

PEBO

plastic materials • since 1987

PEBolen

**POLYETHYLENE
COMPOUND**

recycle
for a
Better
future

2022

Curiosity

One plastic bottle can endure in water or on the ground for one thousand years.



USE
LESS
PLASTIC

1kg

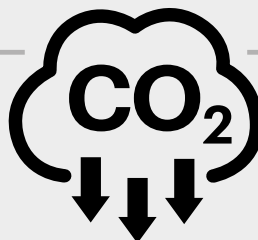
of recycled plastic



=

300

100 watt light bulbs
turned on for 1 hour



recovers **30kW/h**

Recycling

PEBO was amongst the first European companies to start producing compounds originating from recycled plastic.

Today **PEBO** continues its mission aimed at avoiding that a precious element such as plastic becomes a serious environmental hazard.

PEBO regenerates 50.000 tons of Polyethylene per year. This annual output strongly contributes to saving energy, reducing CO₂ emission in the atmosphere and especially avoiding the phenomenon of plastic dispersion into the environment.

PEBO purchases waste plastic materials that come from the industrial sector and garbage collection.

PEBO transforms the waste in "second life plastic raw materials" through a process of volumetric reduction and washing (using filtered water in a closed circuit).

The material is compounded with the scope of obtaining a new material ready to be used for the manufacturing of industrial products.





PEBO was established in 1987 in Tuscany with the aim of producing the highest quality compound, starting from recycling plastic waste.

The company sits on a 30.000 m² site and employs more than 50 people that run:

- **Advanced compounding lines**
- **Integrated shredding, grinding and washing system**
- **Grinded scraps high technology washing line with a water decontamination system**
- **High Tech Laboratory**
- **Optical colour sorting machine**

Thanks to our avant-garde laboratory, we are in a position to select and guarantee high quality compounds for extrusion & blow moulding and for special application.

PEBO is equipped with machinery and instruments to become a 4.0 industry.
Experience, reliability and quality are the success of our company.



Our company

Our new machineries

1. Compounding line with pelletizer under water and stripping system (production capacity 2.500 kg/hr)
2. Optical colour sorting machine
3. Robotic palletizer: it is able to handle 25 kg bags and big bags (capacity:10.000 kg/hr)

