
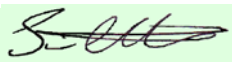


COMBINED CONFORMITY CERTIFICATE			
Regen Ground Granulated Blastfurnace Slag Produced at		PORT TALBOT SF	
Sample Period		February 2016	
Certificate of Conformity of Regen GGBS to EN 15167-1:2006		Certificate of Conformity of Combinations of Regen GGBS and CEM I Portland Cement to Annex A of BS 8500-2:2015	
Spot samples of Regen GGBS were taken and tested to determine conformity to the autocontrol requirements of EN 15167-1:2006 "Ground granulated blastfurnace slag for use in concrete, mortar and grout" following the methods given in that standard. The values reported are mean values for the monthly production period.		Portland Cement Source: LAFARGE : CAULDON PC	
For combinations of Regen GGBS supplied from the above works with the above CEM I Portland cement the permitted proportions conforming to the requirements given in annex A of BS 8500-2:2015 are:			
Results		Product	
EN Limit			
Regen GGBS ONLY			
Fineness m ² /kg	417	min. 275	
Magnesia MgO %	9	max. 18	
Sulfate SO ₃ %	0.18	max 2.5	
Sulfide S ²⁻ %	1.20	max 2.0	
Chloride Content Cl ⁻ %	0.02	max 0.10	
Moisture Content %	0.08	max 1.0	
Alumina Al ₂ O ₃ %	12.5	to 1 dec	
Note: If the value is ≥ 14.5% the '+SR' restriction will be exceeded if the C ₃ A of the CEM I is >10%.			
Alkalis as Na ₂ O equ. (acid soluble)			
Guaranteed Alkali limit %	≤ 1.0		
Certified Average Alkali (Last 25) %	0.80		
Declared Mean : Mean last 25 + (SD last 25 x 1.64) %	0.90		
COMBINATION OF 50% LABORATORY STOCK CEM I PORTLAND CEMENT AND 50% Regen GGBS			
Initial Setting Time min.	195	not > than 2 x PC	
Activity Index %	7 days	65	min. 45
	28 days	88	min. 70
LABORATORY STOCK CEM I PORTLAND CEMENT ONLY			
The stock CEM I Portland cement used in these tests was supplied by Hanson Ribblesdale works and the following results were obtained from that sample			
Initial Setting Time min	115		
Compressive Strength N/mm ²	7 days	48.3	
	28 days	58.3	
The Regen GGBS contained no additional materials other than those permitted. The above results and other tests demonstrate the conformity of the material sold during the month to the requirements of EN 15167-1:2006			
Strength Class		Not Less Than**	Not More Than**
52.5L		6	9
42.5L		6	62
32.5L		55	74
Conformity Evaluation Period (if less than 6 months)	n/a	month(s)	
Combination Designation (Table 1 BS 8500-2:2015)			
CIIS		6	35
CIIIA		36	65
CIIIB		66	80
		** % GGBS	
Results of tests in accordance with BS EN 196-1 for 50% Regen GGBS in combination with 50% CEM I Portland cement shown above			
Age	7 Days	28 Days	
Compressive Strength N/mm ²	31.8	55.8	
The samples of the Regen GGBS and the CEM I Portland cement were bulk average monthly samples for the works specified			
			
1333 – CPD – 00134			

Signed:



S C Chudley National Technical Manager

Issue 2