



## Mechanical and physical properties

Development of natural stone educational and research environment in East Finland  
2007

		Producer	Finska
		Stone	Balmoral Red coarse grained
Standard	Test		
EN 13755	Water absorption (%) mean value Standard deviation (%)		0,12 0
EN 1936	Apparent Density (kg/m <sup>3</sup> ) mean value density from ... To ... (kg/m <sup>3</sup> ) Standard deviation(kg/m <sup>3</sup> )		2640 2640 to 2640 0
EN 1936	Open porosity (%) mean value standard deviation (%)		0,38 0,01
EN 12372	Flexural strength (MPa) mean value Standard deviation(MPa) Min exp value(MPa)		9,5 0,8 7,9
EN 12371	Flexural strength after frost (MPa) mean value Change in mean flexural strength after 48 cycles (%) Standard deviation(MPa) Min exp value(MPa)		9,5 0,0 0,9 7,7
EN 1926	Compression strength (MPa) mean value Standard deviation(MPa) Min exp value(MPa)		184 19,2 145
EN 12371	Compression strength after frost (MPa) mean value Standard deviation(MPa) Min exp value(MPa)		210 9,1 190
EN 1925	Water absorption by Capillarity C (g/m <sup>2</sup> s <sup>0,5</sup> ) mean value Standard deviation(g/m <sup>2</sup> s <sup>0,5</sup> )		0,34 0,067
EN 14231 and CE standards of reference	Skid resistance - dry polished mean value Skid resistance - wet polished mean value Skid resistance - dry honed mean value Skid resistance - wet honed mean value		49,5 12,8 51,6 35,3
EN 14157 and CE standards of reference	Abrasion resistance (mm) mean value		17
EN 13364	Resistance at the anchoring system Mean breaking Load(N) Min exp value (N) Standard deviation (N) d1(mm) bA(mm)		2100 1650 250 9,8 40,2
EN 14066	Resistance to Thermal shock visual changes max Mass change (%) max res. Freq. change (%)		no 0,04 5,1
EN 1925	Water absorption by Capillarity C (g/m <sup>2</sup> s <sup>0,5</sup> ) parallel mean value Standard deviation		no directions
EN 12524	water vapour resistance factor $\mu$ dry water vapour resistance factor $\mu$ wet		10000 10000

Tests performed by GTK in Stone Pole Oy laboratory facilities, Juuka Finland

  
Hannu Luodes  
Project manager  
hannu.luodes@gtk.fi

  
Nike Luodes  
Research scientist

