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373-1

373-1

(74)

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(54) -

3

1a - (SEM) (-methacryloxypropyltrimethoxysilane)

1b -

1c

2 : 100 100 500 가 .
 : (dopant)
 가 12 48

3 :
 가 0.05 0.3Pa · s, 0.8 1.0g/cm³
 100 가 10 1

1 :
 (-methacryloxypropyltrimethoxysilane) ()
 >500) 5 1N HCl 30 , 0.55mol 1.375
 mol (ammonium persulfate, `APS`) 가 (APS/ =2.5 mol/mol) 24
 H₄OH (milling) APS , 3%(v/v) N
 5 가 (Shin Etsu Chemical, =0.1Pa · s, =0.96g/cm³) 100 가 1
 (magnetic stirrer)

1 :
 1a, 1b 1c , 1 - 1 , (S
 EM) . 1a, 1b 1c , 가
 , 1
 (parallel plate type) (ARES, Rheometric Scientific Co.)
 1 20s⁻¹ (shear rate) (shear stress)
 50cm (gap) 0.5mm , (Glassman, Model EL5P8L)
 가 0 3kV/mm . 2 15
 , 3
 3kV/mm
 1.2kPa ,
 4 가 (susp
 ension)
 가

(57)

1.

2.

(-methacryloxypropyltrimethoxysilane), (-methacryloxypropylmethyldiethoxysilane), (-methacryloxypropyltriethoxysilane), (-aminopropyltrimethoxysilane) (-methacryloxypropyltriethoxysilane)

3.

(smectite), (kaolinite) (layered double hydroxide)

4.

100 100 500

5.

6.

가 0.05 - 0.3Pa · s, 0.8 - 1g/cm³

7.

가 0.05 - 0.3Pa · s, 0.8 - 1g/cm³

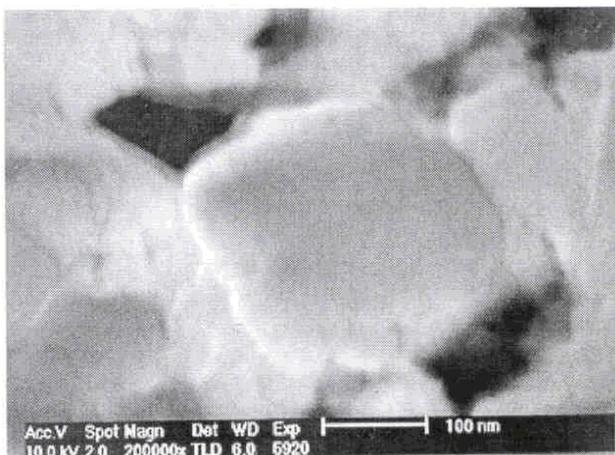
8.

100 가 10 100

9.

100 10 100 가

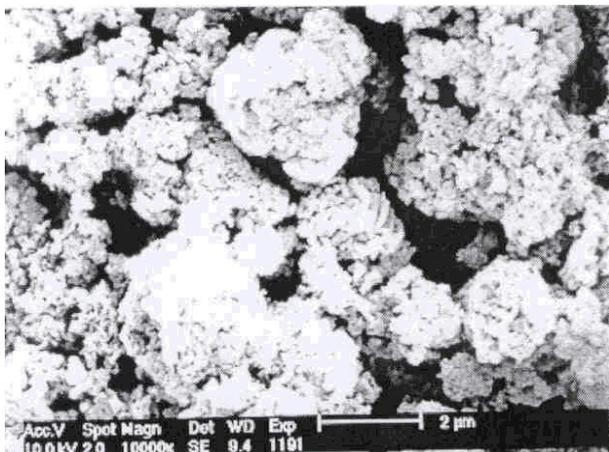
1a



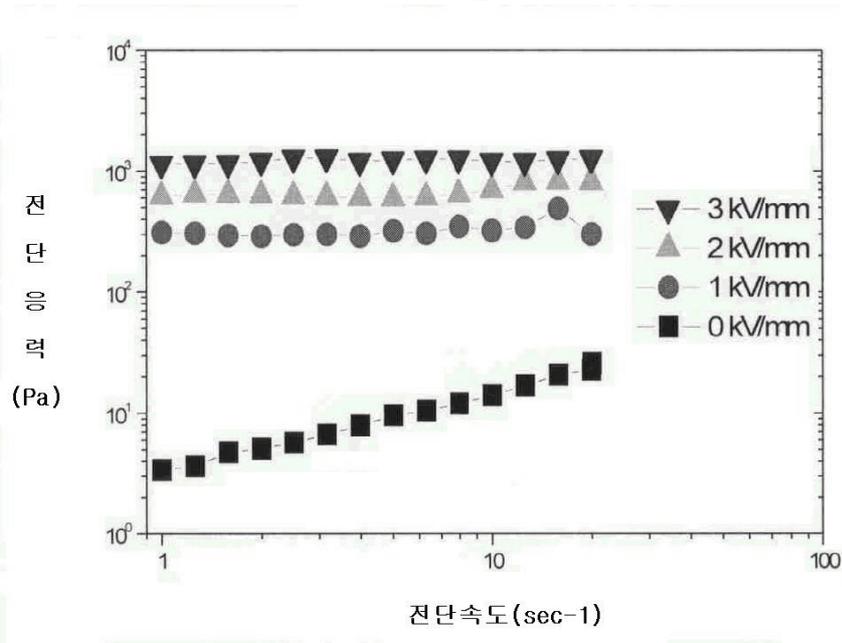
1b



1c



2



3

