

PRODUCT CATALOGUE



100% RECYCLED PLASTIC
100% RENEWABLE ENERGY



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Plastiz is an Italian startup created in response to environmental and social emergencies caused by the **growing invasion of plastic waste**. It is a concrete contribution to circular economic processes where plastic waste is reused for the production of **high-quality surfaces and semi-finished products**.

MISSION



The goal of Plastiz is to raise awareness, promote engagement, stimulate thinking and foster responsiveness to the **plastic problem, circular economy and sustainable entrepreneurship**. Through its processes, products and educational activities, Plastiz intends to offer a change in the perception of plastic among citizens, companies, and institutions.

Plastiz is a company with zero environmental impact.

We regenerate plastic materials that today would have been dispersed into nature, thrown into a landfill, or burned.

The recycling process gives a second life to this material. In addition, the production **only uses energy from renewable sources**.

IMPACT



THE MATERIAL

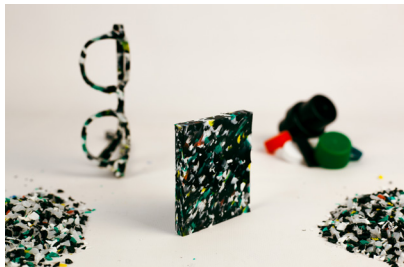
We buy plastic coming from **post-consumer and industrial waste transformed into granules** (End of Waste). Furthermore, we look for plastic **scraps from industrial productions**.

A second source of plastics supply is our community.



Common citizens respond to our awareness-raising campaigns and decide to bring us caps, bottles, and toys that they no longer use and to which they want to give a second life. Or we buy them from **non-profit organizations** that collect plastic waste from citizens.

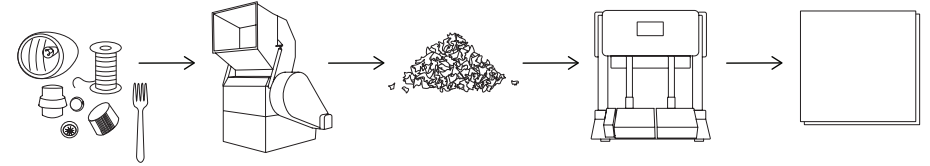
CIRCULAR PROCESS



Plastiz's products are designed to enhance waste from other products to be returned to the production cycle.

All our panels are **monopolymers**, and they do not contain additives nor paints to ensure their recyclability. At the end of their use, they can be **brought back to us** to be re-valued.

PRODUCTION PROCESS



Plastiz's production **differs from others due to the possibility of defining the texture before the production process**. The granulated polymers are arranged on metal plates depending on the texture of the desired final panel. The material becomes consistent and compact while thermo-pressed and then moving in the cooling stage.

INDUSTRIAL INNOVATION



Precious Plastic - an international open hardware plastic recycling project which provides a series of machines and tools for the creation of new products out of recycled plastic on a small scale - served as a starting point to inspire activities for Research and Development.

We developed our own technology and machines that allow the **production of 250 x 125 cm panels** with the objective to optimize the production process and make it sustainable.



PREMIUM

The Premium collection is produced from 100% recycled plastics. The six polymers used for the collection **are the most common types of thermoplastics and they can be recycled again**. The collection is available to be ordered in different thicknesses and guaranteed in high quality.



CUSTOM

Custom surfaces are created in **collaboration with partners and customers**, by using the material they propose or to suit their specific color requirements and texture.

