

FUJI ASL SiO₂ Sol

Primary particle size (nm)	Viscosity (mPa·s/ 25 °C) adjustable	SiO ₂ concentration (%)	Solvent (wt %)	Organic Resin (%)	Organic Solvent
0.45 – 0.65	1500 – 300,000	80-90	10-20	0	Diethylene Glycol Ethyl Methyl Ether etc...

Fuji ASL SiO₂ sol is the specially made SiO₂ particle (SiO₂ molecule) dispersion sol and the size of individual SiO₂ particle is 0.45 - 0.65 nm. With the cutting edge technology, specially synthesize SiO₂ material.

- (1) Become transparent glass at 150 °C. (SiO₂ solidification occurs 150 °C.)
- (2) Viscosity adjustable (low – high viscosity)
- (3) 100 % inorganic SiO₂ (no organic substance or resin)
- (4) Good compatibility with chemical additive, so that customer can make final coating ink based on their demands.
- (5) Can be applied as inorganic binder for various materials such as
 - (a) Inorganic (organic) pigment
 - (b) Fluorescent pigment
 - (c) Dielectric material
 - (d) TiO₂, ZnO etc...
 - (e) Ceramic
 - (f) Magnetic material
 - (g) Fiber etc...

FUJI PIGMENT Co., Ltd.

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- (6) Light fastness is extremely strong**
- (7) Strong against heat**
- (8) High heat conductance, (high heat emit)**
- (9) Good insulate material, high resistance**
- (10) Can be printed and heated on flexible substrate (flexible even after heat treated)**
 - (a) Plastic (PE, PP, PET etc...)**
 - (b) Metal board (Aluminium, SUS, copper, Iron etc...)**
 - (c) Ceramic, Glass board**
 - (d) Paper**
 - (e) Textile**

- (11) High resistance against solvent, water, acid, base**
- (12) High resistance against humidity**
- (13) Robust material, Film can be as thick as in order of 2-3 mm, still robust film**
- (14) High safety SiO₂ material (no toxin)**
- (15) Organic solvent can be modified as customer needs.**

Please let me know your interest.

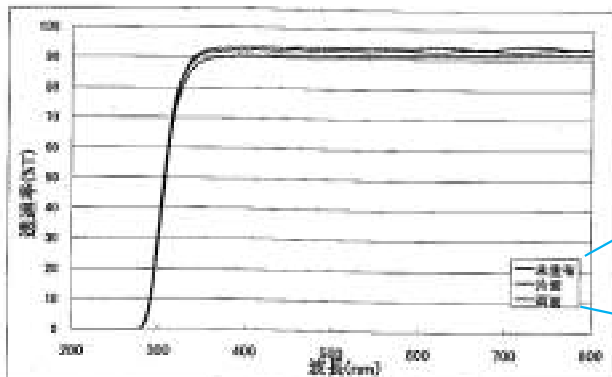
Best regards

Dr. Ryohei Mori

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Transparency change with SiO₂ sol coating

サブナノコート剤塗布によるガラスの透過率の変化



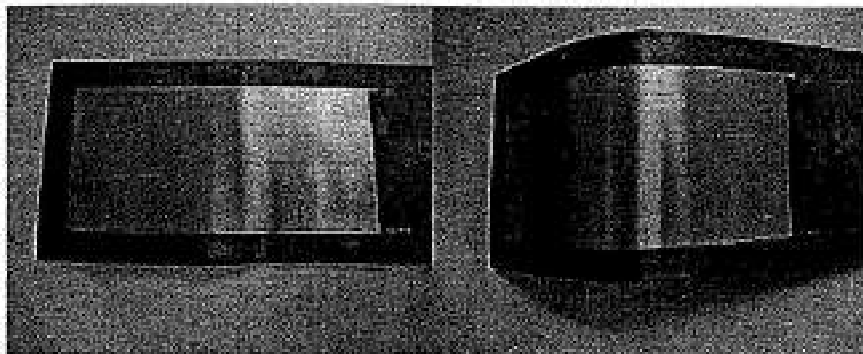
Uncoated
One side coat
Both sides coat

Transparency do not change with SiO₂ coating

耐熱性と屈曲性 (Heat Resistance and flexibility)

Flexibility Experiment (Substrate : Copper)

屈曲性の実験例 (基板; 銅板)



ガスバーナーであぶってから曲げても、被膜は割れたり外れたりしない
Coated SiO₂ film does not break even after heat treated at 700-800 C

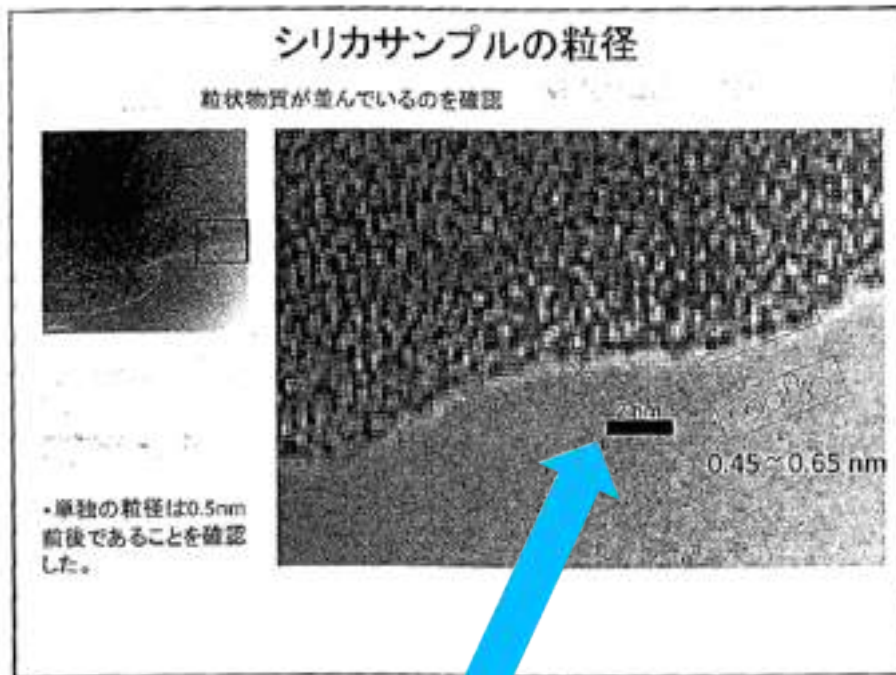
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Individual SiO₂ particle size is
0.45 – 0.65 nm. (1 or 2 molecules)

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