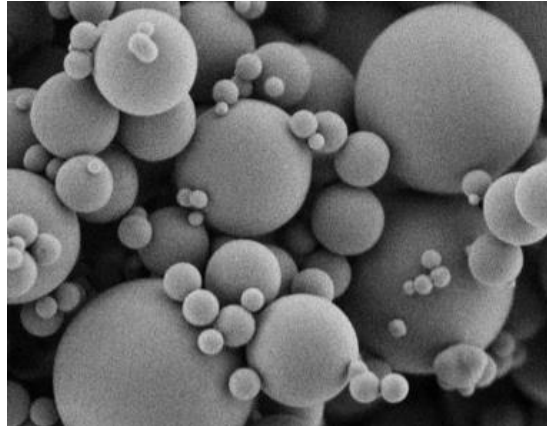


## Denka Releases Advanced Functional Ceramic Fillers, Denka Fused Silica (DF) Low-dielectric Loss Type, for 5G Communications

- Reduces transmission loss during communication and contributes to high-speed broadband communications -



<Denka Fused Silica (DF) Low-dielectric Loss Type (enlarged view)>

Denka Company Limited (headquarters: Chuo-ku, Tokyo; president: Toshio Imai; hereinafter "Denka") announces the launch in October of the advanced functional ceramics Denka Fused Silica (DF) Low-dielectric Loss Type, essential for reducing transmission loss<sup>\*1</sup> for 5G communications and realizing high-speed broadband communications. The product will be exhibited at The Total Solution Exhibition for Electronic Equipment 2021 (JPCA Show) to be held in Tokyo Big Sight from October 27 (Wed.) to 29 (Fri).

5G mobile communications and electromagnetic waves in the millimeter waveband have been introduced to a wide range of fields, such as smartphones, remote medical and disaster prevention services utilizing its high-speed and broadband features, and efficiency improvement in agriculture and production fields. This is playing an important role in realizing a sustainable society. Along with this, to minimize the deterioration of drastically increasing communication volume and quality, there have been strong calls for the development of wiring materials with low transmission loss and dielectric loss tangent. This product was developed to achieve low transmission loss in fillers by using with resin, copper foils, and glass clothes.

This product is based on the Denka Spherical Fused Silica (FB and SFP grades), which have earned an excellent reputation as an insulation filler for semiconductor encapsulation materials in the worldwide market. It enables a 40 to 50% reduction in dielectric loss when compared with conventional products by applying unique surface processing improvement while keeping a uniform spherical shape and particle size distribution. As a material contributing to the realization of high-speed broadband 5G communications, the product will be provided mainly for resin materials (e.g., printed wiring board and encapsulation material), helping to create the foundation of industrial and technological innovations, as called for in the SDGs.

Denka has produced a number of types of functional ceramics such as spherical fused silica, silicon nitride, boron nitride (BN), spherical alumina, and phosphor based on core technologies such as high-temperature firing, nitriding reaction, particle size control, etc. which have been developed since its foundation in 1915. Those products are globally applied for semiconductor and electronic equipment, wind power generation, communication base stations, and automobiles, among other applications. In addition to the Denka Fused Silica (DF) Low-dielectric Loss Type, Denka has already released Denka Spherical Magnesia, which is a high thermally conductive material. Going forward, Denka will be working on the development of spherical barium titanite and other new functional ceramics, low-dielectric organic insulating materials (LDM) and LCP films, etc.

Denka will aim to be a company that is truly needed and indispensable in society, which creates a better world for all through work it can perform better than anybody, in reference to the SDGs.

\*1 Degree of deterioration of electric and optical signals, etc. in communication lines

### **About Denka**

Denka is a chemical manufacturer headquartered in Chuo-ku, Tokyo. The company specializes in developing business activities on a global scale across a wide range of fields, from inorganic and organic chemicals, to electronic materials and pharmaceuticals. Founded in 1915, Denka has steadily continued to develop and manufacture products that contribute to the development of society by fully utilizing its unique concepts and technological capabilities. Upholding its corporate slogan, “Possibility of chemistry” the company and its president, Toshio Imai, are committed to contributing to the sound development of the society while sincerely tackling the challenges that the society is now confronting.

[For Inquiries about This Press Release from Media]

Corporate Communications Dept. Tel : +81-3-5290-5071

[For Inquiries about Products from Customers]

Advanced Specialty Materials Dept. Tel : +81-3-5290-5541