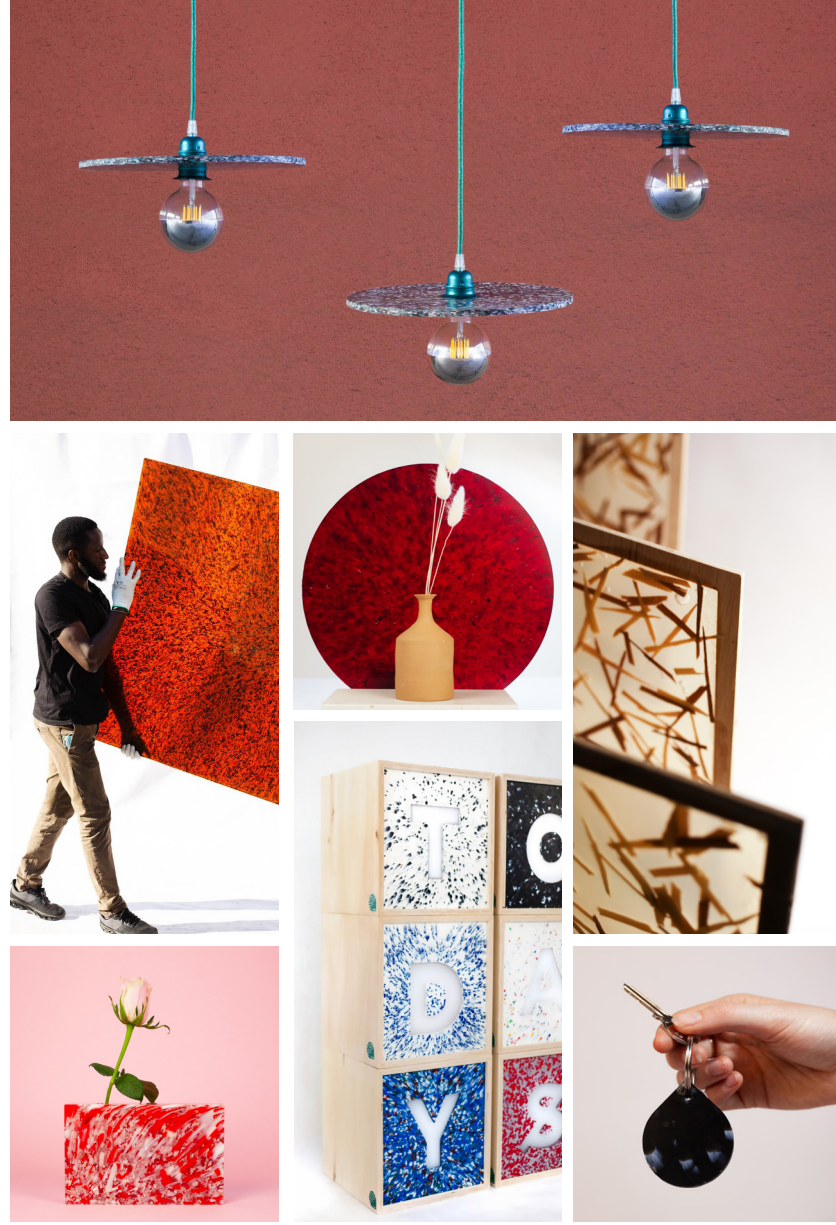
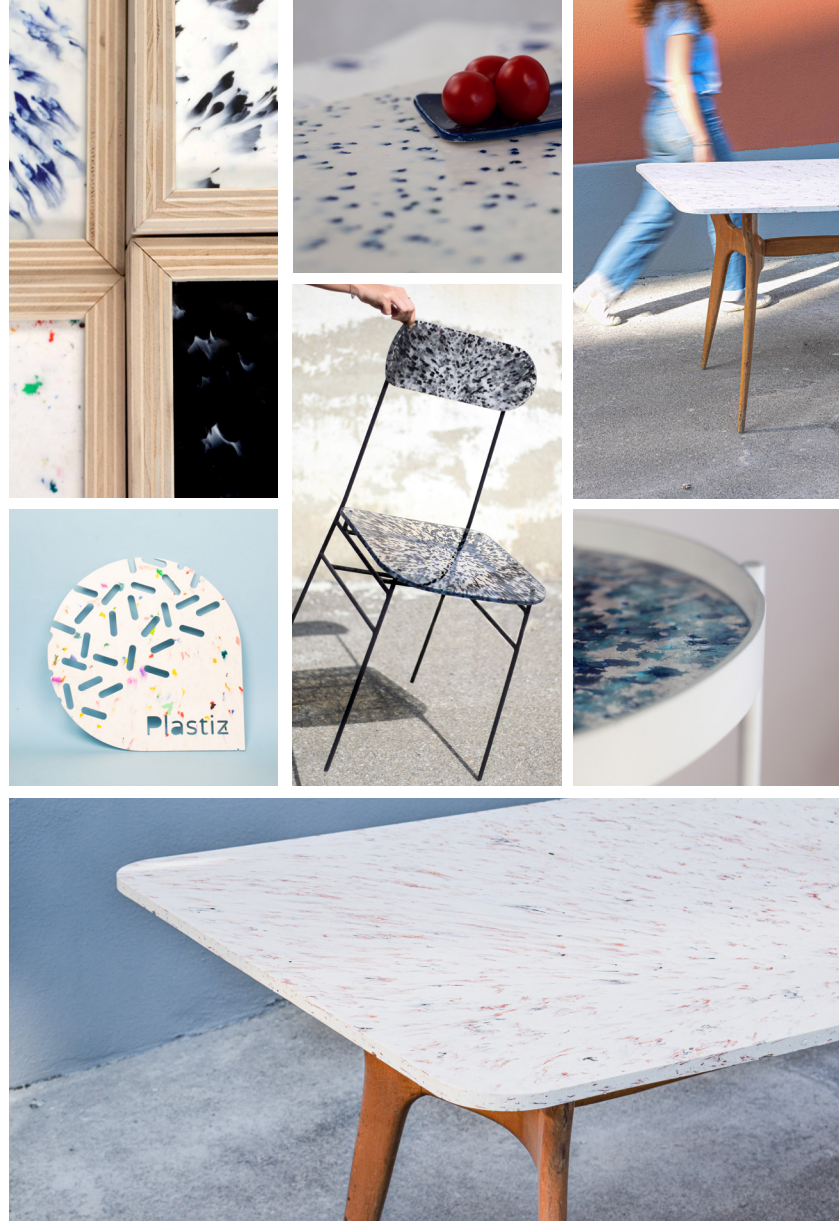


