



جدول ضرائب انبساط حرارتی

Oxide	Coefficients based on weight fraction of oxide (Appen based on mol fraction)				
	Winkelman and Schott [1]	Appen [2]	Lederova et al. [3]	English and Turner [4]	Hall [5]
SiO ₂	2.67	0.5...3.8 ^a	0 ^b	0.5	1.4
B ₂ O ₃	0.33	-5.0...0.0 ^c	/	-6.53	2
P ₂ O ₅	6.67	14	/	/	/
Al ₂ O ₃	16.67	-3	1.685	1.4	5
Li ₂ O	6.67	27	/	/	/
Na ₂ O	33.33	39.5 (41) ^d	32.172	41.6	38
K ₂ O	28.33	46.5 (49)	38.068	39	30
BeO	/	4.5	/	/	/
MgO	0.33	6	3.059	4.5	2
CaO	16.67	13	11.68	16.3	15
SrO	/	16	/	/	/
BaO	10	20	5.375	14	12
Fe ₂ O ₃	13.33	5.5 ^g	/	/	/
ZnO	6	5	/	7	10
PbO	13	13...19 ^e	/	10.6	7.5
TiO ₂	13.67	-1.5...3.0 ^f	/	/	/
As ₂ O ₃	6.67	/	/	/	/
ZrO ₂	/	-6	/	/	/
Sb ₂ O ₅	12	7.5	/	/	/
P ₂ O ₅	6.67	14	/	/	/
SnO ₂	6.67	-4.5	/	/	/
Cr ₂ O ₃	17	/	/	/	/
MnO	7.33	10.5 ^g	/	/	/
NiO	/	5	/	/	/
CoO	14.67	5	/	/	/
CuO	7.33	3	/	/	/
CdO	/	11.5	/	/	/
Ga ₂ O ₃	/	-2	/	/	/
Applicable temperature range in °C					
/	20-100	20-400	20-300	25-90	25-T _g