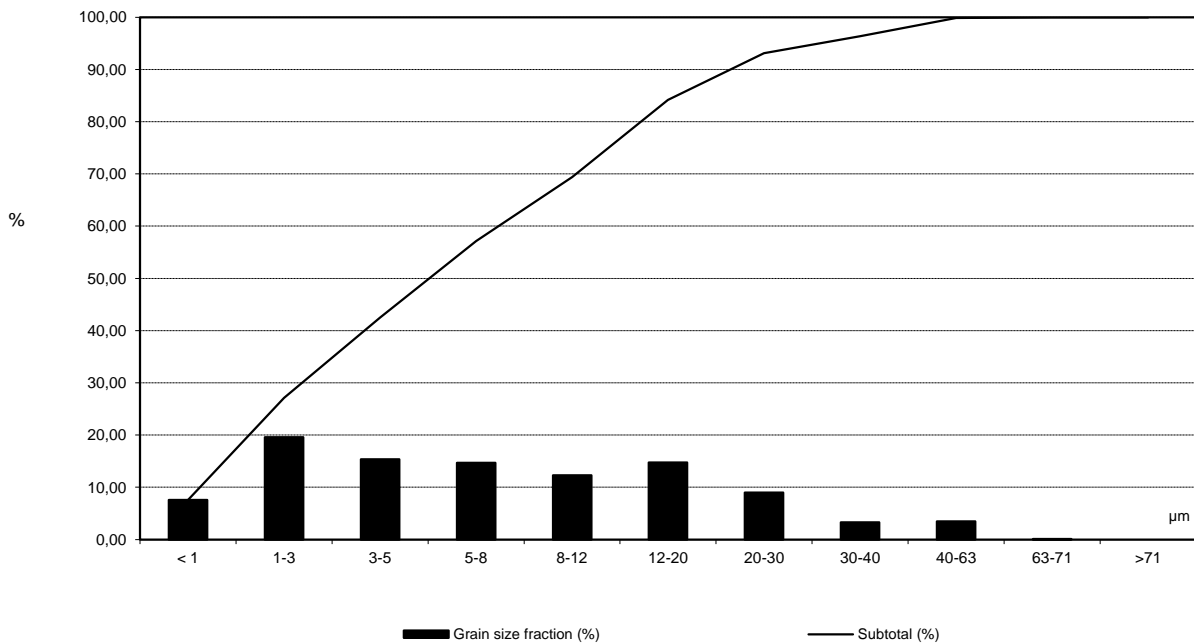


| | | | | |
|--------------------------------|--------------|--------------------------|-------------------|---------------------------------|
| Lab.- N° | 12090 | Kaolin M 20 | month/year | 11/2012 |
| Chemical analysis: | | Mineralogy: | | |
| Constituents | fired % | Mineralgroup | in weight % app. | Determined Mineral |
| SiO ₂ | 73,6 | Kaolinite group | 30,0 | Kaolinite (+Fireclay) |
| Al ₂ O ₃ | 18,8 | | | |
| TiO ₂ | 0,9 | Micaceous minerals | 35,0 | Illite |
| Fe ₂ O ₃ | 1,2 | | | |
| CaO | 0,1 | Montmorillonite minerals | Traces | Smektit + Mixed-layer |
| MgO | 0,9 | | | |
| K ₂ O | 4,2 | Quartz | 32,0 | Quartz |
| Na ₂ O | 0,1 | | | |
| Loss on ignition | 3,2 | Feldspar group | 2,0 | Potassium Feldspar (Microcline) |
| C-total | 0,1 | | | |
| S | 0,1 | Others | 1,0 | Fe-Ti-minerals |

| | | | |
|------------------------|---------------------------------|--------------------------|-----------------------------------|
| Technical data: | | | |
| Humidity: | max. 1% (DIN) | D50: | 6,3µm |
| Density: | 2,7-2,8 g/cm ³ (DIN) | D90: | 26,5µm |
| Tap volume: | 140-170 ml/100g (DIN) | Specific surface: | 12.000cm ² /g (BLAINE) |
| Bulk volume: | 180-230 ml/100g (DIN) | Oil absorption: | 47ml/100g |
| pH-Value: | 6-7% (DIN) | Brightness: | 78 |

Particle size distribution (CILAS 1064 wet)



| | in µm | <1 | 1-3 | 3-5 | 5-8 | 8-12 | 12-20 | 20-30 | 30-40 | 40-63 | 63-71 | >71 |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Grain size fraction (%) | | 7,57 | 19,56 | 15,38 | 14,65 | 12,26 | 14,74 | 8,98 | 3,25 | 3,49 | 0,12 | 0,00 |
| Subtotal (%) | | 7,57 | 27,13 | 42,51 | 57,16 | 69,42 | 84,16 | 93,14 | 96,39 | 99,88 | 100,00 | 100,00 |

* Above technical data are for information purposes only. Our materials are sold according to samples and under our general selling terms.