A CLEANER APPROACH TO SUSTAINABILITY

Wash-off labels for more efficient glass and PET recycling and reuse

Labeling a smarter future

Find the right solution for your brand at upmrafislab.com
The future is circular
with UPM Raflatac SmartCircle™ wash-off solutions

The global drive to reduce waste and move towards a circular economy is continuing to gain pace, with packaging companies seeking new and innovative solutions to maximise the recyclability – and reusability – of their containers. Extended Producer Responsibility (EPR) legislation is becoming more common worldwide, with the aim of making producers responsible for the environmental cost of their products, particularly at end of life. Increasing the recyclability of packaging can therefore also lead to cost savings in the form of reduced regulatory fees.

Our strong commitment to sustainability and a truly circular economy has inspired us to develop wash-off labeling solutions that support both product recyclability and reuse. For PET containers in the food, beverage, home care, and personal care industries, our wash-off solutions increase the yield of recycled PET flakes by increasing the efficiency of the recycling process, supporting the availability of high-quality recycled raw material.

Our wash-off solutions for returnable glass beverage containers provide a premium look while separating easily from the bottle using standard washing processes, enabling unlimited container reuse during the bottle’s lifetime.

UPM Raflatac SmartCircle™ solutions like these lead to less waste and increase in recyclability and reusability. This reduces the demand for new virgin products and encourages and promotes a circular economy.
**SmartCircle™ wash-off labeling solution for**

**PET CONTAINERS**
- Increases the yield of recycled PET flakes
- Available with clear, white and metallised film face materials
- Recognized by third-party recycling bodies
- Available with post-consumer recycled (PCR) PET liner

**GLASS BOTTLES**
- Increases the efficiency of the washing process
- Available with a clear PET-G shrink film for a no-label look or paper face for wines and spirits
- Enables a switch from wet-glue labels to self-adhesive labels

Helps to achieve sustainability goals and enhances brand value
Increasing the recyclability of PET containers

By increasing the efficiency of PET recycling we can help cut demand for virgin plastic, with the many economic and environmental benefits that brings. Unlike traditional label materials, our wash-off label solutions for PET containers separate easily during the caustic washing process, floating away from the high-value, clean PET flakes and allowing a greater yield to be recovered without contamination. These flakes can then be converted into new pellets for PET packaging, reducing waste and improving the efficiency of the plastic recycling process.

How it works:

1. Bottles are shredded and washed in a hot alkaline wash solution, typically at +80ºC
2. Wash-off labels float to the top, carrying away contaminants
3. Clean PET bottle flakes sink to the bottom
4. A greater yield of high-purity PET suitable for bottle-to-bottle use can be recovered
Our wash-off solutions for PET containers have been recognised by recycling bodies worldwide, including:

- APR (Association of Plastic Recyclers)
- EPBP (the European PET Bottle Platform)

**UPM Raflatac SmartCircle™ RW85C**

The high clarity of UPM Raflatac SmartCircle™ RW85C makes it ideal for clear-on-clear applications when paired with our clear film face materials and PET liners. We also offer RW85C with white and metallised film faces for creating eye-catching label designs and branding on PET containers in the home care and personal care segments. For even greater sustainability, several of our RW85C-based products are constructed with recycled content PET liner.

**UPM Raflatac SmartCircle™ RW65C**

For recycling processes that require a lower temperature, our UPM Raflatac SmartCircle™ RW65C adhesive washes off at 65°C rather than 80°C – providing even greater sustainability and cost savings. The adhesive is suitable for film face materials combined with paper or film liners. It provides excellent performance in high-speed dispensing and resistance to water-whitening once labeled. RW65C has been tested and approved according to European PET Bottle Platform methods and ISEGA research institute requirements.

**UPM Raflatac SmartCircle™ RC7W**

Our UPM Raflatac SmartCircle™ RC7W adhesive has been tested in typical PET wash off processes and comes with the peace of mind that the materials used will conform to necessary requirements. This adhesive can be combined with paper or film liners and offers excellent performance in high-speed dispensing as well as resistance to water whitening once beverage bottles are labeled.
Increasing the reusability of glass bottles

In order for returnable glass bottles to be refilled and relabeled, the original label needs to be removed during an industrial bottle washing process. This presents an obvious challenge: during product use the label must withstand moisture and liquid, for example during storage in cold conditions, condensation, ice-bucket exposure and spillages, but when the bottle is returned the label needs to be simply and cleanly washed off.

Our new wash-off solutions allow the clean removal of labels in typical industrial washing processes while still offering a premium look for glass beverage bottles and all the high performance you’d expect during product life. They allow producers to change from wet-glue to self-adhesive labels for better brand value, and are a truly sustainable option for returnable bottles, with unlimited opportunities for bottle reuse until end of life. Wash-off labels for glass bottles are top-coat free and suitable for UV-flexo printing; they can also be overlaminated for extra protection.

How it works:

1. Bottles are labeled with a PET-G shrink film or paper label face and one of our wash-off adhesives for glass bottles
2. After use, returned bottles are washed in standard conditions, in a hot alkaline wash solution at +80ºC
3. During the washing process, labels shrink and separate cleanly from the bottle, allowing them to be collected and removed
4. Contaminants such as ink and adhesives are carried away by the label, leaving behind clean glass bottles ready for reuse

UPM Raflatac SmartCircle™ RW760
For a premium no-label look on glass beverage bottles, UPM Raflatac SmartCircle™ RW760 adhesive is designed to support reusability of glass beverage bottles. During the washing process, labels shrink and separate cleanly from the bottle, enabling refilling and relabeling of the bottles. RW760 adhesive offers strong adhesion on glass and excellent water whitening resistance in the final application.

UPM Raflatac SmartCircle™ RP30W
For paper labels on wines and spirits, UPM Raflatac SmartCircle™ RP30W offers advanced wash-off performance. It provides good performance on the label dispensing line and reliable bottle application even in cold conditions, as well as excellent adhesion to polar surfaces. In combination with a vast array of WSA treated papers, the adhesive allows many different looks and finishes to be catered for.