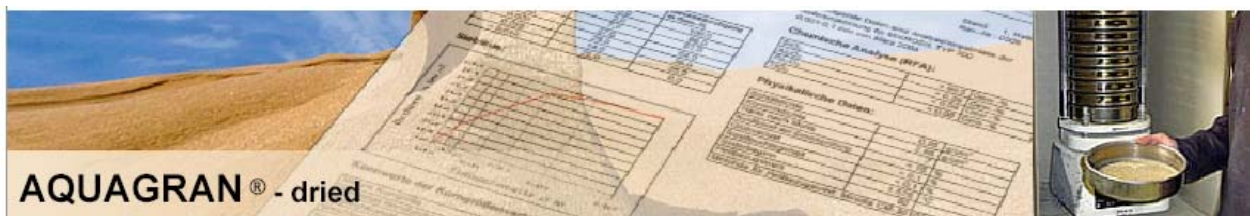




Technical data sheet – Filter gravel



AQUAGRAN® - dried

grain size: 2 - 3.15 mm

Issue: 1st term 2010
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Filter quartz on the basis of EN 12904 and DIN 49 24

The following values are mean values of our permanent production control in the period:
July 2009 - November 2009

The following dates are analysis results of the reference grain size for AQUAGRAN
0.71 - 1.25 mm produced on February 2008

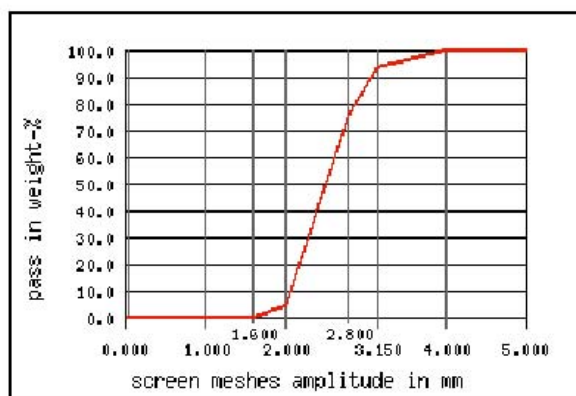
Particle size distribution:

size of verify-sieve: in mm	residuum content: weight %	total pass: weight %
5.000	0.0	100.0
4.000	0.0	100.0
3.150	6.2	93.8
2.800	17.8	76.0
2.000	71.7	4.3
1.600	3.6	0.7
1.000	0.5	0.2
0.063	0.1	0.1
< 0.063	0.1	0.0

Chemical analysis (RFA):

SiO ₂	97	weight %
Al ₂ O ₃	1.62	weight %
Fe ₂ O ₃	0.062	weight %
TiO ₂	0.034	weight %
Na ₂ O	< 0.05	weight %
K ₂ O	0.98	weight %
CaO	< 0.02	weight %
MgO	< 0.05	weight %

Grading curve:



Physical properties:

bulk density, loose	1.6	g/cm ³
particle density dry	2.65	g/cm ³
Mohs hardness	7	
friability coefficient	< 15	%
ignition loss	< 0.2	%
scrap humidity content	< 0.2	%
sinter beginning	1.575	°C

Variables of grain size distribution:

average grain size	2.510	mm
effectively diameter of grain	2.570	mm
uniformity coefficient	1.3	
degree of uniformity	94	weight %
fineness number of grain (AFA)	12	

Chemical analysis (various methods of tests):

antimony	< 0.002	g/g
arsenic	0.005	g/g
lead	< 0.005	g/g
cadmium	< 0.0005	g/g
chromium	< 0.005	g/g
nickel	< 0.005	g/g
mercury	< 0.0002	g/g
selenium	< 0.002	g/g
pH-value	6.6	
acid loss	0.17	%
material of organic origin	colorless	

Please consider that the afore mentioned product dates are statistical values; variations are naturally possible.