ENVIRONMENTAL REPORT Vol. 8

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

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Fuji Seal International

Fuji Seal International, INC.

Fuji Seal Group

Environmental Initiatives through Printing Technology

Fuji Seal Group is working on various types of environment-friendly options for shrink labels, pressure sensitive labels, and spouted pouches. Printing is one of critical processes during production for any packaging material from the viewpoint of design and display. We are developing and deploying eco-friendly printing technologies and inks in cooperation with our suppliers to ensure that consumers and customers are satisfied with our products.

Packaging printed with inks that contain plant-derived components

Biomass inks have been introduced to various shrink labels and pressure sensitive labels since 2019. By using biomass raw material in printing inks, it is now possible to replace more than 10% of oil-based ingredients in dry weight with plant-based counterparts.
Replacing with plant-derived materials is generally considered to be favor for carbon neutral and is consistent with not only Fuji Seal Group's environmental policy, but also our customers'.
One of our customers, Kagome Co., Ltd. has also formulated the Kagome Plastics Policy, which aims to reduce the environmental impact of its operations in harmony with the natural environment as a "vegetable-oriented company". As part of this policy, the company is committed to reduce the use of plastics made from petroleum and to replace them with recycled and/or plant-based materials that can be recycled after use. As one specific initiative, the plastic caps for paper beverage containers have been replaced with plant-derived materials since April 2020. In another promotion to win environmentally and life-style friendly prizes, which was launched on September 1, 2020, a combination of recycled PET substrate and plant-derived inks has been used to produce environmentally friendly promotional labels.

(Figure 1) Example of eco-friendly promotional labels

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In addition, the use of plant-based inks is thought to contribute positively to a reduction in CO_2 emissions in the recycling process. In Japan, most colored plastics, including waste inks, are thermally recycled. Effective use of waste materials as solid fuels instead of fossil fuels can lead to the reduction of CO_2 emissions. In our opinion, if part of them are derived of plants, it should lead to further reduction of CO_2 emissions.

Packaging with water-based inks

In general, shrink labels have been mainly printed with oil-based inks that use organic solvents as a diluent in order to achieve better expression and content resistance by their stronger adhesion. In recent years, Fuji Seal Group has introduced a different printing process with water-based inks in order to reduce the impact on air pollution and climate change. Fuji Seal, Inc. is currently promoting fully water-based inks (with an organic solvent content of 5% or less in weight where water is used as a diluent) among various water-based inks. As a result, emissions of suspended particulate matter and volatile organic compounds (VOCs), one of the causes of photochemical oxidants, should be substantially reduced, and reduction in CO_2 emissions during the label production* can be also achieved.
(*Compared to existing printing specifications for shrink labels)

Anti-microbial and anti-virus packaging materials

As COVID-19 spreads and rages around the world in 2020, the role of packaging in protecting products is being reassessed. Amidst such environmental changes, we are developing labels using anti-virus and anti-bacterial inks so that consumers can take products decorated with our packaging in their hands without concerns or increasing the amount of plastic used.
Fuji Seal, Inc. arranged anti-microbial and anti-viral tests on three different packaging articles, and received the corresponding SIAA* certification marks for anti-microbial and anti-microbial/anti-viral products. Fuji Seal Group will continue to verify such anti-bacterial and anti-viral treatment on various packaging materials for product development and registration of the products into the certification bodies in the future.

* SIAA (The Society of International sustaining growth for Antimicrobial Articles) is an organization of manufacturers and antimicrobial testing institutions of antimicrobial agents, fungicides, and treated Kohkin/Boukabi products whose goal is the popularization of appropriately treated and secure Kohkin/Boukabi products. With the opinions of industry and customer representatives, specialists, and the government, SIAA maintains rules governing the quality and safety of treated Kohkin products and certifies the labeling and use of SIAA marks, symbols for the security of products that comply with the rules and standards. (cited from SIAA homepage: https://www.kohkin.net/en_index/en_siaa.html)

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A list of anti-bacterial and anti-viral products produced by Fuji Seal Group on SIAA website

SIAA
ISO 22196
for KOHKIN

The SIAA mark is displayed on products that have been evaluated according to the ISO 22196 method and for which quality control and information is disclosed in accordance with the guidelines of The Society of International sustaining growth for Antimicrobial Articles.

<Anti-bacterial>

- It inhibits the growth of bacteria on the surface of the packaging material.
- This product is not a drug.
- This product does not inhibit the growth of all bacteria.
- The product complies with SIAA safety standards.

SIAA
ISO 21702
Anti Virus

The SIAA mark is displayed on products that have been evaluated according to the ISO 21702 method and for which quality control and information is disclosed in accordance with the guidelines of The Society of International sustaining growth for Antimicrobial Articles.

<Anti-virus>

- It reduces the number of specific viruses on the surface of the packaging material.
- This product is not a drug.
- The antiviral treatment is not intended to treat or prevent disease.
- The product complies with SIAA safety standards.