INSANE

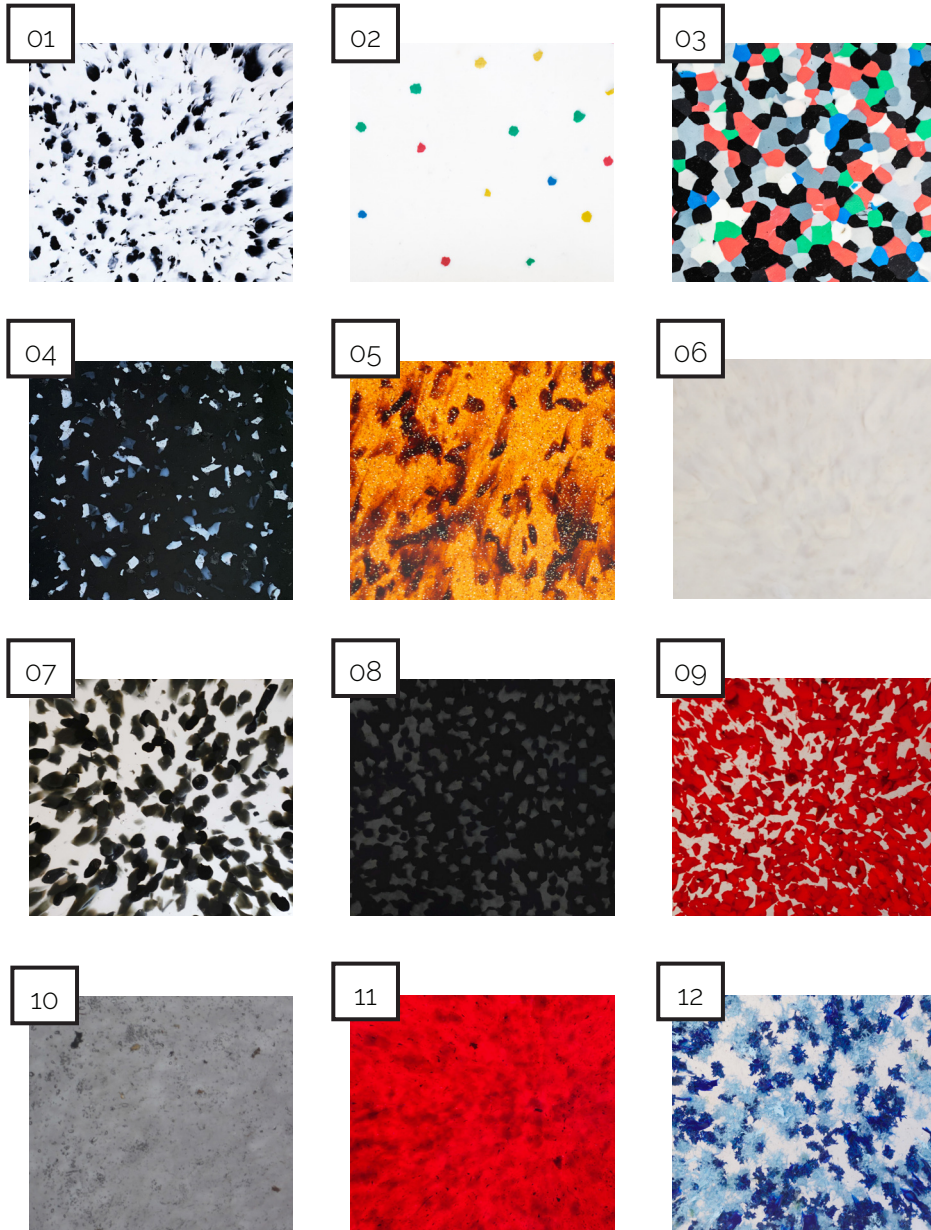
Insane surfaces are the **result of our research activity**, by testing new plastic materials and production processes.

