

113.2 - Portland Cement Clinkers (solid form)

These SRMs provide certified values for the abundance of major phases in cement clinkers, i.e., the percentages of alite (C_3S), belite (C_2S), aluminate (C_3A), and ferrite ($C_2(A,F)$). NOTE: In cement chemist notation, C=CaO, S=SiO₂, A=Al₂O₃ and F=Fe₂O₃.

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

	2686b	2687a	2688
Description >>	Portland Cement Clinker	Portland Cement Clinker	Portland Cement Clinker
Unit Size >>	50 g	5 vials x 8 g	3 vials x 10 g

Component (mass fraction, in %)			
Alite (C_3S)	64.82	57.88	64.95
Alkali Sulfates			
Aluminate (C_3A)	3.76	9.56	4.99
Aluminum oxide	(4.18)	(5.470)	(4.90)
Aphthitalite		(0.16)	
Arcanite	(0.20)	(0.68)	
Belite (C_2S)	16.68	24.70	17.45
Calcium oxide	(63.97)	(66.172)	(66.50)
Chlorine	(0.0019)		
Ferrite (C_2AF)	10.42	6.27	12.20
Free Lime (CaO)	(0.53)	(0.51)	(0.2)
Iron oxide	(3.72)	(2.403)	(4.07)
Loss on Ignition at 1000 °C		(0.49)	(0.21)
Magnesium oxide	(4.37)	(1.035)	(0.98)
Manganese trioxide		(0.031)	(0.03)
Periclase	3.31	(0.25)	
Phosphorus pentoxide		(0.524)	(0.08)
Potassium oxide	(0.45)	(0.702)	(0.35)
Silicon dioxide	(21.33)	(22.07)	(22.68)
Sodium oxide	(0.24)	(0.103)	(0.11)
Strontium oxide		(0.090)	(0.13)
Sulfur trioxide	(0.04)	(0.695)	(0.31)
Titanium dioxide	(0.23)	(0.246)	(0.24)
Zinc oxide		(0.028)	

- Certified values are normal font.
- Non-certified and reference values are italicized.
- Values of potential interest and information values are within parentheses.