



CEMENT PRODUCTS - CEM I 42.5R BULK CEMENT

A Portland cement product manufactured in accordance with, and certified to BS EN 197-1: 2011. This product complies with the requirements for CE marking (Certificate of Conformity No. 050 – CPD – 0019) and operates a Factory Production Control system to attestation level 1+. This product conforms to the European Directive 2003/53/EC which stipulates that a cement may not be placed on the market if it contains more than 2ppm soluble Chromium VI. Ferrous Sulphate is used to control the level of Chromium VI.

The product is marketed as Cement CEM I 42.5R.

Physical Properties

Property	Requirement	Range
Surface Area (m ² /Kg)	-	370 - 420
Apparent Particle Density (Kg/m ³)	-	3000 - 3200
Initial Setting Time (mins)	≥ 60 mins	135 - 185
Soundness (mm)	≤ 10 mm	0 - 2.0

Compressive Strength N/mm²

2 day	≥ 10.0	28.0 - 32.0
7 day		43.0 - 48.0
28 day	≥42.5	57.0 - 62.0

Chemical Properties

Element (oxide of)	Symbol	Unit	Requirement	Range
Silica	SiO ₂	%		18.0 - 24.0
Aluminium	Al ₂ O ₃	%		4.0 - 7.0
Iron	Fe ₂ O ₃	%		2.5 - 3.5
Calcium	CaO	%		60.0 - 65.0
Magnesium	MgO	%		1.5 - 3.5
Sulphur	SO ₃	%	< 3.5	2.5 - 2.7
Chloride	Cl	%	< 0.10	0.01 - 0.08

Other Properties

Loss on Ignition (%)		%		1.0 - 3.0
Insoluble Residue (%)		%		0 - 5
Alkali's	Na ₂ eq	%		0.4 - 0.65