

Materials



Delivering diverse solutions to global needs through the unique functions of our fine chemical materials.

Business Overview

We are Japan's only acetic acid producer. The Acetyl Business's main products include organic compounds such as acetic acid and its derivatives; cellulose acetate, made from cellulose derived from wood pulp or cotton; and acetate tow, obtained by spinning cellulose acetate. Our acetic acid and its derivatives are used in a wide range of fields, such as synthetic fibers, raw materials for plastics, pharmaceutical agricultural chemicals, and various solvents. Our acetate tow used for cigarette filters has a large global market share.

Cellulose acetate is attracting attention as an environmentally friendly and sustainable raw materials.

The Chemical Business's peracetic acid derivatives such as cycloaliphatic epoxy and caprolactone are produced by a unique synthetic reaction. They are used as urethane materials for semiconductors and paints for automobiles. Other chemicals in this Business Unit include amine and ketene chemicals, which are the raw materials for paints, adhesives, pharmaceuticals, agriculture, etc.

Business Environment

- Intensifying competition among sellers of acetate tow for cigarette filters as global demand for cigarettes wanes
- Rising expectations for environmentally friendly materials to address marine plastic pollution
- Intensifying competition as our materials become increasingly multi-purpose

Strategies

- Improving profitability and competitiveness of existing businesses through cost reductions
- Launching an eco-centered plastic business to create new growth drivers
- Product differentiation through enhanced functionality and added value

SDGs Relevant to these Segments



Performance Highlights (Consolidated)

Net sales (FY2020/3)

¥109.4 billion

Operating income (FY2020/3)

¥15.8 billion

TOPICS

Biodegradable Materials Expected to Address Concerns over Marine Plastic Pollution

We propose the use of biodegradable raw materials such as cellulose acetate and our caprolactone derivative Placel in order to effectively address plastic pollution, which is damaging the world oceans.

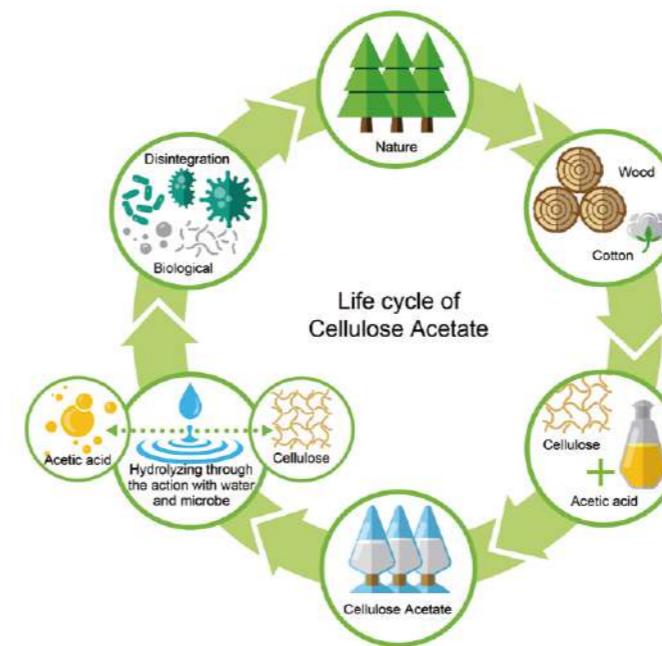
Cellulose acetate is a biodegradable and environmentally friendly polymer material made from a plant-derived natural polymer "cellulose", and "acetic acid" which exists in nature as well. The discarded cellulose acetate is decomposed into water and carbon dioxide by microorganisms that exist naturally not only in soil and waste but also in the ocean. It is also possible to adjust the disassembly rate with Daicel's technology.

Pracel is one of the caprolactone derivatives which is

biodegradable in soil and marine. It has long been used in a wide range of applications such as hot melt adhesives. In recent years, it has attracted attention in the bioplastics field due to its high compatibility with various polymers and its ease of molding.

It is known that petroleum-based plastics take decades to hundreds of years to decompose. By using cellulose acetate or Pracel, which decomposes in a few months to a few years, as an alternative to conventional plastics, it can be a solution to the marine plastic problem. We will accelerate collaboration with our partners and continue to contribute to the realization of a sustainable society.

Cellulose acetate life-cycle



Representative applications of cellulose acetate and placel

Cellulose acetate	Packing containers, fibers, pellets for plastic processing, films for protecting films, cosmetics (foundations)
Placel	Agricultural multi-purpose films, paper cups, compostable bags



Textiles



Compostable bags

Business Overview of FY2020/3

Sales of cellulose acetate and its derivatives, the main products of the Acetyl Business, decreased year-on-year due to a slumping market and declining sales volume in Japan and overseas, primarily resulting from China's economic slowdown. The sales volume and profits from acetate tow for cigarette filters, another mainstay product, increased following the successful expansion of market share among

key customers as well as the acquisition of new customers. However, Chemical Business profits decreased year-on-year because the increased sales volume of cycloaliphatic epoxy supported by an ongoing supply shortage was offset by the declining sales volume of core products including caprolactone due to sluggish demand in China, which in turn is attributable to the U.S.-China trade friction.