The Sibelco technical data sheet is full of fascinating and useful information. Here is a Guide to help explain some of the information about your clay.

Ateliermasse Rot

Technical Data

Characteristics

Ateliermasse Rot is a stoneware body. It is suitable for p[illegible]tic for[illegible]ing [illegible]thods.
Available as plastic body.

Firing Colour	red		
Recommended Firing Temperature Range	1000	-	1160 °C

1

Technical Data

Unfired

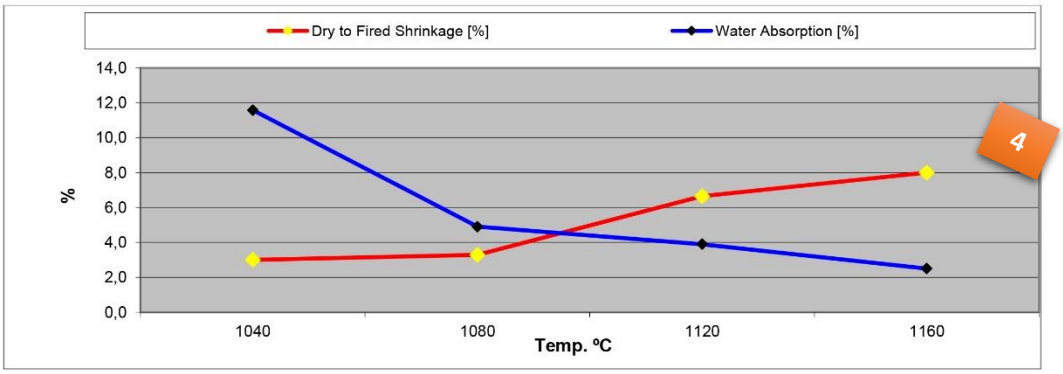
Moisture				19,2%	plastic			
Chemical Analysis	SiO_2	TiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	K_2O	Na_2O
	69,8%	1,30%	19,5%	5,80%	0,40%	0,50%	2,50%	0,20%
Loss of Ignition				6,0%				
Wet to Dry Shrinkage				7,8%	plastic properties			

2

Fired

Specimen Firing Temperature [°C]		1100
Coefficient of Thermal Expansion [x10-6/°C]		
	20 - 400 °C	7,4
	20 - 500 °C	8,0
	20 - 600 °C	9,6
Dry to Fired Shrinkage [%]		6,5
Water Absorption [%]		4,5

3



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1 The complete range of firing which covers bisque to glaze firing.

2 The moisture amount of water in the body of clay per 10kg.
Useful to know if you wanting to make a slip from the clay.

The full breakdown of the raw materials in the clay and their proportions per 100%.
This gives you an idea of the quality of materials used and an idea of how the clay might perform with glazes.

Loss on ignition or LOI is useful to the makers and production potters. This is a value that shows how much is lost after it has been fired to a certain temperature. What a clay body can lose in weight affects glaze recipe ratios of a larger scale and it also gives an idea of how much a clay will gas off and combust, which can be an indicator that a body will be troublesome with glazes, generally a lower number is good.

3 First of the shrinkage values indicates the shrinkage proportion from the wet clay to dry, or as we would say greenware un-fired clay.

These group of values actually explain the expansion of the body *in the kiln*. Although clay will shrink overall when drying out or when fired, whilst in the kiln the clay will expand and grow, this is important to understand because glaze also expands and contracts. For example, if the coefficient of thermal expansion is high this would put the glaze under compression if not compatible.

In terms of the water absorption value, a higher absorption rate is not a problem if your wares are for a mantlepiece or decorative pieces. However, if you are making dinnerware or an outside piece, a lower number will be better.

4 The graph shows the two values and how they relate. Both shrinkage and absorption are important. A clay body is at its strongest when the body has shrunk to it highest value and the porosity is at its lowest value. If you continued to fire the clay beyond the temperature point indicated the clay would expand in size, bloat, distort and become more brittle. If you are a maker of dinnerware, you would be interested in these values as this would indicate when the clay body would be at its strongest. This will give you an indication of how the clay will behave at certain temperatures across the firing range.

All this information shows you how well these bodies by Sibelco have been scientifically tested and accessed for their quality and performance.