



Crushed Granulated Blast Furnace Slag Technical Data Sheet

1. DECLARED COMPOSITION

	Units	Average Values	Requirement	
			Min.	Max.
Crushed Granulated Blast furnace Slag ¹	%	100	-	-

1 Granulated blast furnace slag is sourced from British Steel Scunthorpe but can also be sourced/imported from various locations and blended to create a consistent feed.

2. CHEMICAL CHARACTERISTICS

The chemical characteristics are determined in accordance with the following laboratory procedures:

HCCL OP 093 - Determination of chemical analysis by XRF.

	Units	Average Values	Requirement	
			Min.	Max.
SiO ₂	%	36.34	35.00	38.00
Al ₂ O ₃	%	11.25	10.50	13.50
CaO	%	39.91	38.00	41.00
MgO	%	8.10	7.00	10.00
MnO	%	0.34	-	1.00
TiO ₂	%	0.73	0.50	1.00
Na ₂ O	%	0.28	-	0.60
K ₂ O	%	0.52	-	1.00
St ¹	%	1.08	1.00	1.10
S ₂₋₂	%	1.06	0.83	1.03
Fe ₂ O ₃	%	0.36	0.20	0.40
C ¹	%	0.04	-	0.10
Redox		-0.097	-0.090	-0.110
Moisture ³	%	0.06	-	0.50

1 HCCL OP 095 – Determination of Total Carbon and Total Sulphur of Cementitious Powders and Calumite by LECO.

2 HCCL OP 086 – Determination of Sulphide Content of Cementitious Powders and Calumite by wet Chemistry.

3 HCCL OP 089 - Determination of moisture content of Cementitious Powders, Granulate, and Calumite.

3. PHYSICAL CHARACTERISTICS

	Test Method	Units	Average Values	Requirement	
				Min.	Max.
Particle Size Distribution	HCCL OP 080 – Determination of Particle size analysis of Calumite	%		See Table 1	
Determination of Heavy Mineral Content	HCCL OP 085 – Determination of Heavy Mineral Content of Calumite	Number of particles		See Table 2	

Particle Size Distribution

Table 1

Sieve Size	Units	Passing %	Average Values	Requirement	
				Min.	Max.
850 µm	%	100 Min.	-	100	-
710 µm	%	99.7 Min.	-	99.7	-
500 µm	%	75 Min	-	75.0	-
300 µm	%	55 Max.	-	-	55
100 µm	%	15 Max	-	-	15

Heavy Mineral Content

Table 2

Sieve Size	Units	Average Values	Requirement	
			Min.	Max.
710 µm	Number	-	-	0.0
630 µm	Number	-	-	0.0
500 µm	Number	-	-	3.0
400 µm	Number	-	-	6.0
Less than 300 µm	Number	-	-	15.0

4. PRODUCTION AND DELIVERY

Calumite is produced from blast furnace slag that has been rapidly quenched to form a homogenous, glassy material. During the Calumite production process, this material is dried, crushed and screened to produce a granular material, of a size consistent with other glass making raw materials.

The slag is chemically tested prior to use allowing us to blend material if necessary, to maintain chemical consistency of the Calumite product.

All finished product is tested for chemical and physical compliance in our internal laboratories.

The Calumite is stored in 12 silos on site. The Calumite is despatched by road to customers with the UK and by sea to overseas customers in lined bags to ensure that all Calumite arrives free from excess moisture.

5. MANAGEMENT SYSTEMS

The plants management system is certified to BS EN ISO 9001: 2015.

6. DECLARATION OF PERFORMANCE

Certificates of analysis are produced weekly and are a composite sample of the weeks production as stated in the laboratory procedure - HCCL OP 119 – Daily and Weekly Calumite Testing.

These are circulated via email to UK customers or issued as hard copy or electronic copy to export customers depending on export customer requirements

The average values given above represent the previous 12 months production and are provided as guidelines only. The minimum and maximum requirements are specification limits.