



Standard or customized

# Sustainable plastic packaging materials

Scanfill Guide

MISSION: FULFILLING FOIL

# The Scanfill history

Since 2008 Scanfill has worked purposefully to deliver world-class packaging materials, at the same time succeeding with the world's challenging demands for environmental sustainability.

- 2006** Customers began asking the Polykemi Group for mineral-filled PP for packaging. Curious as we are, we started a project called Scanfill.
- 2008** Scanfill AB was founded. At this point of time, the objective was to produce granules.
- 2010** As we all know, the future brings changes and suddenly our first foil extruder was installed. It was a test machine, in order to be able to deliver foil rolls to customers for small-scale tests.
- 2014** Sales of foil material took off as we installed and put our second foil extruder to work. Today 95% of our sales consist of foil material.
- 2017** Time to level up. We upgraded our first foil extruder, enabling the production of EVOH and 7-layer structure foil production.
- 2018** We celebrated the 10th anniversary of Scanfill! Also, we installed a new granule extruder, one with twice the capacity compared to our existing one, to match the large demand for materials.
- 2019** Growing continues. We installed our third foil extruder which has a capacity for 7-layer structure production, with the possibility of reorganizing the layer structure for further development of our foil. The investment will streamline production being large enough to produce double width with double rolling stations.
- 2021** Further expanded opportunities. By installing a full-scale thermoforming machine, our prototype lab gained possibilities to further test materials and prototypes. Installation of three more foil-extruders largely widened our product program to also include PET and PS.
- 2022** Welcome Materialsmart! Our CO<sub>2</sub> calculator knocks the industry over when presenting detailed calculations on the amount of CO<sub>2</sub> emitted per kilogram produced Scanfill material.
- 2023** Boosted capacity and ISCC Plus certificate. By investing in larger and more complex material handling equipment, we increased our all-round capacity for managing recycled material. The ISCC PLUS certification guarantees total traceability in the production and delivery of bio-circular mass balance certified plastic raw material.

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Scanfoil PP  
Scanfoil PS  
Scanfoil PET  
Scanfill Foil PP  
Scanfoil PS ESD  
Scanfoil POP™ rPET  
Degrafoil Flow 1.7



Prevented Ocean Plastic



Color



Transparency

# Our products



PP, PS & PET



Plastic foil for the production of packaging for food, electronics, pharmaceuticals, and more.



Customizable width & length

# Scanfill on an ever-changing market

Selecting suitable plastic for the proper purpose



Up to 100% recycled material



Freezeable



Food approved

## Environmentally friendly materials

Scanfill AB is a Swedish knowledge-based company prone to continuously improve and develop our methods and materials. We deliver high quality, environmentally friendly packaging materials, fulfilling today's ecological demands concerning sustainability without compromising the purpose. We care about the earth's resources and work consciously to ensure our products have as little impact on the environment as possible.

We provide environmentally friendly packaging material, focusing on two material options: **Scanfoil** and **Scanfill Foil**. Scanfoil is our traditional packaging material based on PP, PS, or PET. Scanfill Foil is our other concept, half of which consists of minerals.

## Customer oriented, reliable deliveries

Scanfill AB is a family-owned company originally sprung from customer requests for mineral-filled PP for packaging. We take great pride in being a trustworthy supplier and the heritage in meeting customers' requests is manifested in our short delivery times, personal customer service and flexibility to adapt deliveries to customer requirements.

We care about effectivity and optimizing processes. We know time is money and words are binding. Being a part of Polykemi Group we are less vulnerable to external factors. By being family owned we are independent and influenced only by our very own ideas.

By keeping our promise to you, in turn you can guarantee high quality, on-time deliveries to your customer.

**material  
smart.**<sup>®</sup>

By Polykemi

Materialsmart<sup>®</sup>

**Empower the  
environment  
while boosting  
your business.**



**Unfold your  
perfect  
material and  
minimize your  
environmental  
footprint.**

Use our Materialsmart  
calculator to compare the  
material choices.

