

PORTLAND CEMENT CLINKER Ref #16 TYPICAL PROPERTIES

Chemical Properties	Unit	Test Results	Typical Range
Silicon Dioxide (SiO ₂)	%	20,97	-
Aluminium Oxide (Al ₂ O ₃)	%	5,33	-
Ferric Oxide (Fe ₂ O ₃)	%	3,86	-
Calcium Oxide (CaO)	%	65,32	-
Potassium Oxide (K ₂ O)	%	0,61	-
Sodium Oxide (Na ₂ O)	%	0,18	-
Magnesium Oxide (MgO)	%	1,23	1,0 - 2,0
Sulfur Trioxide (SO ₃)	%	1,42	0,60 - 1,80
Total Alkalies	%	0,58	0,45 - 0,75
Free Lime (F.CaO)	%	1,56	1,0 - 1,8
Loss on Ignition (LOI)	%	0,22	0,1 - 0,4
Lime Saturation Factor (LSF)	%	96,74	94 - 98
Insoluble Residue (IR)	%	0,23	0,2 - 0,7
Litre Weight	%	1184	1100 - 1300
Chloride (Cl)	%	0,01	0,00 - 0,08
Tricalcium Silicate (C ₃ S)	%	58,83	55,0 - 62,0
Dicalcium Silicate (C ₂ S)	%	15,84	12,0 - 18,0
Tricalcium Aluminate (C ₃ A)	%	7,59	6,0 - 10,0
Tetra Calcium Aluminoferrite (C ₄ AF)	%	11,74	9,0 - 13,0

Cement Clinker suitable for the production of Ordinary Portland Cement conforming to BS EN 197-1 (Strength Class 42.5N) or ASTM C 150

Formulas:

$$C3S = 4,071*(CaO - F.CaO) - 7,602*SiO_2 - 6,718*Al_2O_3 - 1,43*Fe_2O_3$$