



## Tender Specifications Sandstein

Supply of porcelain stoneware floor coverings of Porcelaingres:

### 1. CHARACTERISTICS OF PRODUCTS AND MANUFACTURING PROCESSES

The material must be manufactured by means of a dry-pressing process of the atomized mixture made up of kaolin minerals, feldspars and inert materials with low iron content, and subsequently made mechanically resistant by means of the firing process at a temperature of 1250°C. The material surface may not possess further protecting additives.

### 2. STANDARD CONFORMITY

The material must be certificate after ISO standards in accordance with the valid international defined technical features.

ISO 10545,2 (dimensions)  
ISO 10545,3 (waters absorption)  
ISO 10545,4 (bending strength)  
ISO 10545,6 (resistance against deep abrasion)  
ISO 10545,8 (linear thermal expansion coefficient)  
ISO 10545,9 (resistance to thermal shock)  
ISO 10545,13 (chemical resistance)  
ISO 10545,12 (frost resistance)  
ISO 10545,14 (stain stability)  
DIN 51094 (colour resistance to light)

### 3. PRODUCT DESCRIPTION FOR THE TRADE ENTERPRISE

COLLECTION	"Sandstein"
FORMAT	"60x60" / „60x30" / „30x30" / „10x60"
SURFACE	"natural"
STRENGTH	"10 mm"



#### 4. TECHNICAL FEATURES

Technical features (ISO standard)	Results
<b>Size / Thickness:</b>	60x60 cm (10 mm. $\pm 5\%$ ) 60x30 cm (10 mm. $\pm 5\%$ ) 30x30 cm (10 mm. $\pm 5\%$ )
<b>Water absorption (ISO 10545-3 EN 99):</b>	$E \leq 0,05 \%$
<b>Frost resistance (ISO10545-12 EN 202):</b>	Frost-proof
<b>Deep abrasion resistance (removed volume in cu.mm. – (ISO10545-6 EN102):</b> 140 mm <sup>3</sup>	
<b>Breaking load index:</b>	60 X60 cm (10 mm. Thickness $\pm 5\%$ ) approx. 2100 N 60 X30 cm (10 mm. Thickness $\pm 5\%$ ) approx. 1500 N 30 X30 cm (10 mm. Thickness $\pm 5\%$ ) approx. 2500 N
<b>Bending strength (ISO10545-4 EN 100):</b>	60 X60 cm (Thickness 10 mm.) 42 N/mm <sup>2</sup> -430 Kg/cm <sup>2</sup> 60 X30 cm (Thicknes 10 mm.) 43 N/mm <sup>2</sup> -438 Kg/cm <sup>2</sup> 30 X30 cm (Thickness 10 mm.) 47 N/mm <sup>2</sup> -479 Kg/cm <sup>2</sup>
<b>Chemical resistance (ISO 10545-13 EN 106):</b>	Unaffected
<b>Slip Resistance (DIN 51130 / BCR)</b>	R10 / $\geq 0,40$
<b>Sizes (ISO 10545-2 EN 98):</b>	Length and Width $\pm 0,2\%$ mean value Thickness $\pm 5\%$ mean value Linearity $\pm 0,2\%$ mean value Wedging $\pm 0,2\%$ mean value Warpage $\pm 0,2\%$ mean value
<b>Coefficient of linear thermal expansion (EN 103):</b>	$7 \times 10^{-6} \text{ } ^\circ\text{K}^{-1}$
<b>Resistance to thermal shock (ISO 10545-9 EN 104):</b>	Resistant
<b>Colour resistance to light (DIN 51094):</b>	no change in brightness or colour
<b>Stain resistance after abrasion and abrasion + chemical attach. (ISO10545-14):</b> Class 5 (surface completely restored to the pristine aspect)	