

# EcoDesign Tubes

## Our five EcoDesign pillars



Recycling Friendly

Recycled Content

Renewable Resources

Reduced Material

Product Safety

<p><b>Concept</b></p>	<p>We provide tube packaging ready for recycling; body, shoulder and caps are made of a single material family, with or without high barrier.</p>	<p>Our RECYCLED tubes contain up to 77% of recycled material, with up to 73% PCR proportion.</p>	<p>Our bioplastic solutions offer a much lower carbon footprint compared to conventional plastic tubes.</p>	<p>The less material used for a tube, the less the environmental impact measured in terms of carbon footprint.</p>	<p>Composite materials with hard and soft barriers offer incomparable protection of beauty, pharma or toothpaste formulas.</p>
<p><b>Tube</b></p>	<p><u>Polyfoil® MMB</u> Mono PE tube <u>Polyfoil® EcoPro</u> Polyfoil® <u>Sensation</u></p>	<p><u>RECYCLED</u> <u>Polyfoil® EcoPro</u></p>	<p><u>PICEA™</u> <u>SUGARCANE</u> <u>PaperX</u></p>	<p><u>Eco-Stripped</u> <u>Polyfoil® EcoPro</u> Polyfoil® <u>Sensation</u></p>	<p><u>Polyfoil® MMB</u> Polyfoil® <u>EcoPro</u> Polyfoil® <u>Sensation</u></p>

## We take responsibility

Plastic is currently the biggest enemy of our global seas and marine life. Due to public interest in this subject, pressure on all market players is mounting to find new solutions for a circular economy. Future generations must be able to find a healthy environment. Therefore, measures to protect the environment and resources are part of our values and corporate strategy. Here you can discover what we as a company and with our packaging are doing for sustainability:

## Sustainable Tubes

In 2018, the European Union massively tightened the existing guideline for packaging and packaging waste. By 2030, all plastic packaging must be recyclable, of which 55% effectively recycled. Currently, less than 30% of all plastic packaging is collected. A substantial part of plastic waste collected cannot effectively be recycled and, despite being sorted, is burnt.

A quick look at the material flows of packaging shows: In Europe, there are around 80 million tons of plastic waste. Of these, around 20 million tons consist of plastic packaging, of which around 4 million tons are flexible consumer packaging. Of these, only 1 million ton consists of multi-material combinations, which are the biggest challenge in the recycling stream.

Together with the industry, our customers and consumers, we want to achieve the ambitious goals of the EU and thus make a considerable contribution to the circular economy.

We are therefore working intensively on several approaches:



### Recycling-friendly design

Tubes from mono-materials such as PE and PP are generally recyclable, if the cap is of the same material as the tube body. However, in many countries, the fitting recycling stream is still not available to consumers. The majority of empty tubes are energy recovered or end up in landfills.

The challenge is even greater for **multi-layer tubes** containing aluminum, like standard Polyfoil® tubes: In Europe, composite materials are not yet collected separately, and due to its barrier layer, the tubes end up in the aluminum stream.

That is why we have developed a new, patented barrier tube series, the thin-walled Polyfoil MMB tube. It complies with all pharmaceutical, food and cosmetics regulations, is ready for recycling in the PE or PP stream, has a high barrier and is also available with post-consumer recycled material on request. There are also no compromises when it comes to decoration: Printable all round, coloured as desired and with a gloss, soft-touch or metallic finish.

# RecyClass



***CosPaTox***

## Make a responsible packaging choice

Learn how you can translate recyclable tube packaging into a strategic advantage for your brand.

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## Use of recycled materials

Our RECYCLED tubes contain up to 77% recycled material, with up to 73% PCR proportion which is suitable for cosmetic products. With RECYCLED you save new material and the plastic ends up back in the cycle instead of in the environment.



## Use of renewable raw materials

Our bioplastic solutions offer a much lower carbon footprint compared to conventional plastic tubes. With the PICEA™ tube, we go the extra mile: It contains a wood-bioplastic combination exclusively made for us with 10% spruce sawdust from Germany. This wood has an even lower carbon emission balance per kilogram than residual bioplastic, making this tube an absolute CO<sub>2</sub> star. Our bioplastic tubes meet Ecocert and Cosmos requirements.

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## Less use of materials

The less material used for a tube, the less the environmental impact measured in terms of carbon footprint. Tubes are generally lighter than plastic bottles and present a weight advantage for the same volume. Thin-walled tubes are standard in our company. Yet there are still savings potentials with the caps and shoulder geometry. These need to be applied, without reducing the value and barriers of a tube.

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## Less product waste, long shelf-life

Composite materials have the advantage of providing incomparable protection of the product content with relatively little use of materials. They are highly developed and meet regulatory requirements concerning the used raw materials. Through their protective properties, be it with hard or soft barrier

structures; they increase the life of expensive pharmaceutical and cosmetic products. Because insufficiently protected pharmaceutical and cosmetic products could lead to even greater environmental impact compared to the impact of the packaging material itself.

## See what's in for each concept

EcoDesign Product Comparison

**NEOPAC**  
THE TUBE

	Polyfoil® MMB Tube	Polyfoil® EcoPro	PaperX Tube	Recycled Tube	Eco Stripped Tube	PICEA™ Wood Tube	Sugarcane Tube
<b>EcoDesign Concept</b>							
							
<b>Materials / Dimensions</b>							
<b>Diameters / Volumes</b>	19 – 50 mm 10 – 275 ml	35 – 50 mm 25 – 275 ml	35 – 50 mm 50 – 200 ml	16 – 50 mm 5 – 300 ml	35 – 50 mm 40 – 300 ml	16 – 50 mm 5 – 300 ml	16 – 50 mm 5 – 300 ml
<b>Body material</b>	HDPE	70% rHDPE PCR in overextrusion	80% Paper FSC certified forest/ PE-EVOH	rHDPE / rLDPE HDPE / LDPE	rHDPE / rLDPE Sugarcane PE HDPE / LDPE	WPC (wood / bio PE compound)	rHDPE / rLDPE HDPE / LDPE
<b>Head material</b>	HDPE	100% HDPE or 70% rHDPE / PCR or HDPE	PE Snap on	70% rHDPE 30% HDPE	rHDPE Sugarcane PE HDPE	Sugarcane PE	Sugarcane PE
<b>Closure</b>	PP / HDPE / rHDPE	PP / HDPE / rHDPE	PP / HDPE / rHDPE	PP	PP / HDPE / rHDPE	PP / HDPE / rHDPE	PP / HDPE / rHDPE
<b>Wall thickness</b>	0.35 / 0.5 mm PP Soft Version	0.35 mm	0.30 mm	0.35 / 0.4 / 0.5 mm	0.35 / 0.4 / 0.5 mm	0.4 / 0.5 mm	0.35 mm

www.neopac.com/ecodesign