LABORPLAST

Recycled PVC

Compound

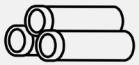
New life to PVC

since 1958

Leader in Italy and Europe, Laborplast operates in the production of recycled PVC cores and compound and PVC rods.

Laborplast S.p.A. was founded in 1958 in a small factory in Sacconago - Busto Arsizio, in the province of Varese.

More than
60 EMPLOYEES



30,000 TONNES
of raw material
processed

6,500 Kg
production capacity per hour

35,000 m²
area

12
production lines

Products

Giving new life to **PVC**

Laborplast produces 3 main types of products:

RECYCLED PVC

Cores

Mainly intended for winding flexible packaging,
agricultural sheeting and non-woven fabrics.

RECYCLED PVC

Compound

Intended to produce extruded and moulded items
for the construction and manufacturing sectors.

PVC

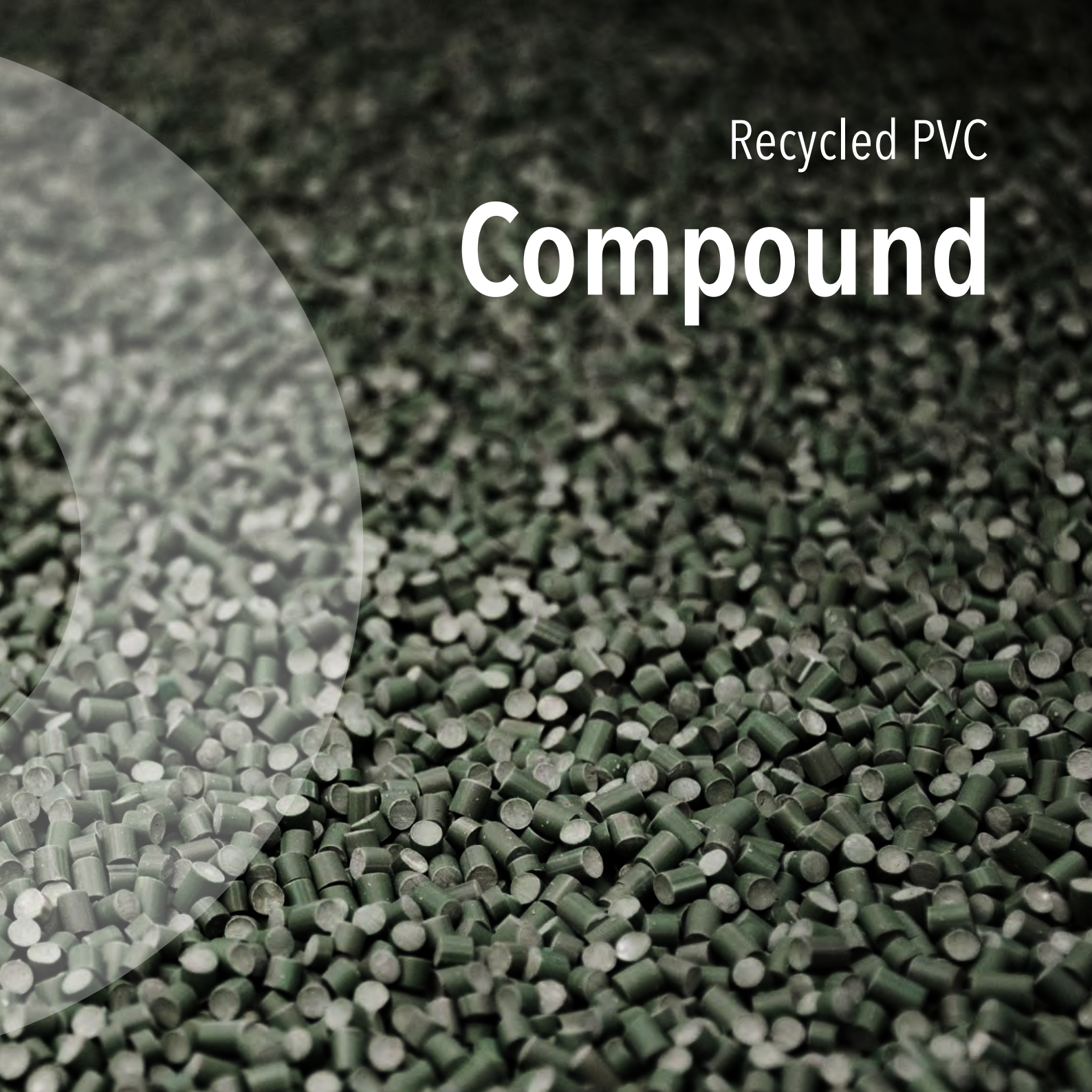
Rods

They are used for various applications:
mechanical, chemical, electrical and design.

