

**Quality parameters of loamy raw material from "Pałęgi" deposit
(according to geological documentation)**

Macroscopic description	clays and loamy mudstones of dark red-brown colour, with yellow and willow-green inserts
Stratigraphy	lower trias (middle mottled sandstone)
Granulometric composition *	
>63µm (0.063 mm)	4.2 - 14.8%, most often 6 - 10%
>20µm (0.02 mm)	15.5 - 27.0%, most often 17 - 20%
2 - 20µm (0.002-0.02 mm)	35.4 - 48.3%, most often 40 - 42%
< 2µm (0.002 mm)	34.2 - 41.9%, most often 38 - 40%
Mineral composition	
Loamy minerals easily fusible **	10 - 19%, most often 10 - 14%
illite	23 - 37%, most often 26 - 30%
kaolinite	6 - 12%, most often 8 - 10%
chlorite	2 - 5%
quartz	30 - 45%, most often 32 - 34%
feldspar	traces
hematite	3 - 6%, most often 5 - 6%
calcite + dolomite	minute quantities
Chemical composition	
SiO ₂	61.18 - 69.80%, on average 64.79%
Al ₂ O ₃	13.70 - 18.13%, on average 16.26%
Fe ₂ O ₃	5.77 - 8.42%, on average 7.22%
TiO ₂	0.83 - 0.99%, on average 0.91%
MnO	0.06 - 0.11%, on average 0.09%
MgO	1.78 - 2.82%, on average 2.38%
CaO	0.28 - 0.51%, on average 0.40%
K ₂ O	2.19 - 3.01%, on average 2.68.%
Ignition loss (105 - 1000°C)	4.18 - 5.37%, on average 4.81%
Technological parameters	

Natural humidity	maximum 14 %
Make-up water	18.02 - 34.41%, on average 26.21%
Drying contraction	5.1 - 8.5%, on average 6.8%
Total contraction (1000°C)	5.8 - 9.9%, on average 7.85%
(1050°C)	5.7 - 13.8%, on average 9.75%
Weight absorbability (1000°C)	6.13 - 11.25%, on average 8.69%
(1050°C)	3.92 - 9.00%, on average 6.46%
Compression strength (1000°C)	5.34 - 22.8MPa, on average 14.07MPa
(1050°C)	14.20 - 33.5MPa, on average 23.85MPa
Contents and harmfulness of marl	0 (tendency to efflorescence appearance)
Tendency to efflorescence appearance	none

Notice Occasional appearance of sandstone bits $O > 50$ mm is admissable

- * Granulometric analysis is carried out using laser analyser
- ** Mixed illite-smectite and chlorite-smectite package