

ENVIRONMENTAL
REPORT

Vol. **13**

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

In the e-commerce market, which has been growing rapidly in recent years, the 3Rs (reduce, reuse, recycle) and reduction of greenhouse gas emissions are required. Fuji Seal Group is working with customers and the entire supply chain to find solutions to these issues.

■ Post-consumer recycling demonstration project

Fuji Seal Group is participating in a demonstration project with Kimura Soap Co., Ltd. ("customer") and G-Place Co., Ltd. to sell spouted pouches and pressure sensitive labels ("PSL") in the e-commerce market and to collect them from consumers after use for their recycling purposes. In consideration of recyclability, the customer has adopted a "PSL on Pouch" specification for its 12/JU-NI refill 450ml package, which uses an unprinted pouch using mono-materials and a PSL that can be easily and neatly removed after use. In this project, we will not only study the horizontal recycling of the pouches, but also collect the spouts and PSLs to determine the best recycling destination for each. In addition, the customer has also adopted the postable packages for the delivery of this product.



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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■ Mono-material pouch

In order to protect the contents and maintain strength with a small amount of plastic, pouches are usually made of composite films, each of which has a specific function. In some cases, composite materials can be cascade recycled (recycling with quality loss), but single materials (mono-materials) can be recycled for higher quality applications. Therefore, in recent years, the demand for mono-material pouches has been increasing globally from the viewpoint of recycling. Fuji Seal Group, along with partners in each region, has been developing and studying olefin-based mono-material pouches by incorporating the elements required in each region, and will make further efforts to develop and expand sales.

■ Pressure sensitive label on pouch

When considering material recycling, coloring with printing ink may limit the range of destinations for reuse. Recyclability of pouches can be improved by use of "PSL on Pouch" where an unprinted pouch is decorated with pressure sensitive labels that can be easily peeled off, and do not leave adhesive residue. In addition, it is possible to manufacture products according to the demand of the final products, reduce intermediate inventory, and reduce waste on design change by using the same volume and plain format of pouches with pressure sensitive labels displaying product information according to the contents and country of sale.

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Postable package

In the field of e-commerce, re-delivery due to absenteeism is becoming a problem. In recent years, there have been cases where products are delivered to the front door in the absence of consumers, such as in the case of "delivery by mail," but there is still a strong demand for postable packages. Fuji Seal, Inc. has developed a postable package for e-commerce that is designed to meet the needs of such delivery, while saving space when stored and making the pouch easy to hold when in use. The deployment of this new package type should contribute to the reduction of greenhouse gas emission from redelivery, which is estimated to be 418,271 tons of CO2* per year, and to the reduction of working hour for drivers, which is also another social issue.



Fig.3) Postable package for e-commerce products.

By cutting off the shoulder of the box, the spout cap is exposed and the content can be poured without removing it from the box.

* Ministry of Land, Infrastructure, Transport and Tourism, Report by 2nd Study Group on Promotion of Diversification of Delivery Methods to Reduce Redelivery

<p>Size fit in post box redelivery not needed</p>	<p>Space saving upright storage like a book</p>	<p>Shape easy to pour the content</p>
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Fig.4) Benefits of postable package for e-commerce products.

In the future, we will continue to develop and deploy products that are friendly to both the environment and people, not only in the e-commerce market, but also in response to changes and potential demands in various markets.