We value your plastic materials to produce surfaces and semi-finished products





THE TEXTURES OF THE PREMIUM COLLECTION



<p>01</p> <p>PONGO</p> <p>HDPE</p> <p>Base in white plastic caps with black spots like the Dalmatian's mantle</p>	<p>02</p> <p>CARNEVALE</p> <p>HDPE</p> <p>Base in white caps with confetti colored plastic</p>	<p>03</p> <p>VORONOI</p> <p>HDPE</p> <p>Geometric texture made with Sertene®, granules form post-consumer plastic</p>
<p>04</p> <p>MARQUINIA</p> <p>PS</p> <p>Mince of industrial by-product similar to marble</p>	<p>05</p> <p>CARETTA</p> <p>PS</p> <p>Sweet's packaging transformed into amber-colored panels</p>	<p>06</p> <p>POPCORN</p> <p>PS</p> <p>White tinted panel created by using disposable cutlery</p>
<p>07</p> <p>GIRINO</p> <p>PS</p> <p>Transparent like water with gray and black dots</p>	<p>08</p> <p>ETNA</p> <p>PS</p> <p>Dark panel created from plastic spoons mince</p>	<p>09</p> <p>RIBES</p> <p>PS</p> <p>Red mince of glasses, cutlery, and toys on a transparent base recalling berries</p>
<p>10</p> <p>FUMÉ</p> <p>SAN</p> <p>From food containers to a smoky gray panel</p>	<p>11</p> <p>CRASH</p> <p>PMMA</p> <p>Intense Red panel created from the rear lights of motor vehicles</p>	<p>12</p> <p>MONET</p> <p>PET-G</p> <p>Blue shades on a panel inspired by the impressionist brushstrokes</p>

HDPE

POLYMER

High-Density Polyethylene (HDPE) is a thermoplastic polymer obtained from the polymerization of ethylene. It is one of the most processed and used, and it constitutes the largest fraction of the world's consumption of polymers.

Physical properties

Density [g/cc].....0.937-1.06

Thermal properties

Softening temperature (C°).....74.0-134

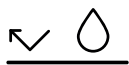
Thermal conductivity(W/m-K).....0.288-0.480

Mechanical properties

Hardness, Rockwell R.....60.0-70.0

Elastic modulus [GPa].....0.655-1.10

Impact resistance, Notched [J/cm].....5.30-7.50



Compact surface



Impact resistant



Possibility of soft touch finish



Excellent resistance to scratches and abrasions



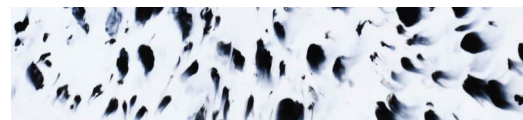
Suitable for both outdoor and indoor environments



Easy to clean and maintain

ORIGIN'S MATERIAL

We use high-density polyethylene that comes mainly from post-consumer plastics, such as caps and bottles. Some of it is also waste from industrial pipe production.



PONGO

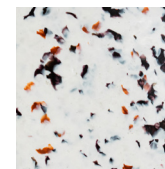


VORONOI



CARNEVALE

CUSTOM



PS

POLYMER

Polystyrene is the polymer of styrene. At room temperature it is a glassy solid; above its glass transition temperature, about 100 °C, it acquires plasticity and can flow.

