

... recycling-friendly design for glass packaging

Lacquered versus translucent glass containers with removable labels

Glass recycling is the processing of what is known as 'hollow glass'. Problematic non-glass components are sorted out in the recycling process using cutting-edge technology. The goal is to produce ready-to-melt shards of high quality that can be turned into new hollow glass at the glass factory.

A key feature of glass as a packaging material is its transparency. The contents are visible. That property has to be maintained in recycling. Non-transparent (opaque) glass shards are recognised as contaminants by an optical sorting system, which operates based on light. These shards are then separated from the transparent glass.

Another basic rule in glass recycling is that all non-glass components of glass packaging should be as easy to remove as possible so that the material streams are free from residues after sorting (to the extent possible). As such, it makes sense to avoid full surface-glued labels wherever possible to improve glass recyclability. Glass that cannot be separated from labels is lost in the recycling process because every sorting system has its technical limits, no matter how cutting-edge the recycling process is.

Worked examples:

1. Transparent hollow glass

The picture shows transparent hollow glass in white, green and brown that is highly recyclable. If labels affixed with glue cannot be removed, the glass there is not transparent and is sorted out. It is lost for glass recycling purposes.



2. Lacquered hollow glass

This picture shows two lacquered hollow glass bottles. The lacquer means that they are not transparent. That in turn means that these glass bottles are sorted out in the sorting process and lost completely for glass recycling purposes.



In practice:

Transparent/coloured glass versus lacquered glass

- Sortability is key to the glass recycling process.
- Transparent hollow glass in white, green and brown is highly recyclable.
- Optical sorting systems are used to find 'good' recyclable glass.
- Contaminants such as non-removable or hard-to-remove labels cannot be recycled.
- Lacquered hollow glass is sorted out because it is hardly translucent.