

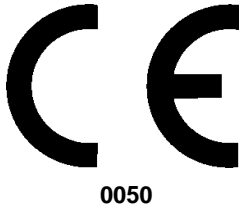
## Cement Data Sheet

Manufactured in: - Lansdown, Killaskillen, Kinnegad, Co. Westmeath, Ireland.

Date: 21/03/2025

### Portland - limestone Cement

I.S EN 197-1:2011	<b>CEM II/A-L 42,5 N</b>	12/09/2005
	Certificate of Conformity No: 0050 - CPR - 0023	
CE	<b>CEM II/A-L 42,5 N</b>	12/09/2005



### Declared Composition (%)

<u>Constituents</u>	<u>Calcium Sulfate</u>
Portland Cement Clinker (K).....	Gypsum.....
Blastfurnace slag (S).....	Other source of Calcium Sulfate.....
Silica fume (D).....	
Natural pozzolana (P).....	
Natural calcined pozzolana (Q).....	
Siliceous fly ash (V).....	<u>Additives</u>
Calcareous fly ash (W).....	Grinding Aid.....
Burnt Shale (T).....	Ferrous Sulphate.....
Limestone (L).....	

**80 - 94**      **3.0 - 6.0**  
**6 - 20**      **< 0.1**  
**< 0.3**

### Compressive Strengths (MPa)

<u>Time</u>	<u>Test Method</u>	<u>Mean Values</u>	<u>Range of Values</u>
2 Day	IS EN 196 - 1	<b>31.9</b>	<b>28.0 - 34.0</b>
7 Day	IS EN 196 - 1	<b>47.4</b>	<b>45.0 - 51.0</b>
28 Day	IS EN 196 - 1	<b>58.1</b>	<b>55.0 - 61.0</b>

### Physical Properties

<u>Property</u>	<u>Test Method</u>	<u>Mean Values</u>	<u>Range of Values</u>
Specific density (Kg/M <sup>3</sup> )	IS EN 196 - 6	<b>3110</b>	<b>3000 - 3200</b>
Bulk density (T/M <sup>3</sup> )	-	-	<b>1.00 - 1.30</b>
Specific surface (M <sup>2</sup> /Kg)	IS EN 196 - 6	<b>413</b>	<b>370 - 440</b>
Initial setting time (min)	IS EN 196 - 3	<b>121</b>	<b>90 - 190</b>
Soundness (mm)	IS EN 196 - 3	<b>0.7</b>	<b>0.0 - 4.0</b>

### Chemical Properties

<u>Property</u>	<u>Test Method</u>	<u>Mean</u>	<u>Range</u>	<u>Property</u>	<u>Test Method</u>	<u>Mean</u>	<u>Range</u>
LOI (%)	IS EN 196 - 2	<b>6.3</b>	<b>4.0 - 8.5</b>	SO <sub>3</sub> (%)	IS EN 196 - 2	<b>2.6</b>	<b>2.0 - 3.5</b>
IR (%)	IS EN 196 - 2	<b>0.3</b>	<b>0.1 - 2.0</b>	K <sub>2</sub> O (%)	IS EN 196 - 2	<b>0.56</b>	<b>0.40 - 0.80</b>
SiO <sub>2</sub> (%)	IS EN 196 - 2	<b>17.6</b>	<b>16.0 - 19.0</b>	Na <sub>2</sub> O (%)	IS EN 196 - 2	<b>0.17</b>	<b>0.15 - 0.35</b>
Al <sub>2</sub> O <sub>3</sub> (%)	IS EN 196 - 2	<b>4.5</b>	<b>4.0 - 5.0</b>	Cl (%)	IS EN 196 - 2	<b>0.07</b>	<b>0.01 - 0.09</b>
Fe <sub>2</sub> O <sub>3</sub> (%)	IS EN 196 - 2	<b>2.6</b>	<b>2.0 - 3.5</b>	FCaO (%)	ISO 29581 - 2	<b>1.3</b>	<b>1.0 - 3.0</b>
CaO (%)	IS EN 196 - 2	<b>67.7</b>	<b>65.5 - 70.0</b>	Na <sub>2</sub> O <sub>eqv</sub> (%)	IS EN 196 - 2	<b>0.54</b>	<b>0.45 - 0.75</b>
MgO (%)	IS EN 196 - 2	<b>1.4</b>	<b>1.0 - 2.0</b>	C <sub>3</sub> A	IS EN 196 - 2	<b>7.5</b>	<b>6.0 - 9.5</b>
Cr(VI) (ppm)	IS EN 196 - 10	<b>0.4</b>	<b>0.0 - 2.0</b>				