Physical properties

Density [g/cc].....0.0130-1.18

Thermal properties

Softening temperature(C°).....70.0-108

Thermal conductivity (W/m-K).....0.17

Mechanical properties

Hardness, Rockwell R.....71.0-120

Elastic modulus [GPa].....0.303-3.55

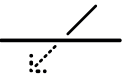
Impact resistance, Notched [J/cm].....0.107-2.14



Polished, rough or satin finish.



Vitreous texture



Also transparent



Good resistance to scratches and abrasions



Suitable for both outdoor and indoor environments



Easy to clean and maintain

MATERIAL'S ORIGINS

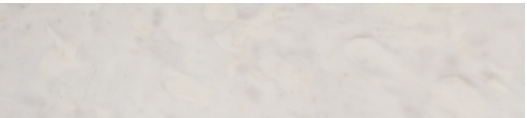
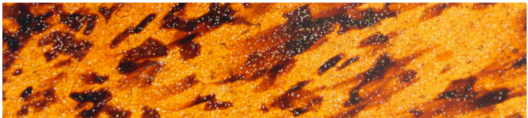
We use recycled polystyrene from industrial production scraps or post-consumer waste. For example, in our collection, some panels are created with disposable cutlery, candy stands, and reels.



MARQUINIA



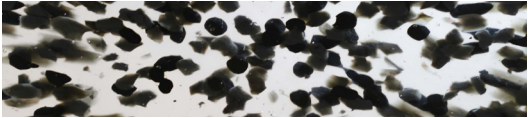
CARETTA



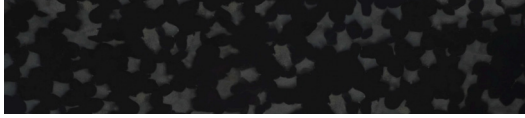
POPCORN



GIRINO



PS

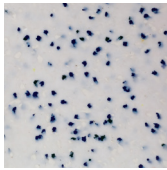
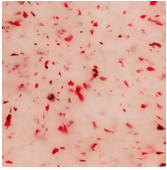


ETNA

RIBES



CUSTOM



SAN

POLYMER

Styrene Acrylonitrile is the acrylonitrile-styrene copolymer, also known as SAN. It is used as a substitute for Polystyrene because it has better thermal resistance.

Physical properties

Density [g/cc].....1.07-1.08

Thermal properties

Softening temperature (C°).....99.0-111

Thermal conductivity (W/m-K).....0.17

Mechanical properties

Hardness, Rockwell R.....70.0-125

Elastic modulus [GPa].....3.17-4.71

Impact resistance, Notched [J/cm].....0.107-0.294



Polished, rough
or satin finish.



Vitreous texture



Great heat
resistance



Similar to
smoked glass



Transparent



Easy to clean
and maintain

MATERIAL'S ORIGINS

Our SAN comes from the scraps of an injection molding process, where the polymer is used for the production of transparent containers.



FUMÉ

PMMA

POLYMER

PMMA is a transparent thermoplastic polymer. PMMA can be considered the lighter alternative to glass thanks to its aesthetics of transparency and scratch resistance.

Physical properties

Density[g/cc].....0.700-1.30

Thermal properties

Softening temperature (C°).....58.3-119

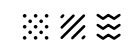
Thermal conductivity(W/m-K).....0.187-0.216

Mechanical properties

Hardness, Rockwell R.....69

Elastic modulus[GPa].....0.950-3.79

Impact resistance, Notched [J/cm].....0.118-1.47



Polished, rough
or satin finish.



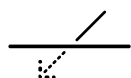
Vitreous texture



Compact
surface



High resistance
to cutting and
shaping



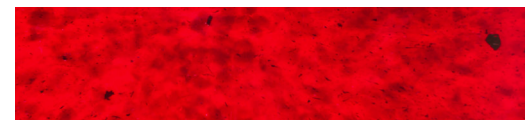
Transparent



Easy to clean
and maintain

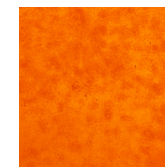
MATERIAL'S ORIGINS

We wanted a panel that could connect us to the industrial story of our city, known for the Italian automotive industry. We recycle PMMA to create "Crash" from the waste of vehicles' rear lights.



CRASH

CUSTOM



PET-G

POLYMER

Glycol-modified polyester (G) is a thermoplastic that can be 100% recycled, with the same chemical composition as polyethylene terephthalate (PET). Glycol is added to make the plastic more resistant and increase its service life.

