碎石、砂砾

行　　业：	Geology / mineralogy, Ceramics / glass industry
进料尺寸：	< 2 cm
最终精度：	< 220 µm
样 品 量：	~ 18 g
研磨建议：	Vibrating Cup Mill PULVERISETTE 9 is suitable for comminution. For each sample and desired grinding set, most suitable speed setting and cup size needs to be determined previously. Setting as recommended will not achieve desired fineness in desired time for some of the possible grinding sets.

VIBRATING CUP MILL PULVERISETTE 9

speed setting: 1400 rpm

100 ml grinding set made of tempered steel

Feed quantity:	100 g of gravel and sand mix
Feed Size:	< 1,5 cm
Grinding time:	20 s
Final fineness:	94 % < 224 µm
Comments:	Test wise, also 100 grams of the sand and gravel mix have been ground for 20 seconds with the 100 ml grinding set made of tempered steel.

After 20 seconds, the grinding has been interrupted and an aliquot of sample has been taken out to check the distribution by sieving with a test sieve of 224 µm. After 20 seconds, already 94 % of sample is passing the test sieve.

Sample and gravel and sand got pre mixed with a small shovel. Afterwards, 100 grams have been filled into the grinding set. About 1/3 of sample was placed between core and ring.

VIBRATING CUP MILL PULVERISETTE 9

speed setting: 1400 rpm

100 ml grinding set made of tempered steel

Feed quantity:	100 g of gravel and sand sample
Feed Size:	< 1,5 cm
Grinding time:	30 s
Final fineness:	99,3 % < 224 µm
Comments:	Instead of 20 seconds as shown in result 4, this time the sample was ground for a total of 30 seconds.
	After 30 seconds, optical properties might be similar to result 4 (in behalf von brightness, coloration). By sieving of an aliquot, now 99,3 % of sample was able to pass the used test sieve.
	Sample is still sticking lightly; longer grinding times are possible to improve grinding result.

Grinding results after 20 seconds and 30 seconds appear not to differ by the optical properties. Both times, sample was sticking lightly to core and ring (easy to brush off). Only by sieving, it was shown that the 30 seconds grinding result is finer.