



| Certificate of CONFORMITY SUMMARY | | | | | | | | | |
|--|---------------|--|-----------------------|-----------------|-----|---------------|-----|--------|-----|
| Aboño | Sample Period | February 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> | | | | | | | | | |
| | | | GGBS Percentage Range | | | | | | |
| Portland Cement Source | | Compressive Strength N/mm ² | | 52.5 L | | 42.5 L | | 32.5 L | |
| | | 7 day | 28 day | Min | Max | Min | Max | Min | Max |
| Platin | 52.5N | 28.7 | 52.0 | 6 | 32 | 6 | 73 | 48 | 80 |
| Limerick | 52.5N | 28.1 | 49.5 | 6 | 23 | 6 | 62 | 47 | 80 |
| Lägerdorf | 52.5N | 33.3 | 49.6 | 6 | 40 | 6 | 73 | 62 | 80 |
| Tunstead | 52.5N | 28.4 | 51.9 | 6 | 19 | 6 | 67 | 51 | 80 |
| Padeswood | 52.5N | 31.7 | 51.5 | 6 | 28 | 6 | 63 | 45 | 78 |
| Ribblesdale | 52.5N | 31.4 | 49.9 | 6 | 19 | 6 | 61 | 46 | 77 |
| Ketton | 52.5N | 32.7 | 52.6 | 6 | 35 | 6 | 68 | 47 | 80 |
| Rugby | 52.5N | 30.3 | 50.8 | 6 | 17 | 6 | 65 | 49 | 80 |
| Cauldon | 52.5N | 30.8 | 52.9 | 6 | 31 | 6 | 72 | 54 | 80 |
| Hope | 52.5N | 33.8 | 52.5 | 6 | 15 | 6 | 66 | 53 | 80 |
| Cookstown | 52.5N | 29.5 | 49.0 | 6 | 30 | 6 | 61 | 48 | 80 |
| Cimpor | 52.5R | 30.8 | 50.3 | 6 | 39 | 6 | 64 | 55 | 78 |
| Secil | 52.5R | 29.9 | 51.9 | 6 | 40 | 6 | 67 | 54 | 80 |
| <p>These combinations count fully towards the cement content in concrete to BS 8500.</p> | | | | | | | | | |
| 2. Combination Designation (Table 1 BS 8500-2:2015) | | | | Percentage GGBS | | | | | |
| | | | | Not Less Than | | Not More Than | | | |
| CIIA-S | | | | 6 | | 20 | | | |
| CIIB-S | | | | 21 | | 35 | | | |
| CIIA | | | | 36 | | 65 | | | |
| CIIB | | | | 66 | | 80 | | | |
| <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