Visit our page and try the calculator

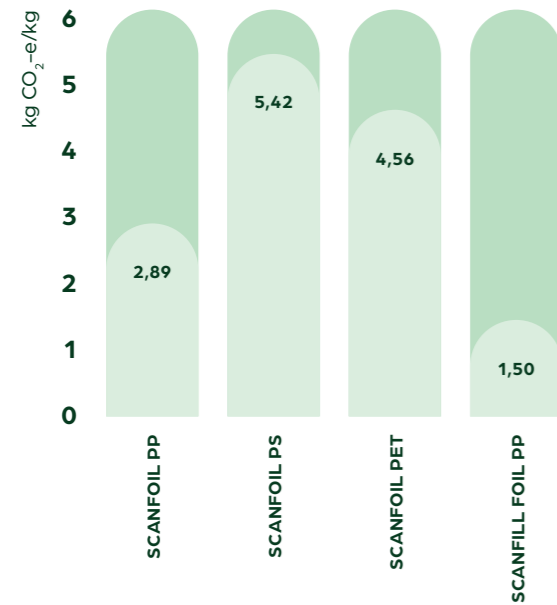
# Cutting costs and reducing CO<sub>2</sub>e emissions

You can save both the climate and resources with materialsmart decisions – two flies in one hit, as we would say in Sweden. Material choices offer major possibilities to reduce your company’s climate footprint with the instant effect of also saving time and cutting costs.

Using scientific studies to develop a detailed calculation tool, our experts can analyze your company’s material choices and, considering your preferences, calculate how you can make your products more materialsmart.



Visit our page and try the calculator



## CO<sub>2</sub>e certified materials

Our customers have the opportunity to receive a certificate with every material they order. This means that you, as a customer, get exact values for the emissions your material causes, values that make it easier for you to evaluate your materials and calculate your total emissions.

We calculate the final carbon footprint of your material using LCA before issuing your certificate. In terms of data and methodology, the certificate is founded on our third-party verified LCA according to ISO standards.

Contact us for more information about CO<sub>2</sub>e certificates.



## Material advice

It's a plastic jungle out there. Our material expertise, combined with our capabilities for test runs and prototype development, allows us to have a comprehensive understanding of where our foil comes from and what it needs to perform after leaving our factory.

With us, you always get a personal contact, and our technicians are always close at hand. We accompany you from inquiry to production. When questions arise during production or for future adjustments, you get answers from experts who understand your business.

We'll help you to the best foil for your purposes.



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# Climate impact reduced by 54%

By replacing the materials in a salad bowl, weight, cost and climate impact were significantly reduced.



Freezable



Food approved



Recyclable



Microwaveable



Our customer replaced their material from high impact polystyrene (HIPS) to a highly transparent polypropylene (**Scanfoil PP HiClear**) while making themselves and the climate a great favor.

The bowl in HIPS weighed 20 g and had a climate impact of 93 g CO<sub>2</sub>-e/bowl. When replaced by Scanfoil PP HiClear, the climate impact was reduced by 54% and the weight of the packaging was reduced by 15%.

This was an act of carefully calculated Materialsmart bravery. Not only did our customer reduce both weight and climate impact, PP is the most requested material on the recycled market. And for the obvious bonus: on the market where this particular salad bowl is used, the packaging fee was reduced by 15%.

**Area Sales Manager**

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# Scanfoil PP

Scanfoil PP is a thermoforming foil with good forming properties, transparent with the choice of regular clarity or HiClear and is also available in colors.

The HiClear transparency is comparable with APET. Scanfoil PP is food approved and can be used for chilled food, frozen food and ready meal for microwave oven heating.

The material is suitable for cold-, warm-, hot filling and retort sterilization. Including a barrier layer will result in a high performing

Modified Atmosphere Packaging (MAP) or skin pack system using a FFS or thermoforming machine.

Suitable for various applications and segments, e.g. electrical components, industrial applications and secondary packaging.

The Scanfoil PP is fully recyclable and the material group with the highest demand on the recycling market.



Foil thickness

**350–1200 µm**

Density

**0.9 g/cm<sup>3</sup>**

**THERMOFORMING  
SETTINGS**

Pre-heating cabinet ≈ 80°C  
Foil temperature ≈ 140–160°C

Foil width

up to **1450 mm**

Shrinkage

**1–3%**

Scan for product specifications



## FEATURES

- Food approved
- Microwaveable
- Freezable
- Recyclable
- Low Density

## OPTIONS

- Barrier (Low, Standard, High)
- ESD
- Easy Seal
- Anti-Fog
- BIO-circular
- Recycled

## APPEARANCE

- Clear
- HiClear
- Colored
- Dual colors



**RECYCLED**  
30% PIR = 2,11 kg CO<sub>2</sub>e/kg

**VIRGIN**  
2,89 kg CO<sub>2</sub>e/kg



# Scanfoil PS

Scanfoil PS is a thermoplastic foil with good forming properties, transparent and available in various colors.

The material is suitable for thermoformed packaging applications. The snapping effect makes it suitable for break-off applications such as multi-packs. Scanfoil PS is also

available in a high impact version, both transparent and in various colors.

