Packaging for your life.

LINHARDT

SUSTAINABILITY GUIDE FOR PLASTIC TUBES

DEVELOPMENT PROJECT

SUPERTUBE

- Mono material:
  PE tube body, PE shoulder, PE closure
- Material reduction in the entire tube: 40% reduced wall thickness
  in the tube body, lightweight closure
- PCR material in the entire tube:
  100% PCR in the tube, 50% PCR in the cap
- HD printing and other printing techniques available

GERMAN PACKAGING AWARD

SUSTAINABILITY

WINNER 2021

"Sustainability implemented consistently. And even in multiple dimensions at once."
„An innovative solution by LINHARDT that should become the norm."
Excerpt from the jury evaluation of the German Packaging Award (Company-internal translation)

DEVELOPMENT PROJECT

TOP TUBE

- 73% lighter closure, 73% reduced carbon footprint of closure*
- Good recyclability thanks to Mono PE solution
- Available with reduced wall thickness
- Suitable for diameters 40 & 50 mm (30 & 35 mm planned)
  → Ideal for product lines with different tube sizes

More information

* Comparison between Top Tube closure 2.01 g with standard fliptop closure 7.3 g, carbon footprint incl. HDPE, injection moulding and material transport

TUBES WITH REDUCED WALL THICKNESS

- Possible wall thickness reductions:
  350 µm (Ø 19 - 50 mm) → **30% material reduction**
  300 µm (Ø 19 - 30 mm) → **40% material reduction**
  270 µm (Ø 19 - 30 mm) upon individual technical feasibility study
- EVOH barrier possible
- Available as mono PE tube with PE closure
- PCR material possible
- HD printing and other printing techniques

30% or 40% material reduction in the tube body

MONO-PE TUBES

- Mono material: PE in tuben body, shoulder and closure for **increased recyclability**
  Development project: Mono PP tubes
- EVOH barrier possible
- Reduced wall thickness possible
- PCR material possible
- HD printing and other printing techniques

Fully recyclable mono material

PCR TUBES

- **High percentage of recycled plastic**:
  Up to 100% PCR
- PCR tubes possible in transparent, white, coloured, or with pearl effect
- EVOH barrier possible
- Available as mono PE tube with PE closure
- Reduced wall thickness possible
- HD printing and other printing techniques

- Recycling cycle within Europe for reduced carbon footprint
- Broad choice of post-consumer recycled plastic materials
- Customized PCR rate configuration for different purposes

LINHARDT GMBH & CO. KG
Dr. Winterling Straße 40
D-94234 Viechtach

Tel +49 (0) 9942 951-0
info@linhardt.com

LINHARDT SUSTAINABILITY GUIDE FOR PLASTIC TUBES

At LINHARDT, we create sustainable packaging solutions by following three main principles:

REDUCE: Reduction of the used material

REPLACE: Use of alternative, sustainable materials

RECYCLE: Use of recyclate or increase in recyclability

In order to make your specific plastic tube sustainable, we offer a wide range of configuration options::

Material

- Use mono material for high recyclability: tube body, shoulder and closure in PE
- Use PCR material with variable PCR content up to 100% and various compliances (Food Grade, REACH, FDA*)

Structure

- Reduce wall thickness for less use of material
- Avoid or reduce EVOH layer for increased recyclability

Decoration

- Avoid coloured tube body and shoulder
- Waive full-surface printing
- Use bright colours
- Choose HD printed mono-plastic tubes instead of flexo printed laminate multilayer tubes

Status 12/2023

*FDA not available for all PCR materials.

LINHARDT GMBH & CO. KG
Dr. Winterling Straße 40
D-94234 Viechtach

Tel +49 (0) 9942 951-0
info@linhardt.com