

### Port Talbot - February 2023

Combinations of Regen GGBS supplied from Hanson Cement in combination with the CEM I Portland Cements and CEM II Portland Limestone Cements (PLC) listed below conform with the requirements of BS 8500-2:2015 over the indicated range of proportions. The compressive strength results are for tests carried out in accordance with BS EN 197-1 with 50% Regen GGBS in combination with the indicated CEM I Portland Cement and 20% Regen GGBS in combination with the indicated CEM II Portland Limestone Cements (PLC)

Portland Cement Source	Compressive Strength N/mm <sup>2</sup>		Regen GGBS Percentage Range					
			42.5L		32.5L		22.5	
	7 day	28 day	Min	Max	Min	Max	Min	Max
ABERTHAW	30.4	54.4	6	74	63	80	80	80
METAPORQUERA PLC	42.5	59.6	1	30	n/a	n/a	n/a	n/a
ABERTHAW PLC	40.9	57.7	1	30	n/a	n/a	n/a	n/a
KETTON	33.9	53.9	6	66	52	80	74	80
CAULDON 52.5N	34.1	56.1	6	73	68	80	80	80
PADESWOOD	32.8	55.4	6	70	51	80	77	80
TUNSTEAD	28.0	52.4	23	67	54	80	74	80
RIBBLESDALE	34.8	55.0	35	69	57	80	77	80
RUGBY	32.4	54.7	6	67	58	80	74	80
LEMONA	31.9	56.4	6	67	55	80	75	80
DUNBAR	23.3	51.3	36	52	48	80	78	80
CHATHAM LAGERDORF	35.9	58.3	6	73	65	80	79	80
PLATIN	32.3	55.7	6	70	51	80	77	80
COOKSTOWN	No	Sample	n/a	n/a	n/a	n/a	n/a	n/a
ALHANDRA 52.5R	27.1	52.7	35	66	55	80	75	80
HOPE	29.5	53.3	6	68	57	80	75	80
LIMERICK	30.1	52.8	6	64	52	80	73	80
MONJOS	31.3	54.2	6	73	60	80	78	80
METAPORQUERA	No	Sample	n/a	n/a	n/a	n/a	n/a	n/a
ST. EGREVE	No	Sample	n/a	n/a	n/a	n/a	n/a	n/a
ALCANAR	31.0	55.1	29	69	57	80	78	80
LAGAN	25.5	56.0	6	71	57	80	78	80
OUTAO	No	Sample	n/a	n/a	n/a	n/a	n/a	n/a
KETTON PLC	42.9	57.1	1	30	n/a	n/a	n/a	n/a
PADESWOOD PLC	42.3	55.3	1	30	n/a	n/a	n/a	n/a
CEMENTOS MOLINS	No	Sample	n/a	n/a	n/a	n/a	n/a	n/a
HOPE PLC	40.4	59.4	1	30	n/a	n/a	n/a	n/a
OGGAZ	32.6	56.4	35	69	59	80	77	80

Combination Designation (Table 1 BS 8500-2)	Percentage Regen GGBS	
	Not Less Than	Not More Than
CIIA (With CEM I)	6	20
CIIA (With PLC)	Depends on limestone content in cement	
CIIB-M	Depends on limestone content in cement	
CIIB-S	21	35
CIIIA	36	65
CIIBB	66	80

The Regen GGBS contained no additional materials others than those permitted according to BS EN 15167-1.

Hanson Cement has used all reasonable care to ensure the information herein contained is accurate but to the extent permitted in law, no liability can be accepted by Hanson Cement for any loss, damage, cost or expense arising from any inaccuracy, whether due to negligence or otherwise.

Signed:



Dr Nina Cardinal, Dipl.Ing., CEng, MiMMM National Technical Manager



1333-CPR-00134