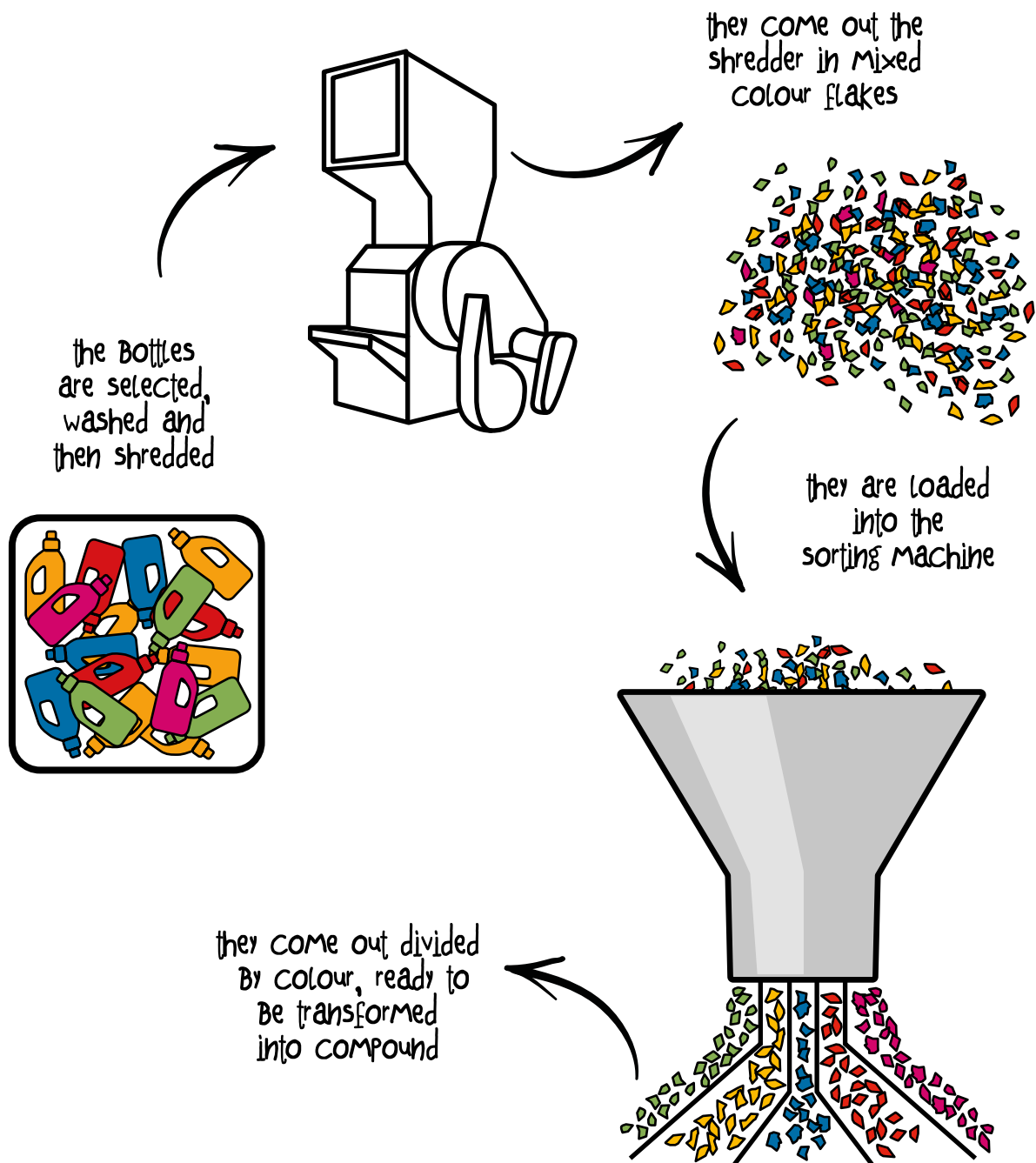
Material delivery options

Resin compound can be delivered in three options:

- 25 kg bags on 110 × 130 cm pallets
- 1000 -1200 kg Big Bags on 100 × 100 cm pallets
- 25,000 kg bulk



Optical sorting colour machine



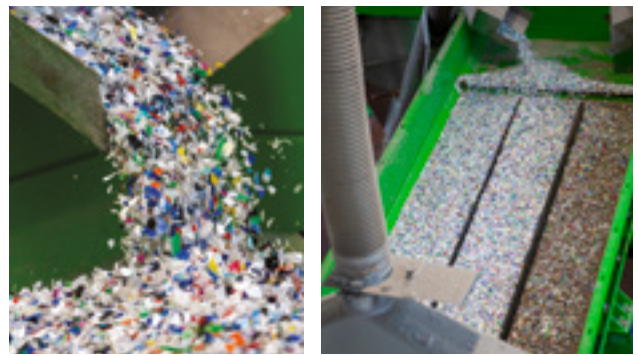


Optical sorting is essential in any plastic processing operation as it helps you to achieve a purer quality of products. Our sorting equipment uses a range of technologies including cameras, lighting and machine learning software. It can sort and remove product defects and foreign materials by colour, shape and texture.

Our product tracking software accurately classifies each grain as either accepted or rejected, minimizing recirculation of unclassified granules. This helps to reduce energy consumption, wear on ejectors, and downtime from clearing product build-up.

The optical sorter is equipped to remove typical defects in HDPE (milk bottles, bottle caps, detergent and shampoo bottles) such as coloured PE and PP, packaging labels, aluminium and wood to help us meet the requirements to obtain near pure resin streams.

This machinery helps us to obtain better colour sorted materials, to produce granules with a more homogeneous and constant colour for each supply.