Scanfoil PS has good electrical insulation properties, is food approved, and has high hardness and high surface gloss.

The material is recyclable and can be reused in the production of new foil.

Recycled material

up to **100%**



Foil thickness

**350–1500 µm**

Density

**1.04–1.06 g/cm<sup>3</sup>**

**THERMOFORMING  
SETTINGS**

Pre-heating cabinet - **Not required**  
Foil temperature ≈ **120–180°C**

Foil width

up to **900 mm**

Scan for product specifications



#### FEATURES

- Food approved
- Freezable
- Recyclable

#### OPTIONS

- Anti-Fog
- ESD
- Recycled

#### APPEARANCE

- Clear
- Colored



**RECYCLED**  
100% PIR = 0,39 kg CO<sub>2</sub>e/kg

**VIRGIN**  
5,42 kg CO<sub>2</sub>e/kg



# Scanfoil PET

Scanfoil PET is a thermoplastic foil with good forming properties, transparent and available in various colors.

The material is suitable for thermoformed packaging applications as well as film applications, such as protective face shields. The material is fully recyclable and can contain up to 100% recycled material in the foil.

Due to Scanfoil PET transparency it is a material that provides a great presentation of products in packaging.

## Prevented Ocean Plastic™ rPET

Prevented Ocean Plastic™ (POP), is a high quality, certified recycled plastic that meets regulatory health and safety standards. The plastic has been collected from coastal areas at risk of ocean plastic pollution. The material is traceable back to source. Product specifications for POP PET are equal to those of Scanfoil PET.



Recycled material  
up to **100%**

Foil thickness

**230–800 µm**

Density

**1.35–1.40 g/cm<sup>3</sup>**

**THERMOFORMING  
SETTINGS**

Pre-heating cabinet - **Not required**  
Foil temperature ≈ **120–140°C**

Foil width

up to **800 mm**

Shrinkage

**0.6–0.8%**

Scan for product specifications



### FEATURES

- Freezable
- Recyclable
- Food approved

### OPTIONS

- Anti-Block
- ESD
- POP
- Recycled

### APPEARANCE

- Clear
- Colored



**RECYCLED**  
80% PIR = 1,17 kg CO<sub>2</sub>e/kg

**VIRGIN**  
4,56 kg CO<sub>2</sub>e/kg



# Scanfill Foil PP

Scanfill Foil PP is a mineral reinforced thermoforming foil with excellent forming properties, forms faster and better than PP and is available in all colors. The material is approved for multi-use.

The minerals significantly lower the CO<sub>2</sub>e emissions and add an exclusive soft touch. Scanfill Foil PP is food approved and can be used for chilled food, frozen food and ready meal for microwave oven heating.

The material is suitable for cold-, warm-, hot filling and retort sterilization. Including a barrier layer will result in a high performing Modified Atmosphere Packaging (MAP) or skin pack system using a FFS or thermoforming machine.

Suitable for various applications and segments, e.g. electrical components, industrial applications and secondary packaging.

Mineral content

up to **52%**

Recycled material

up to **100%**



Foil thickness

**350–1300 µm**

Density

**0.9–1.4 g/cm<sup>3</sup>**

**THERMOFORMING SETTINGS**

Pre-heating cabinet ≈ 80°C  
Foil temperature ≈ 140–160°C

Foil width

up to **1450 mm**

Shrinkage

**0.8–1.5%**

Scan for product specifications



## FEATURES

- Food approved
- Microwaveable
- Freezable
- Recyclable

## OPTIONS

- Barrier (Low, Standard, High)
- ESD
- Easy Seal
- Multi-use
- Recycled

## APPEARANCE

- Colored
- Dual colors
- Matte or glossy surface



**RECYCLED**  
30 % PIR = 0,74 kg CO<sub>2</sub>e/kg

**VIRGIN**  
1,50 kg CO<sub>2</sub>e/kg



# Scanfoil PS ESD

Scanfoil PS ESD is a thermoplastic foil with good forming properties, and a choice of surface resistance level on both sides of the foil.

The material is suitable for thermoformed packaging applications with reduced surface resistance requirements, e.g. packaging for electrical devices sensitive for ESD.

We can offer a foil with surface resistance in three different levels, ranging from  $10^2$  to  $10^9 \Omega$ , on both sides of the foil, based on carbon nanotube technology. The volume

resistance will also be reduced, but typically to a dissipative level.

The material is recyclable, and can be reused in the production of new foil.

