

## 2a

## Comparison of recycling-friendly designed packaging from the yellow-bag / yellow-bin: mono-material packaging versus fibre-based composite packaging

Many companies are currently replacing pure plastic packaging with fibre-based packaging featuring a plastic coating. Even if packaging mainly consists of paper – applying a plastic coating instantly limits recycling. Essentially only the fibre portion of that type of composite packaging is recyclable. Paper mills try to separate the fibres from the plastic. Depending on the coating and the paper mill, the separation may or may not be successful. As a general rule, the plastic portion is rejected and disposed of. For composite materials, that means recovery capacity is limited.

**Mono-material packaging with a corresponding recycling infrastructure has a better recyclability profile.**

### Example 1

The picture shows packaging from dried goods in the food-stuffs sector: the paper packaging (left) is coated with polyethylene (PE) on the inside and, at a weight of 9 grammes, is nearly twice as heavy as packaging made of pure polypropylene (PP) plastic (right) weighting only 4.9 grammes.

The film bag is made of 100% polypropylene and is printed on directly. It is mono-material packaging and 100% recyclable.

The mono-material packaging made of polypropylene is preferable in terms of waste prevention because of its recycling-friendly design.



### Example 2

Here we see two takeaway trays: the plastic tray made of pure polypropylene (below) is 100% recyclable. It weighs 19.4 grammes and is 60% lighter than the paper composite tray (above) weighing 32.5 grammes.

The paper composite tray is cardboard with a plastic coating. The lid is made of polyethylene terephthalate (PET). The recyclability of this tray is 54% at most.