Laborplast supplies 100% Second Life Plastic certified micronized PVC for pipe and profile extrusion (1-M).

Laboratory

Since 2017, **an in-house lab for physical-mechanical, rheological and colorimetric tests** has allowed the testing of compression, tensile, three-point bending, MVR, MFR, VST, HDT, Charpy and Izod impact resistance, thermal stability, rheology, molecular composition of materials.



Recycled PVC

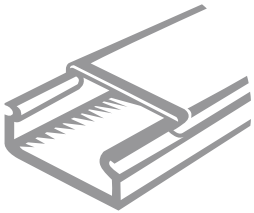
Compound

Recycled rigid PVC compound is a versatile product, used as a raw material for processing various manufactured products. This material's strength lies in its ability to combine PVC compound technical performance with the need to use environmentally friendly products.

With its know-how, its R&D department ready to analyse new requests and its laboratory that checks products' technical features, Laborplast provides specific formulations based on the customer's needs.

The resulting compound is suitable for pipes and profiles extrusion and injection moulding processes. Compound filtration varies on the intended use: from a minimum of 80 microns for compounds intended to produce extruded items with low thickness or moulded parts, to a maximum of 500 microns for the extrusion of items with a high thickness.

Each production batch is tested in our in-house laboratory before being shipped to the customer.



UPVC-EPR COMPOUND

for profile extrusion

UPVC-EPR COMPOUND for profile extrusion

UPVC-EPR compound is intended for the extrusion of profiles with thicknesses between 0.8 mm and 15 mm and designed to obtain a high-quality product, comparable to profiles extruded using a virgin compound, at a competitive price and with less environmental impact.

UPVC-EPR formulations are predominantly made from milled post-industrial profiles, window profiles, calendered and thermoformed products. Calcium carbonate is added in variable percentages to optimise the product's mechanical properties. During the process, additives such as paraffin waxes, Ca/Zn stabilisers and shock-absorbing agents are used to improve the product's processability and technical performance.

This compound's main applications are technical profiles, spiral pipes, electrical conduits, sheet piling, and building profiles.

PROPERTIES	UM	VALUE	TOLERANCE	METHOD
Density	(G/CM^3)	1.45	± 0.8	ISO 1183-1
Traction modulus	(MPA)	2700	± 500	ISO 527-1
Yield strength	(MPA)	36	± 4	ISO 527-1
Tensile strength	(MPA)	27	± 4	ISO 527-1
Elongation at break	(%)	40	± 10	ISO 527-1
Flexural modulus	(MPA)	2600	± 500	ISO 178
Flexural strength	(MPA)	57	± 5	ISO 178
MFR	(G/10min)	20	± 10	ISO 1133/G
MVR	(CM^3/10min)	15	± 10	ISO 1133/G
Vicat softening temperature (VST)	(°C)	76	± 4	ISO 306/B
HDT	(°C)	58	± 4	ISO 75/C
Impact resistance	kJ/m^2	9	± 0.5	ISO 180/5.55
Thermal stability	min.	55	± 10	ISO 182-3

Minimum recycled percentage: 40% for the "UPVC-RI-EPR" category | 30% for the "UPVC-PR-EPR" category

The values specified are examples and not exhaustive and are closely linked to the technology used to obtain the sample. They differ according to the formulation.

UPVC-EPI COMPOUND

for pipe extrusion

UPVC-EPI COMPOUND for pipe extrusion

UPVC-EPI compound is intended for pipe extrusion and designed to achieve a high-quality product at a competitive price. UPVC-EPI formulations are predominantly made from mills deriving from pipes, mandrels and thick post-industrial and post-consumer profiles. Calcium carbonate is added in variable percentages to optimise the product's mechanical properties.

During the process, additives such as paraffin waxes, Ca/Zn stabilisers and shock-absorbing agents are used to improve processability and technical features. By varying the filtration and gelling degree, different categories of compound are obtained to produce 1 to 20 mm-thick items. There are formulations to produce items of greater thickness (e.g., solid and perforated bars).

This compound's main applications are cores/mandrels for winding, pipes for construction and plant engineering, and profiles for high thickness construction.

