

## KORRATH

### High Temperature Corundum Bricks

**KORRATH** grades are corundum, tabular alumina, mullite and zirconia based with high density, high purity, low porosity, and good to excellent thermal shock resistance.

**KORRATH** is available in standard brick sizes (straights, arches, and wedges) as well as custom plates and shapes.



Properties	Units	C 80	C 85	C 902 HT	C 904	C 91	C 972Zr	C 99
<b>Density</b>	lbs/ft <sup>3</sup>	178	178	187	184	184	206	196
	(g/cm <sup>3</sup> )	(2.85)	(2.85)	(3.00)	(2.95)	(2.95)	(3.30)	(3.15)
<b>Apparent Porosity</b>	%	< 17	19	16	20	17.5	16.5	16
<b>Cold Crushing Strength</b>	Psi	10,100	16,600	11,500	10,100	7800	8700	13,000
	MPa	70	115	80	70	54	60	90
<b>Creep, Load 0.2Mpa</b> (28.4Psi) Temperature 1500°C (2732°F)	e25[%]	0.09	0.01	0.25	0.98	1.07	NA	1.03
	≤25-15[%]	0.001	0.001	NA	0.02	0.038	NA	0.029
<b>Thermal Shock Resistance</b> DIN 51068 Part 1	Cycles	> 100	45	110	> 120	60	50	17
<b>Elevated Temperature Flexural Strength</b>	Psi							
	At 1000°C (1832°F)		2900			1260		2500
	At 1200°C (2192°F)		2900	1875	1090	750	1450	2320
	At 1400°C (2552°F)		2030	720	800	330	1160	1160
	At 1500°C (2732°F)	200	1740	575	435	460	1230	580
<b>Chemical Analysis</b>	%							
	Al <sub>2</sub> O <sub>3</sub>	84.6	> 88	> 90	> 81	> 91	> 96	> 99.5
	SiO <sub>2</sub>	14.2	< 11	< 9.5	< 7	< 8	< 0.25	0.1
	ZrO <sub>2</sub>	-	-	-	> 11	-	2.9	-
	Fe <sub>2</sub> O <sub>3</sub>	0.2	< 0.2	0.1	< 0.2	< 0.2	< 0.1	< 0.1
	TiO <sub>2</sub>	0.2	< 0.1	0.1		0.15		0.02
	CaO + MgO	0.1	0.2	0.1		0.2		0.04
Na <sub>2</sub> O + K <sub>2</sub> O	< 0.2	< 0.2	< 0.2		< 0.2		< 0.2	

*The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.*