

Fuji Seal International, INC.

## ENVIRONMENTAL REPORT

Vol. 13-2

Our packages contribute to both customers and society's initiatives in environmental sustainability.

Recently, social awareness about the environment, such as marine plastic, is intensively spreading. In fact, we have been making attempts in Reduce – Recycle – Reuse activities. We would like to introduce some of our efforts.

Fuji Seal Group

## Environmental Consideration in E-commerce Packaging: Development of pouches using mono-materials

Follow-up on the progress of the same topic in Environmental Report Vol. 13.

## ■ the "Future Residents" project

Fuji Seal Group has been working with Kimura Soap Co., Ltd. and G-Place Corporation on the "Future Residents" project, a validation project of spouted pouch recycling where spouted pouches were collected after use by mail from consumers. This project was named as "Future Residents Project" partly because it is to find what we can do for the earth and residents ("Ju-Nin" in Japanese) in the future, and also because Kimura Soap Industry's hair care brand 12/JU-NI ("Ju-Ni" is twelve in Japanese) was used in the project.

The 450-ml refill of 12/JU-NI Shampoo and Conditioner came in a plain mono-material pouch for recyclability with a pressure-sensitive label on, which can be easily and neatly removed after use of the pouch. The product was sold exclusively online (e-commerce), and the postable packaging was also adopted in order to reduce green-house gas emissions associated with redistribution. Along with the product, consumers received explanatory materials describing the purpose of the project, instructions on how to return the pouch, a return bag, and a return envelope.



Fig.1) PSL on Pouch.

Pouches made of mono-materials with pressure sensitive labels that are easy to peel off and do not leave adhesive residue.





Fig.2) Postable Package for e-commerce products.

Before (left) and after opening box (right).

Products and some of their pictures for "12/JU-NI refill 450ml" packages provided by Kimura Soap Co., Ltd.



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After use, consumers were asked to wash and dry the pouch with water, place it in the enclosed bag, and return it with the return envelope. The product was sold for a period of approximately one year, and the pouches were collected as planned. As a result of the cooperation of consumers who endorsed the main purpose of this demonstration project and showed a high level of interest in environmental issues such as climate change, we were able to achieve a very high collection rate of 67% as of the end of January 2023.

Currently, we are sorting the collected pouches, converting them into films, spouts, and caps, and identifying problems during recycling. We have proved that we can create a pouch that contains 100% recycled material for the spouts and caps, and more than 30% for the pouch as a whole. Samples of the same size as the product are currently being prepared for comparative evaluation of physical properties. The evaluation is scheduled to be completed in May 2023, and we will update the information as soon as the evaluation results are obtained.



Fig.3) Spouts and caps. 100% recycled material (left) and 100% new material (right)



Fig.4) Pellets from collected pouches.

Through this project, we will establish one form of recycling methods and continue to accelerate our efforts toward a circular economy. We will pursue the realization of horizontal recycling cycles in order to build a recycling-oriented society for our limited and precious resources.



Fig.5) Sample with recycled materials



Fig.6) FSG Initiative for a circular economy