## LEVELS OF RESISTANCE

SURFACE	VOLUME
Level 1 $10^2 - 10^4 \Omega$	$10^9 - 10^{11} \Omega$
Level 2 $10^3 - 10^6 \Omega$	$10^9 - 10^{11} \Omega$
Level 3 $10^5 - 10^9 \Omega$	$10^9 - 10^{11} \Omega$



Foil thickness

350–1500  $\mu\text{m}$

Density

1.04–1.06  $\text{g}/\text{cm}^3$

### THERMOFORMING SETTINGS

Pre-heating cabinet - **Not required**  
Foil temperature  $\approx 120-180^\circ\text{C}$

Foil width

up to **900 mm**

Scan for product specifications



### FEATURES

Recyclable

### OPTIONS

Anti-Block

ESD

Recycled

### APPEARANCE

Colored black



**RECYCLED**  
90% PIR = 0,89  $\text{kg CO}_2\text{e}/\text{kg}$

**VIRGIN**  
5,42  $\text{kg CO}_2\text{e}/\text{kg}$



# Scanfoil POP™ rPET

**Fill your material with purpose,  
protect the ocean from plastics.**

Prevented Ocean Plastic™ (POP), is a high quality, certified recycled plastic that meets regulatory health and safety standards.

The plastic has been collected from coastal areas at risk of ocean plastic pollution.

The material is traceable back to source. Product specifications for POP rPET are equal to those of Scanfoil PET.



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PRODUCT DESCRIPTION

POP rPET



Foil thickness

**230–800 µm**

Density

**1.35–1.40 g/cm<sup>3</sup>**

Shrinkage

**0.6–0.8%**

Foil width

up to **850 mm**

Glass transition temp. (T<sub>g</sub>)

**73–78°C**

Scan for product specifications



## FEATURES

Freezable  
Recyclable

## OPTIONS

Anti-Block  
Recycled

## APPEARANCE

Clear  
Colored



**RECYCLED**  
80% PIR = 1,17 kg CO<sub>2</sub>e/kg



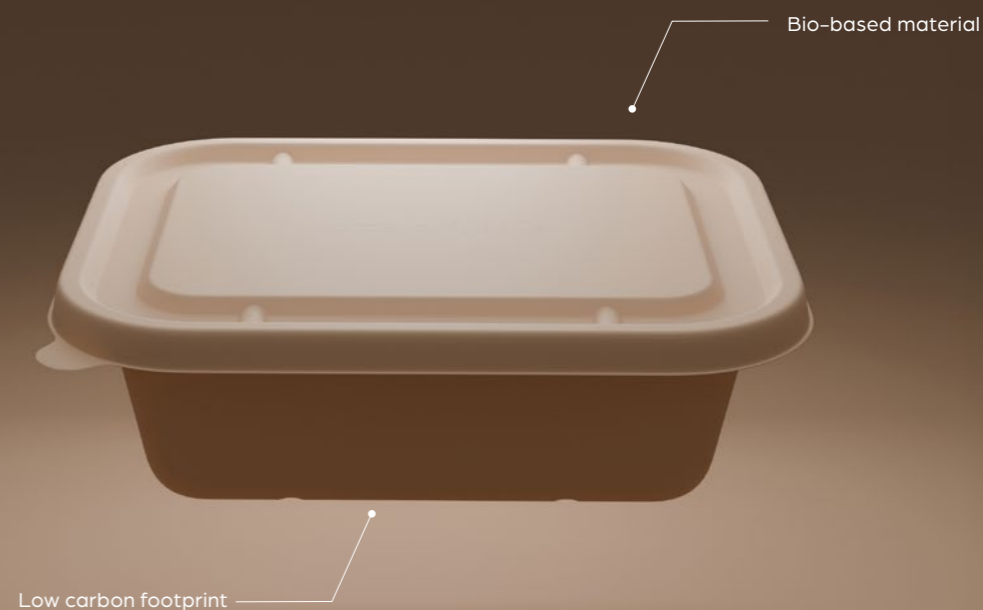
# Degrafoil Flow 1.7

The bio-based Flow 1.7 from Finnish company Sulapac is a sustainable and functional natural fiber compound for thermoforming. The material combines the functionality of plastic with the advantages of fibrous materials. The foil is bio-based, industrially compostable, and has a low carbon footprint.