PROPERTIES	UM	VALUE	TOLERANCE	METHOD
Density	(G/CM^3)	1.50	± 0.8	ISO 1183-1
Traction modulus	(MPA)	2900	± 500	ISO 527-1
Yield strength	(MPA)	34	± 4	ISO 527-1
Tensile strength	(MPA)	26	± 4	ISO 527-1
Elongation at break	(%)	30	± 10	ISO 527-1
Flexural modulus	(MPA)	2800	± 500	ISO 178
Flexural strength	(MPA)	55	± 5	ISO 178
MFR	(G/10min)	15	± 5	ISO 1133/G
MVR	(CM^3/10min)	10	± 5	ISO 1133/G
Vicat softening temperature (VST)	(°C)	77	± 4	ISO 306/B
HDT	(°C)	60	± 4	ISO 75/C
Impact resistance	kJ/m^2	7	± 0.5	ISO 180/5.55
Thermal stability	min.	55	± 10	ISO 182-3

Minimum recycled percentage: 40% for the "UPVC-RI-EPI" category | 30% for the "UPVC-PR-EPI" category

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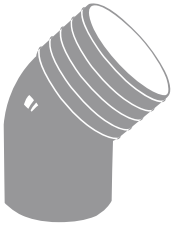

UPVC-INJ COMPOUND

for injection moulding

UPVC-INJ COMPOUND for injection moulding

UPVC-INJ compound is used to produce injection-moulded items and designed to obtain a product with excellent aesthetic features without impacting ease of processing or mechanical performance.

UPVC-INJ formulations are predominantly made from milled post-industrial window profiles, calendered, thermoformed and injection-moulded items.

During the process, additives such as paraffin waxes, Ca/Zn stabilisers and shock-absorbing agents are used to improve the product's processability and technical performance.

This compound's main applications are technical items and construction fittings.

PROPERTIES	UM	VALUE	TOLERANCE	METHOD
Density	(G/CM^3)	1.40	± 0.8	ISO 1183-1
Traction modulus	(MPA)	2200	± 200	ISO 527-1
Yield strength	(MPA)	40	± 5	ISO 527-1
Tensile strength	(MPA)	25	± 5	ISO 527-1
Elongation at break	(%)	100	± 30	ISO 527-1
Flexural modulus	(MPA)	2000	± 200	ISO 178
Flexural strength	(MPA)	55	± 3	ISO 178
MFR	(G/10min)	30	± 5	ISO 1133/G
MVR	(CM^3/10min)	20	± 5	ISO 1133/G
Vicat softening temperature (VST)	(°C)	73	± 4	ISO 306/B
HDT	(°C)	53	± 4	ISO 75/C
Impact resistance	kJ/m^2	11	± 0.5	ISO 180/5.55
Thermal stability	min.	60	± 10	ISO 182-3

Minimum recycled percentage: 50% for the "UPVC-RI-INJ" category | 30% for the "UPVC-PR-INJ" category

The values specified are examples and not exhaustive and are closely linked to the technology used to obtain the sample. They differ according to the formulation.

COMPOUND PPVC

plasticized
for extrusion and
injection moulding

COMPOUND PPVC plasticized for extrusion and injection moulding

PPVC compounds are designed for the extrusion and injection moulding of different types of products and formulated to obtain a high-quality product, similar to virgin compounds, at a competitive price and with a lower environmental impact.

PPVC formulations are mainly made of post-industrial regrinds from cables, synthetic leather, gaskets and hoses. Plasticizers, calcium carbonate, lubricants and Ca/Zn stabilizers are used to improve the processability and mechanical properties of the product.

Upon request, it is also possible to study compounds with specific additives to improve the performance of the product under special conditions (e.g. UV, flame and high temperature resistance).

This compound's main applications are: hoses, footwear, gaskets, flooring, cables and membranes/ geomembranes.

PROPERTIES	UM	VALUES RANGE	METHOD
Hardness	Sh. A	50 — 90	ISO 868
Density	(g/cm^3)	1.38 – 1.48	ISO 1183-1
Elongation at break	(%)	100 – 300	ISO 527-1
Thermal stability	min.	30 - 100	ISO 182-3

Minimum recycled percentage: 30% for "PPVC-RI" category | 10% for "PPVC-PR" category

