GBFS

Granulated Blast-furnace Slag is a white to grey glassy granular material and a by-product in the production of iron in the blast furnace. Both iron and slag are periodically tapped from the furnace at 1 500 °C.

The slag is rapidly cooled with water to form glassy granular material. Between 15 and 35% of slag is generated per ton of iron produced.

Tables: Material specifications

Component	Percentage (%) minimum	Percentage (%) maximum
Na2O	-	0.5
MgO	-	13.5
Al2O3	10	17.5
SiO2	32	42
S	-	2
K2O	-	2
CaO	30	40
TiO2	-	2.5
MnO	-	1.8
FeO	-	3
GLASS CONTENT	95	-
LOI	-	3

Standard / Ratio	Minimum ratio	Maximum ratio
SANS 50197-1:2000		
SANS 55157-1:2011		
(CaO + MgO) / SiO2	1	
CaO + MgO + SiO2	66.70%	
CaO / SiO2	0.81	1.4
Monthly Average for CaO:SiO2	0.85	

Table: Typical analysis

CaO	SiO2	FeO	MgO	MnO	Al2O3	K2O	S	TiO2	P2O5	Na2O
30.3	35.8	0.447	9.57	1.03	19.2	0.795	0.771	1.02	0.005	0.243