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PRODUCT DESCRIPTION

SULAPAC FLOW 1.7



Foil thickness

350–1200  $\mu\text{m}$

Density

1.26  $\text{g}/\text{cm}^3$

**THERMOFORMING  
SETTINGS**

Pre-heating cabinet – **Not required**  
Foil temperature  $\approx$  130–180°C

Foil width

up to 1450 mm

Shrinkage

0.3–1%

Scan for product specifications



## FEATURES

Food approved  
Freezable  
Compostable  
Recyclable

## OPTIONS

ESD

## APPEARANCE

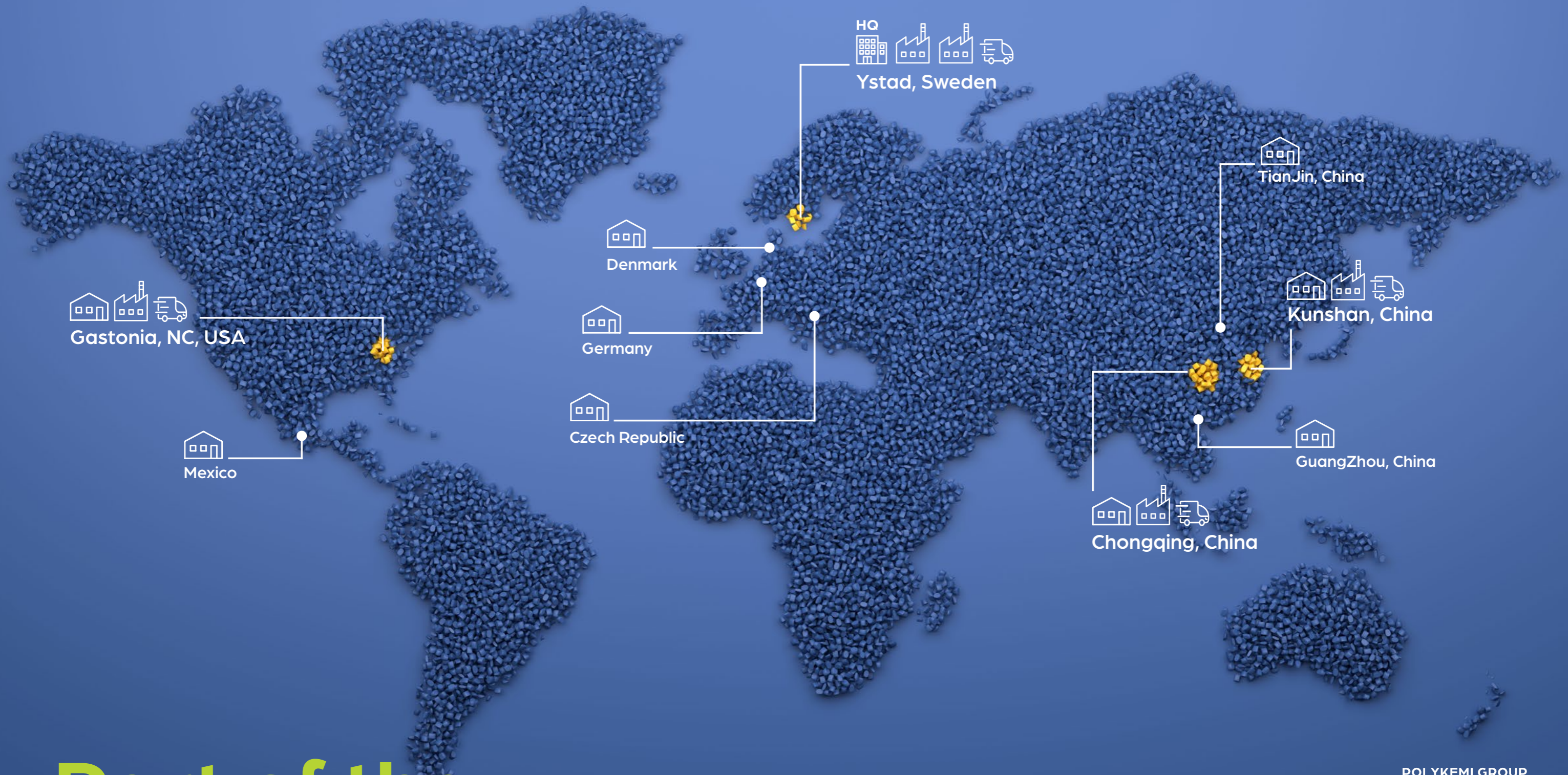
Clear  
Colored



**RECYCLED**  
30% PIR = 1,10  $\text{kg CO}_2\text{e}/\text{kg}$

**VIRGIN**  
1,43  $\text{kg CO}_2\text{e}/\text{kg}$

MADE WITH  
**SULAPAC**  
LIKE NATURE



# Part of the Polykemi Group

POLYKEMI GROUP

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