



*Chemical Analysis*

**Ball clays (for Sanitary ware)**

CODE	AC-35	AC-50	U1
<b>Ball Clay</b>			
SiO <sub>2</sub>	68 – 70	65 - 68	69 - 72
Al <sub>2</sub> O <sub>3</sub>	18 – 20	19 - 21	17 - 19
Fe <sub>2</sub> O <sub>3</sub>	< 1.5	< 2	< 1
TiO <sub>2</sub>	< 1.3	< 1.3	≤ 1
Na <sub>2</sub> O	< 0.2	< 0.2	< 0.2
K <sub>2</sub> O	< 0.5	< 0.5	< 0.3
CaO	1.5-2	1.5-2	1.5-2
MgO	< 0.5	< 0.5	< 0.5
L.O.I	5 - 7	6 - 7	5 - 7

**Physical & Thermal properties at 1180°C/6 h**

Strength (kg/cm <sup>2</sup> )	Dried	28 - 35	40-45	27 – 30
	Fired	550 - 600	750	450-500
Fired Shrinkage		9.5 – 10.5	9.5 – 10.5	9-10
% Water Absorption		< 1	0.8-1.2	1-2
Plasticity		30 - 33	30 - 33	28-30
Color		Cream	Cream	Light Cream
Application		Sanitary Ware		
Sizing		< 40 mm, < 10 mm, Powder		
Packing		Big bag, Bulk		
Delivery Place		Tabas – Robot-e Khan		

Updated: 2021.01.20

**\*Samples are tested under company laboratory condition. Values are liable to natural deviations and are not to be cited as guaranteed properties or guaranteed values.**

دارنده گواهی نامه : ISO/IEC 17025: 2017



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Suravajjn Aghigh Mining & Industrial Co

## Raw Material for (Sanitary were)

CODE	ASEM -10			
Type	Kaolin			
	Chemical Analysis			
SiO <sub>2</sub>	45 - 46			
Al <sub>2</sub> O <sub>3</sub>	36 - 37			
Fe <sub>2</sub> O <sub>3</sub>	1.8			
TiO <sub>2</sub>	1.5			
CaO	<0.25			
MgO	0.5			
Na <sub>2</sub> O	<0.7			
K <sub>2</sub> O	0.1			
SO <sub>3</sub>	0.1			
L.O.I	13 - 14			
Mineralogical Analysis	Kaolinite(≥ 92%), Anatase and Quartz			
	Physical Properties			
Drying Strength (kg/cm <sup>2</sup> )	17-19			
	Thermal properties (Dilatometry) $\alpha \times 10^{-7} \text{ } ^\circ\text{C}^{-1}$			
	$\alpha$ 300	$\alpha$ 400	$\alpha$ 500	$\alpha$ 600
At 1156 °C 60	41.60	42.26	42.92	43.59
At 1195 °C 60	42.02	42.57	43.14	43.77
Color	At 1190° C L= 70-75 a= 0.7 b=5.42			
Application	Porcelain bodies- Sanitary ware			
Sizing	0 -12 mm			
Packing	Big bag-Bulk			
Delivery Place	According to customer order			

Updated: 2017

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## Raw Material for (Sanitary were)

CODE	ASEM -20			
Type	Kaolin			
Chemical Analysis				
SiO <sub>2</sub>	44 - 45			
Al <sub>2</sub> O <sub>3</sub>	37 - 38			
Fe <sub>2</sub> O <sub>3</sub>	<0.7			
TiO <sub>2</sub>	1.6			
CaO	<0.3			
MgO	<0.7			
Na <sub>2</sub> O	<0.3			
K <sub>2</sub> O	<0.3			
SO <sub>3</sub>	0.12			
L.O.I	13 - 14			
Mineralogical Analysis	Kaolinite(≥ 94%), Anatase and Quartz			
Physical Properties				
Drying Strength (kg/cm <sup>2</sup> )	17-19			
Thermal properties (Dilatometry) $\alpha \times 10^{-7} \text{ } ^\circ\text{C}^{-1}$				
	$\alpha$ 300	$\alpha$ 400	$\alpha$ 500	$\alpha$ 600
At 1160 °C 50,	42.22	42.59	43.07	43.66
At 1123 °C 33,	40.30	41.14	41.84	--
Color	At 1160° C 55, L= 89 a = 1.8 b = 9.6			
Application	Porcelain and white bodies - Sanitary ware			
Sizing	<40 cm - Powder			
Packing	Big bag-Bulk			
Delivery Place	According to customer order			

Updated: 2017

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