

*Chemical composition and physical properties of cement - CEM I 42.5N*

# CEM I 42.5N

<u>Chemical Composition</u>	<b>Unit</b>	<b>Results</b>	Requirements of BS EN 197-1 / 2011
SiO <sub>2</sub>	%	20.67	
Al <sub>2</sub> O <sub>3</sub>	%	4.52	
Fe <sub>2</sub> O <sub>3</sub>	%	3.9	
CaO	%	60.39	
MgO	%	1.23	
SO <sub>3</sub>	%	2.7	≤ 3.50
Na <sub>2</sub> O	%	0.37	
K <sub>2</sub> O	%	0.23	
CL	%	0.04	≤ 0.10
Cr <sup>+6</sup>	ppm	1.89	≤ 2.00
Insoluble residue	%	1.65	≤ 5.0
Loss on ignition	%	3.71	≤ 5.0
Free Lime	%	0.76	
<u>Physical Properties</u>			
Fineness, specific surface (Blaine)	cm <sup>2</sup> /g	3308	
Expansion	mm	0.5	≤ 10
<u>Compressive Strength</u>			
2 Days	MPa	20	≥ 10
28 Days	MPa	46.35	≥ 42.5 and equal or less than 62.50
Initial Setting Time	Minutes	195	≥ 60
Final Setting Time	Minutes	245	