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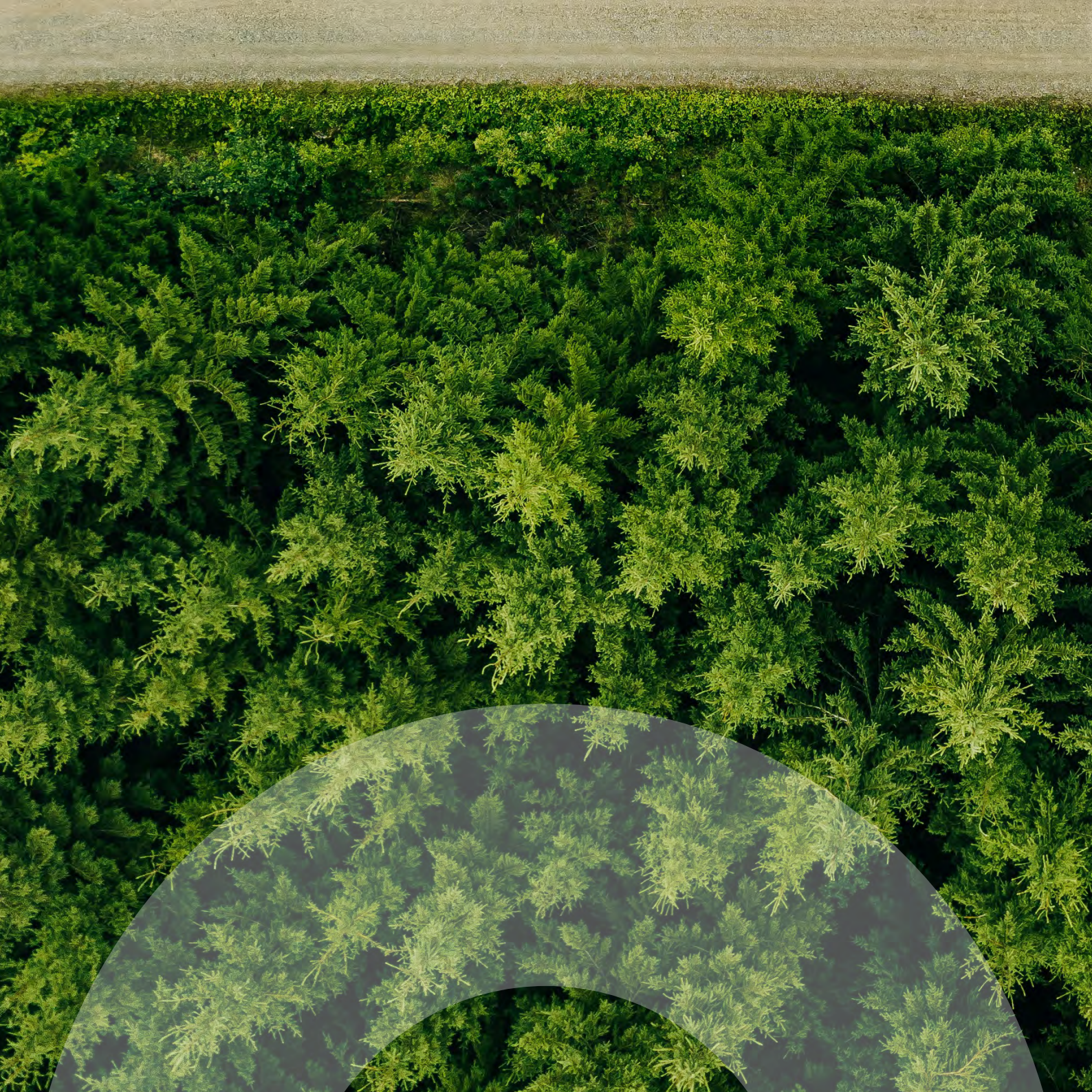

Sustainability

Sustainability is our everyday business

People, Planet, Profit

Sustainability is a challenge that sees Laborplast at the forefront in addressing the environmental and social impact on its employees and the external community.

Laborplast sees future as the result of a joint project, where sustainability is systemic and directly involves environmental, social and economic development. This is known as the 3P Strategy, or “Triple Bottom Line”.

Certifications

PLASTIC SECOND LIFE Mix Eco

This certification identifies products obtained from recycled plastic materials from separate collection and/or industrial waste.
Particularly, Laborplast guarantees the following percentages:

- **30%** for UPVC-PR-EPI, UPVC-PR-EPR, UPVC-PR-INJ compounds
- **40%** for 1-T-RI cores and UPVC-RI-EPI compounds
- **40%** for UPVC-RI-EPR compounds
- **50%** for UPVC-RI-INJ compounds

ISCC PLUS Certificate

awarded by the Italian Institute of Plastics, attests that Laborplast complies with the requirements of the certification system ISCC PIÙ - International Sustainability and Carbon Certification.

ISO 9001:2015
(Quality)

ISO 14001:2015
(Environment)

ISO 45001:2023
(Health and Safety)

ISO 50001:2018
(Energy)

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