

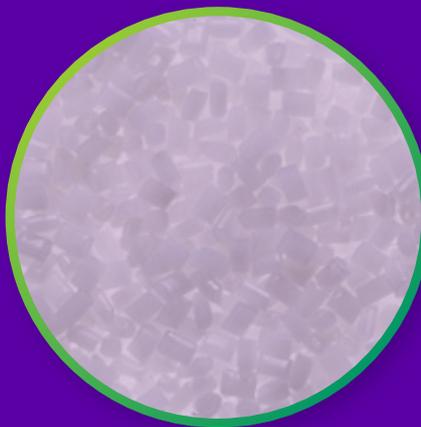
Building a circular future

Based on a Circular Economy model, at **Braskem Idesa** we produce and deliver a solution to the market: mixtures of recycled materials and virgin resins which will be produced and supplied in collaboration with local recyclers.

For this reason, we continue to innovating the processes that allow us to develop chemical and plastic solutions that will help build a circular future and generate a better impact on the environment and society.

This new solution is composed of:

Recycled material
(HDPE, LDPE or PP)



Virgin material
(HDPE, LDPE or PP)

It reinforces our values, beliefs and commitment to the sustainable development of the country.

In addition, this important development positions us as the first Mexican company to offer a high-quality solution that contributes to the Circular Economy, which is part of the portfolio of.



The history of Braskem Idesa

Created in 2010, it's an association in which Braskem participates, the biggest producer of thermoplastic resins and leader in America, and Grupo Idesa, one of the main Mexican business groups. Together the companies lead the **Braskem Idesa** complex, which focuses on the development and implementation of a petrochemical complex for the production of polyethylene in Nanchital, Veracruz.

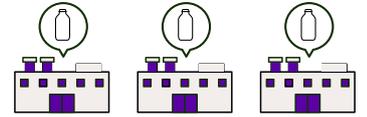




Investment:
USD 5,200
millions

ANNUAL PRODUCTION:

1 million 50 thousand TONS
of High and Low Density Polyethylene



3 PLANTS

2 of High Density and
1 of Low Density



COMPETITIVENESS

**CUTTING
EDGE
TECHNOLOGY**

**ETHANE IN GAS AS
RAW MATERIAL**

Best features
vs. liquid.



**IDEAL
INFRASTRUCTURE**

Ports, railways,
roads.

WORLD SCALE

Cracker of 1 million
tons/year and
Plants from 300 to
450 thousand
tons/year.

Main benefits

of our PCR resin **vs.** Recycling

- Allows the use in high performance applications
- Lot-to-lot quality
- Traceability throughout the process
- Reduction of carbon footprint and energy consumption

Also our PCR resins are solutions with social and environmental impact (circularity of plastic).





Process diagram

Building a circular future





1

COLLECTION



Compilation of HDPE in collection centers and purchase from gatherers, who separate it before coming into contact with household garbage.

Material **verification**.

2



Elimination of containers **NOT made with natural HDPE**.

Pressing, bale formation and transport to the Alcamare plant.

CLASSIFICATION

The process starts with:

1st Separation of containers and spin to remove: lids, ring and labels.
2nd Separation by different material and color (FTIR Technology).

Separation of non-ferrous materials.

Packaging grinding.

3

Elimination of organic residues with a detergent that is subsequently eliminated.
Separation of materials of different density.



WASH

Rinse and remove detergent residue and moisture.

Storage.

4

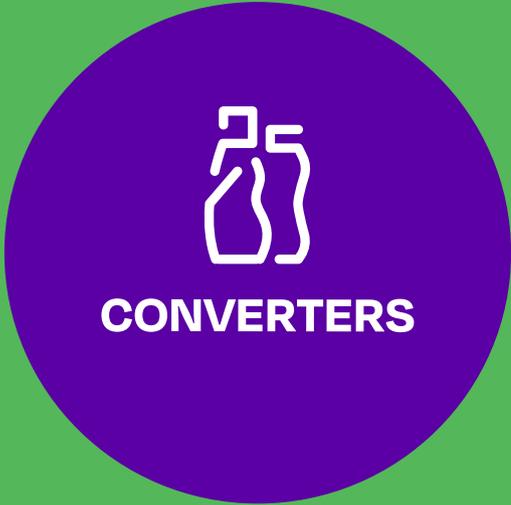


RECYCLING

Extrusion of the processed material and the **HDPE** virgin resin, ensuring that their proportions are correct.

Elimination of possible residues, fine pellets and agglomerates.

Packaged in 1-ton **super sacks** approx.



Braskem Idesa

Shipping to distribution centers

Product packaging by the logistics provider according to customer needs.

HDPE

PRODUCT	MELT FLOW RATE (G/10MIN @190 °C/2.16 KG)	DENSITY (G/CM ³)	PCR TYPE	% PCR	ESCR ² (IGEPAL 100%)
RPR 3A1 NL	0.38	0.955	Natural	30%	1000 h
RPR 5A1 WE	0.4	0.955	Natural	50%	118 h
RPR 7A1 NL	0.18	0.955	Natural	70%	123 h
RPR OA2 WE	0.44	0.963	White	100%	10 h
RPR OA2 GN	0.44	0.963	Green	100%	10 h
RPR OA2 BL	0.44	0.963	Blue	100%	10 h
RPR OA2 RD	0.44	0.963	Red	100%	10 h
RPR OA2 GY	0.47	0.959	Mixed Color	100%	13 h
RPR 3G2 WE	5.0	0.957	White	30%	5 h

LDPE

PRODUCT	MELT FLOW RATE (G/10MIN @190 °C/2.16 KG)	DENSITY (G/CM ³)	PCR TYPE	% PCR	HAZE
RPL 5C1 NL	1.85	0.921	Natural	50%	7.6%
RPL 5A1 NL	0.6	0.921	Natural	50%	22%
RPL OC2 NL	1.25	0.927	Natural	100%	18.2%

PP

PRODUCT	MELT FLOW RATE (G/10MIN @190 °C/5 KG)	PCR TYPE	% PCR
RPH OE1 NL	2.5	Natural	100%
RPI008	8	Natural	25%





le Future → Sustainable Future
Sustainable Future → le Future

**Sustaining
Solutions
that Promote a
Circular Economy**