

November 6, 2024

Tetsuya Okano, Vice President of Sekisui Kasei U.S.A., Inc., a Group company of SEKISUI KASEI CO., LTD. (Head Office: 2-4-4 Nishi-tenma, Kita-ku, Osaka, Japan; President: Masato Kashiwabara), spoke at the Per- and Polyfluoroalkyl Substances in the Plastics Industry Conference 2024 (hereafter "PFAS 2024") and introduced Fluxflow, a polymer material developed using solution polymerization.

Speech at the Per- and Polyfluoroalkyl Substances in the Plastics Industry Conference 2024

Introducing Fluxflow, a Polymer Material Using Solution Polymerization

1. Overview

At the "PFAS 2024" conference, participants shared their observations regarding the state of PFAS-related regulations and discussed the technical and economic issues involved in PFAS prohibition mechanisms. It was held in Baltimore, Maryland, on October 29 and 30, 2024.

Due to concerns including the health risks and how long they remain in the natural environment, PFAS have come to be increasingly regulated in recent years, especially in Europe. The conference focused on presenting new alternative products and technologies which do not make use of PFAS and recommending the transition of the industry to greater sustainability. The scope extended beyond the fluoropolymer market to include additives and other substances used in the plastic industry with the potential to contain PFAS, such as mold lubricants, foaming agents, processing materials, anti-sticking agents, flame retardants, and rust prevention coatings. PFAS are also used as additives for uniformly dispersing PTFE particles in liquids.

SEKISUI KASEI has dedicated itself to rapidly commercializing non-fluorochemical dispersing agents. In his speech, Vice-President Okano presented Fluxflow, a fluorochemical-free dispersing agents using biomimetic technologies. He explained its technical advantages and latent applications, and his speech received a great response.



Giving speech at the "PFAS 2024"

2. Features

Fluxflow uses polymer structure control technologies to meet new needs for dispersants, binders, and the like. This polymer material is available in both liquid and wax-like form. It can be used in dispersion applications as a fluorochemical-free material with that helps reduce environmental impacts.

- **Reduction of Environmental Impact :**

Fluxflow is a dispersing agent that contains no fluorine, developed based on the adhesion mechanism used by mussels, which helps reduce environmental impacts.

- **Highly Concentrated Dispersion :**

Fluxflow can be used for the highly concentrated dispersion of particles with low surface free energy, such as PTFE particles, in water.

- **Simple Process :**

Fluxflow dispersing agent is water-soluble, so the process of preparing aqueous dispersions is a simple one.

3. Future Development

SEKISUI KASEI Group will explore new applications for Fluxflow and reinforce its Fluxflow development system to accelerate the use of this product in promising markets.