONTACT POINTS

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