Physical properties

Density[g/cc].....1.18-1.33

Thermal properties

Softening temperature (C°).....70.0-85.0

Thermal conductivity(W/m-K).....0.162-0.255

Mechanical properties

Hardness, Rockwell R.....104-119

Elastic modulus [GPa].....1.10-20.3

Impact resistance, Notched [J/cm].....0.267-5340



Polished, rough or satin finish.



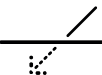
Vitreous texture



Milky appearance



Great resistance to scratches and abrasions



Transparent



Easy to clean and maintain

MATERIAL'S ORIGINS

An artistic panel produced by rigid and transparent packaging coming from municipal waste



BIOPLASTICS

T O T H E F U T U R E

Bioplastics are **biodegradable and compostable** materials.

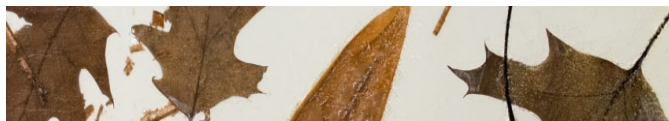
Through research, Plastiz wants to include these materials in its collection.

M A T E R I A L ' S O R I G I N S

Sugar and wood are the only materials in this organic panel. The 100% biobased biopolymer is a product of sugar cane waste, in which we added wood fragments recovered from the production of Izmade.



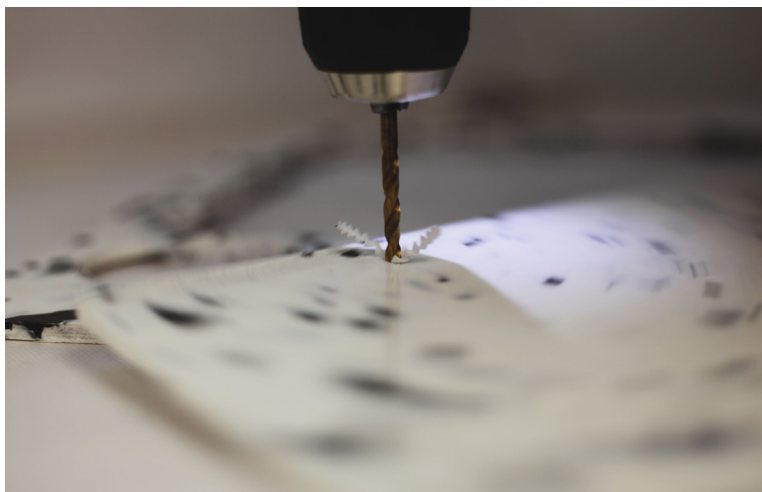
BIOPLASTICS



We combine
bioplastics and organic
materials coming from
nature or waste from
the food industry,
and much more

Bioplastica: PLA with wood waste





WORKABILITY

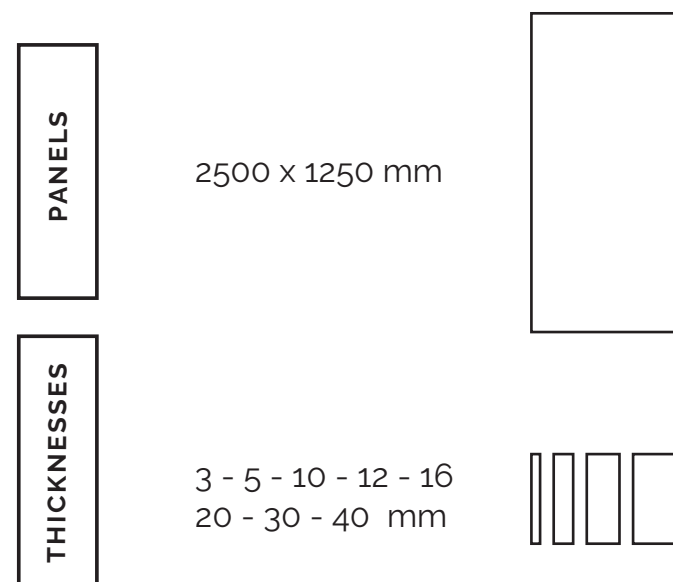
Panels can be sectioned into profiles, cut, and milled - even with numerical control machines - thermoformed and glued.

