

**Life Science**

# Enrich people's lives and improve their health

We develop polymer materials using material processing technologies to provide healthcare-related products that help reduce burdens during medical treatment and improve people's quality of life (QOL).



**Social issues**

The aging of the population advances quickly around the world. Japan in particular is now a world leader in terms of life expectancy, after progress in medical care, people's health awareness and the enrichment of insurance systems. As people's life expectancies are longer, healthcare needs are dramatically changing. Public interest in health improvement and enhanced

medical services is increasing. In addition to the conventional treatment of diseases, the alleviation of burdens during medical treatment, comfort, preventive healthcare, early testing and efforts to increase QOL began to be valued. There is demand for low-irritation medical care and healthcare products that are easy to use for all ages and that provide greater comfort.

## Value provision by the Toyo Ink Group

### Providing soft skin urethane pressure sensitive adhesives with low dead-skin peeling and high moisture permeability

The Toyo Ink Group is working to develop pressure sensitive adhesives and resins for the healthcare field using its long-nurtured polymer synthesis and filler dispersion technologies. We have long provided pressure sensitive adhesives for surgical and sports tapes that are directly applied onto skin as well as cosmetic resins. We have recently developed soft skin urethane pressure sensitive adhesives with limited dead-skin peeling and high moisture permeability. These pressure sensitive adhesives feature low dead-skin peeling when they are removed from skin and low skin humidity to mitigate skin damage. When used in wound dressing agents for long-term application or in bedsore prevention sheets, they are expected to reduce the burdens of treatment and increase comfort.

In response to needs in the healthcare sector for health management without extra attention in everyday life, we

employ flexible polymer technologies provided for the electronics market in our efforts to develop materials for electric field sensor systems for the noncontact measurement of heart rates, breathing, myoelectricity and other vital data. We will provide polymer materials appropriate for medical and healthcare applications to support medical care friendly to people.

### New base for the pharmaceutical business

We are currently building a new plant\* for transdermal patches.

In the pharmaceutical business, we are working intensively to develop medical patches for a new dosing approach based on polymer development technologies. The completion of the new plant compliant with the latest statutory regulations will open the way for increased productivity and long-term stable supply. Thus, we will fulfill our social responsibilities as a pharmaceutical supplier. In the future, it will comply with the newest regulations in the West and in the rest of the world. We will improve the development section in the new plant and accelerate new product development to expand business.

\* The new plant is currently under construction on the premises of the Moriyama Factory in Moriyama-shi, Shiga Prefecture. It is scheduled to start operations in 2023.

**Features of urethane resins**

- **Low odor**.....The odor is not annoying.
- **High moisture permeability**...Skin discomfort due to high humidity is reduced.
- **Low skin irritation**.....Irritation to skin is limited.
- **Removability** .....It can be removed and reapplied.