



Certificate of CONFORMITY SUMMARY																										
Aboño			Sample Period			January 2020																				
Summary of All Cements																										
<p>1. Combinations of GGBS supplied from LKAB Minerals in combination with the CEM I Portland cements listed below conform with the requirements of BS 8500-2:2015 over the indicated range of proportions.</p> <p>The compressive strength results are for tests following the procedure given in EN 197-1 with 50% GGBS in combination with the indicated CEM I Portland cement.</p>																										
Portland Cement Source			Compressive Strength N/mm ²		GGBS Percentage Range																					
					52.5 L		42.5 L		32.5 L																	
			7 day	28 day	Min	Max	Min	Max	Min	Max																
Platin	52.5N		27.9	49.9	6	32	6	73	48	80																
Limerick	52.5N		26.0	48.9	6	24	6	62	47	80																
Lägerdorf	52.5N		29.2	52.3	6	19	6	75	67	80																
Tunstead	52.5N		27.2	50.0	6	20	6	67	53	80																
Padeswood	52.5N		30.5	51.0	6	28	6	63	45	78																
Ribblesdale	52.5N		28.5	50.4	6	20	6	62	46	78																
Ketton	52.5N		30.0	52.0	6	35	6	67	47	80																
Rugby	52.5N		26.9	49.6	6	20	6	65	49	80																
Cauldon	52.5N		30.0	51.1	6	31	6	72	54	80																
Hope	52.5N		30.1	50.2	6	15	6	66	53	80																
Cookstown	52.5N		26.4	48.9	6	32	6	62	49	80																
Cimpor	52.5R		32.4	52.8	6	43	6	66	56	80																
Secil	52.5R		29.3	50.5	6	37	6	66	55	80																
<p>These combinations count fully towards the cement content in concrete to BS 8500.</p>																										
<p>2. Combination Designation (Table 1 BS 8500-2:2015)</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Percentage GGBS</th> </tr> <tr> <th>Not Less Than</th> <th>Not More Than</th> </tr> </thead> <tbody> <tr> <td>CIIA-S</td> <td>6</td> <td>20</td> </tr> <tr> <td>CIIB-S</td> <td>21</td> <td>35</td> </tr> <tr> <td>CIIA</td> <td>36</td> <td>65</td> </tr> <tr> <td>CIIB</td> <td>66</td> <td>80</td> </tr> </tbody> </table>											Percentage GGBS		Not Less Than	Not More Than	CIIA-S	6	20	CIIB-S	21	35	CIIA	36	65	CIIB	66	80
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<p>The 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</p>																										

Signed: 
 L Bontoft -Technical Manager GGBS