

## PP vs PET Bottle in 2-Stage SBM

Traditionally, PET is used as an alternative of glass to produce cost effective & highly transparent container. However, with the sophisticated technology and accumulated experience of WEILI 2-stage reheat stretch blow moulding machine, the processing window of PP can be significantly increased. Considering lower bottle weight and safety issues compared to glass, hot-fillability, sterilizability and also potential in weight reduction compared to PET, the market demand for PP container has been increasing rapidly.

### PP VS PET

#### Filling Temperature

PP resin can withstand temperature up to 95 – 120 degree depending on the resin manufactures.

Normal PET resin cannot withstand high temperature (e.g. > 60 degree). Otherwise, there will be bottle deformation in hot filling.

#### Resin Drying

There is no need of drying process for PP resin in preform production. Energy can be saved.

PET resin has to be dried for 4-6 hours before preform production.

#### Moisture Barrier

PP bottle is superior to PET in its moisture barrier property. PP container is good at storing water sensitive contents (eg. Powder)

PET bottle is good for storing oxygen sensitive beverage compared with PP bottle.

#### Resin Recycling

There are more applications for recycled PP resin than recycled PET resin.

It would be less convenient for resin recycling if bottle is made of PET while cap is made of PP.

#### Softness

PP is ideal for making squeezable bottle for seasoning products due to its elastic property.

PET has high strength but easily to be deformed under pressure.

#### Transparency

With the introduction of clarified additive, excellent optical property and transparency of PP bottle can be achieved.

PET is excellent in transparency compared to all plastic materials.

#### Processing Window

PP has very small processing window, there are higher requirements for the PP preform and the reheat stretch blow moulding machine quality.

PET has relatively wide processing window, complex design of bottle or jar can be blown in ISBM process.

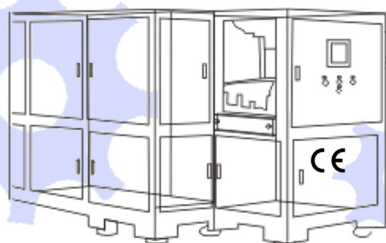
#### Preform Design

PP preform design and reliability of the preform mould are not easy to be found in the market. Wei Li is ready to help!

There are large amount of existing PET preform suppliers in the market.



- ❖ PET
- 1400 ml
- ≡ 78.4 mm
- Ⓢ 60 g
- ⚙ MP Medium  
AP Medium



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