Thanks to **Izmade** we are able to process internally the material to make semi-finished and finished products

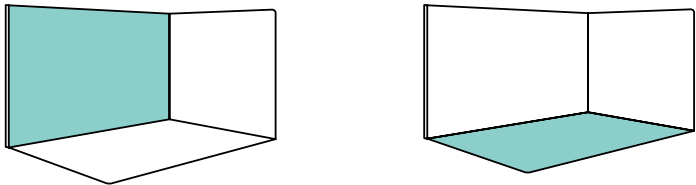
More information on www.izmade.com

FORMAT

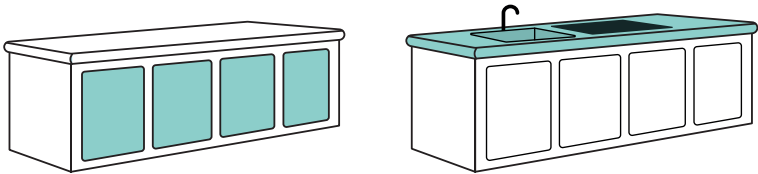
Plastiz's main semi-finished product is the panel, produced in three standard sizes: 29 x 21 centimeters, 40 x 40 centimeters and 250 x 125 centimeters. The thickness can vary from 3 to 40 millimeters. Dimensions and thickness of the semi-finished panel can be discussed on request. It is also possible to supply semi-finished products and elements of further shapes.



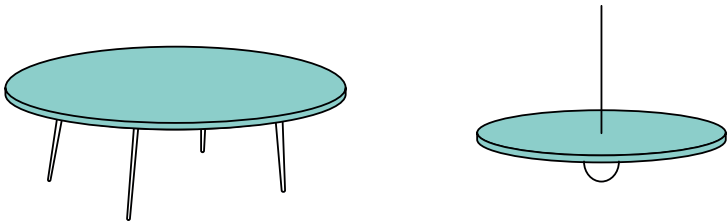
SURFACES



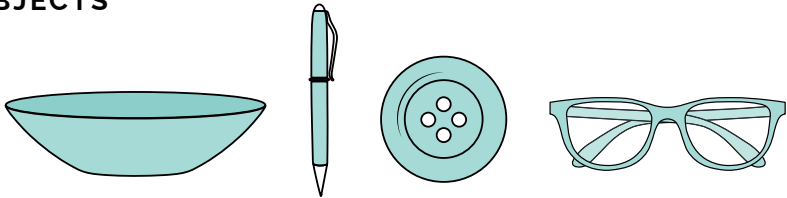
COATINGS







FURNISHINGS



OBJECTS



	 Scratch and abrasion resistance	 Resistance to solvents	 UV resistance	 Heat resistance
HDPE	●●●●○	●●●●●	●●●○○	●●●○○
PS	●●●○○	●●●●●	●●●○○	●●○○○
PET-G	●●●●●	●●●●●	●●●●○	●●●●●
SAN	●●○○○	●●●●●	●●●○○	●●●●○
PMMA	●●○○○	●●●●●	●●●●●	●●●○○

The table refers to qualitative and quantitative tests carried out internally. Specifically, **resistance to solvents** was evaluated with weak acids and bases in everyday use. The **heat resistance** evaluations refer to an internal experiment in which the panels were subjected to progressively prolonged contact with objects heated to high temperatures (>150°C).

SOCIAL IMPACT ACTIVITIES

EVENT

To generate social impact, Plastiz participates in initiatives, and projects involving citizens, associations and public institutions.

Raising awareness on environmental protection, circular economy, and sustainable entrepreneurship, as **elements to foster more responsible social behaviors**, are the themes promoted by Plastiz.



TRAINING AND EDUCATION

Plastiz organizes training and **educational events for schools, companies, and institutions**, promoting an ethic of responsibility and providing tools for conscious management of plastic waste.



The workshop includes an **activity to discover plastics**, their history and diffusion, and a **creative laboratory** where the recycling process of the material is reproduced.

TEAM BUILDING

The team building experience proposed by Plastiz involves groups in a stimulating and **creative personal plastic recycling activity from everyday objects**.

Plastics and their processing are the tool to create a shared learning environment, stimulate collaboration among the members and develop their creativity.



MAKERSPACE

As part of the **Precious Plastic Universe**, you can rent our Makerspace for the production of 40 x 40 cm panels of recycled plastics. Users can contribute to the project, shred their own plastic, and process it for their own creations.



The design of trolley machines allows us to carry out all the social impact activities at our own premises or at host locations.



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Plastiz