

May 23,2008

Development of a New Resin with High Mechanical Strength and High Light Resistance
-Developing uses for encapsulants, adhesives and optics materials for electronic & optics parts-

- ◎ Kaneka Corporation (Headquarters: Osaka. President, Mr. Kimikazu Sugawara) has positioned opto-electronic chemicals such as materials surrounding optical devices as one of its critical strategy areas, and is actively working on the development of new materials. Now, as our opening salvo, we have succeeded in developing a new type of “thermo-resistant, light-resistant transparent resin” that combines high mechanical strength with resistance to light, including ultraviolet rays, through the hybridization at the molecular level of organic and inorganic elements.

This “thermo-resistant, light-resistant transparent resin” we have developed has already been chosen for the Kinki Chemical Society Japan Chemical Technology Award for this year, and the awards ceremony is scheduled to be held on May 23rd.

- ◎ At the moment, encapsulants, adhesive materials, optics materials, and similar use thermosetting resin such as epoxy resin and silicone resin, which support the improvement of their reliability and functionality. In electronic devices as well, light-emitting diodes (LEDs), one of the most typical opto-devices, are increasingly used in displays and for vehicle-mounted or general lighting uses, and their luminance is also increasing. However, the epoxy resin used in previous encapsulants lacks sufficient resistance to heat and light, and silicone resins, on the other hand, lack enough strength, so calls for a new material have been rapidly growing.

- ◎ The “thermo-resistant, light-resistant transparent resin” we have developed this time uses a technology that hybridizes, at the molecular level, various organic olefin compounds and a suitable silicone compound synthesized using our own original technology, and by using a compound of both organic and inorganic elements overcomes the weaknesses of both epoxy resins and silicone resins to create a new, highly heat- and light-resistant silicone series thermosetting resin.

Currently, it is recognized by the market as a material that provides both heat and light resistance that outstrip previous organic compounds, and is already in use by more and one LED manufacturers.

- ◎ In the future, we intend to actively develop uses for it as encapsulants for various types of sensors, adhesives for optics, a material for optical parts such as lenses, and in other next-generation optical devices. In particular, we are committed to development of new heat- and light-resistant silicone series materials for next-generation optical devices, and, including this “thermo-resistant, light-resistant transparent resin” we have just developed, are aiming for sales of three billion yen in three years later.