Our quality

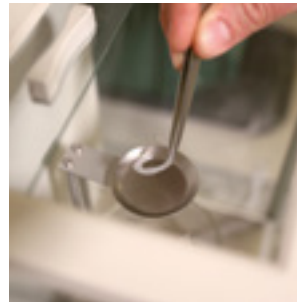
The Laboratory is the heart of **PEBO** success. Thanks to its sophisticated technology and skilled technicians, **PEBO** guarantees a constant quality control of the production processes and of the compound, from the first stage of production up to the final shipment. The secret of **PEBO** quality is a fine selection of raw materials and its accurate blending before extrusion.

testing lab

TYPE OF TEST	SCOPE
M.F.I. Method ISO 1133 Unit g/10min	Certifies the fluidity of the material
DENSITY (g/cm ³)	Certifies the density of the materials. The product can be classified as either high or low density
D.S.C. (min)	To identify contamination of different materials: for example percentage of polypropylene
O.I.T. (min)	Resistance to oxidation aging
HUMIDITY (ppm)	To check the presence of water
TGA Carbon black content (%) Inorganic fillers (%)	To check the percentage of carbon black content and inorganic fillers
FTIR	To identify the type of plastic

Lab analysis are carried out on resin compound before shipment and quality certificates are supplied with shipping documents.

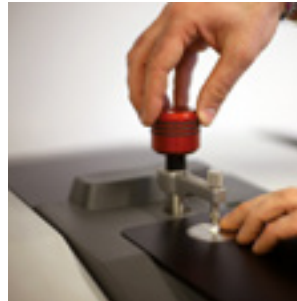
Density



DSC
differential scanning calorimetry



FTIR
spectrometer

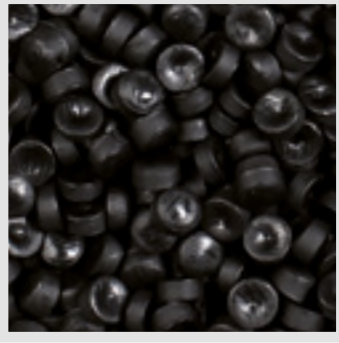


Modular melt flow index tester



Karl fisher coulometer





PEBOlen

HDPE 6100



COMPOSITION: HIGH DENSITY POLYETHYLENE
COLOR: black, light grey, red, blue, dark grey, white and matt
APPLICATION: bottles and tanks

PROPERTY	UNIT	VALUE	TEST METHOD
MELT FLOW RATE*			
190°C - 2.16 kg	g/10 min	0.25 - 0.65	ISO 1133
190°C - 5 kg	g/10 min	1 - 2.5	ISO 1133
VOLUMETRIC MASS*	g/cm ³	0.955 - 0.975	ISO 1183
MELTING POINT	°C	130 - 135	DSC
CARBON BLACK*	%	2 - 2.5%	ISO 6964
TENSILE STRAIN AT BREAK	%	> 450	ISO 527-1:2012
TENSILE STRENGTH AT BREAK	Mpa	20 - 26	ISO 527-1:2012
O.I.T. 200°C*	minutes	-----	ISO 11357-6
HUMIDITY	ppm	< 600	Karl Fischer
SMELL	typical regenerated materials smell more or less intense depending on the batch		
OTHER POLYMERS	%	PP < 6 %	DSC
ASH, METALS	slight traces in the formulations of the original products		
PACKAGING	approx 1250 kg big bag, tank truck, 25 kg bags on pallet		

Product Notes:

Produced with post-industrial and post-consumer recycled materials, added with carbon black, which increases its UV resistance.

NOT SUITABLE FOR FOOD CONTACT.

All the information contained in this sheet is purely indicative; therefore, it is advisable to always contact the company for requests, particular uses and different and / or customized formulations.

* these parameters can be changed according to customers requests.





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Company subject to management and coordination by HB Boscarini S.p.A.



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Ancona

Pesaro

Bologna



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