Sphere Scientific Corporation

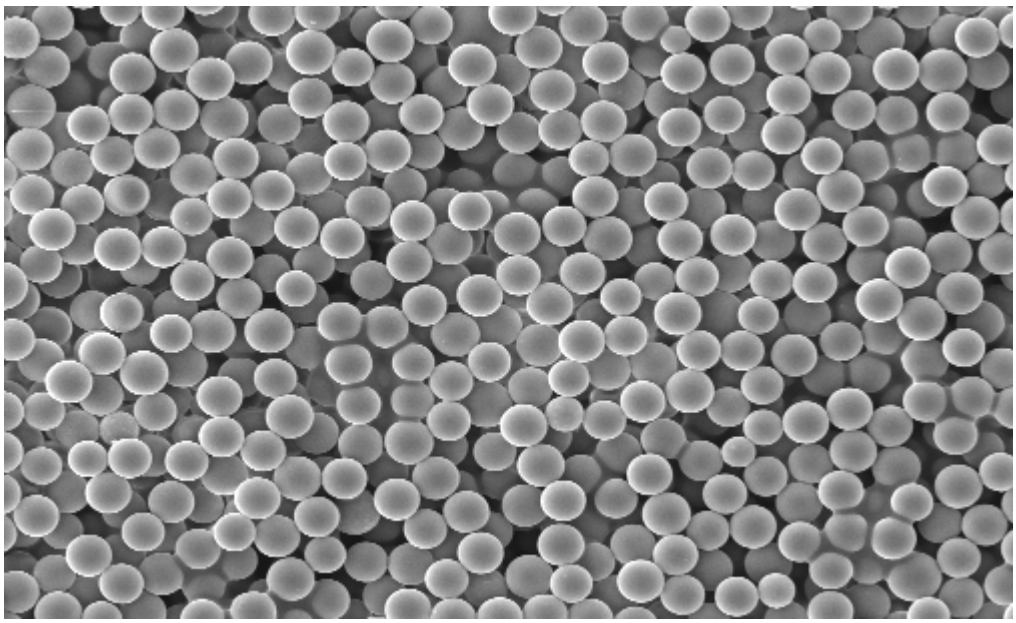
Spacer Microspheres

Microspheres maintain a uniform gap between the two glass panels used to form a flat panel display(such as the LCD). Our silicon dioxide spacer is the next-generation highly functional particles which are synthesized from high purity materials that is used in electronic materials.

General Characteristics

Microsphere Composition:	Silicon Dioxide, amorphous
Nominal Diameter:	4μm, 5μm, 6μm, 7μm, 8μm, 9μm
Density:	1.9 - 2.3 g/cm^3
Surface Conditions:	Nonporous, Silanol group

Example of SEM picture



Features

1．Truly spherical, non-agglomerate, particle size is monodispersed.
2．Impurities are very few, no elution of alkaline ions; Uranium, thorium and other radioactive elements are less than 0.1 ppb.
3．The surface is rich in silanols (≡Si-OH), assuring excellent reaction with silane and

titamate coupling agents. It is also possible to bond functional molecules via surface OH groups as a carrier for synthesizing complex particles.

4. The product is thermally stable. Weight reduction is hardly observed in the temperature range from 200 to 800 ℃. Especially suited for use in epoxy seals that require high curing temperatures.

Chemical Properties Data

Constituents	Typical Values
SiO2	99.90%
Al2O3	4ppm
Na2O	6ppm
TiO2	1ppm
Fe2O3	8ppm
Uranium, Thorium	<0.1ppb

Stucture of LCD with Spacers