Sustainable solutions in polyolefins

Towards a Circular Economy

REPSOL Reciclex
Innovating for a sustainable world

At Repsol, we believe in the circular economy. We focus our innovation solely on our customers’ needs to create highly differentiated products compliant with even the strictest standards.

Our Repsol Reciclex® range of sustainable polyolefins comprehends over 30 grades with a high content of mechanically recycled material; a full Repsol range from chemical recycling and an entire polyolefin bio-based range, including first-generation Bio (1G) from sustainably sourced crops, and second-generation bio-based circular polyolefins (2G) from renewable waste.

Our mechanically recycled materials deliver outstanding technical performance certified by the Recyclass standard and are adapted to the different application needs.

Our ISCC Plus certified circular polyolefins from chemically recycled plastic waste and bio-based ranges maintain the same properties and quality as the original raw materials.

Sustainability is essential to our forward-looking vision and the shared commitment undertaken by everyone at Repsol to become net zero emissions by 2050.

Join us!
Repsol. A global multi-energy company

With over 8 decades of experience

We are leading the energy transition by being the first company in the energy sector to set the goal of reaching net zero emissions by 2050.

Present throughout the energy value chain, the company employs 24,000 people worldwide and distributes its products in nearly 100 countries. Customer-focused product and services portfolio meets all consumer needs of around 24 million customers, whether at home or on the move.
Chemicals

Repsol manufactures a wide variety of products, ranging from base petrochemicals to derivatives

**Base petrochemicals:** ethylene, propylene, butadiene, and benzene.

**Intermediate products:** styrene, propylene oxide, polyether polyols, and propylene glycols.

**Polyolefins:** polypropylene [PP] and PP compounds, both high and low density polyethylene [HDPE and LDPE], metallocene linear low density polyethylene [mLLDPE], ethylene vinyl acetate [EVA] and ethylene butyl acrylate [EBA] copolymers.

**Over 100 scientists and researchers working for you**
Including qualified personnel specialized on Product Stewardship.

Repsol’s commitment to R&D is evidence of the company’s aim to attain business excellence to meet future horizons.

**Added value**
Repsol’s Chemicals Division, with a high degree of integration, focuses its strategy on the constant generation of value through differentiated products and services.
Working for a more sustainable future

At Repsol, we believe in the circular economy, and we run specific projects that minimize the environmental impact of our materials. To this end, we are committed to making our industrial processes increasingly efficient and reducing the carbon footprint of our polymers.

We have a specialized circular economy department dedicated to recycling post-consumer materials to drive development of new materials offering solutions based on innovative polyolefins with recycled content.

We use recycled plastics in critical applications, creating new markets for plastic waste and driving circularity by giving that waste a new use. As a result, we offer a wide range of polyolefins with recycled content that deliver excellent engineering performance certified under Recyclass.

We have circular polyolefins obtained by incorporating pyrolysis oil, from chemically recycled plastic waste not suitable for mechanical recycling, together with virgin feedstock into our petrochemical process, reducing the consumption of non-renewable resources. These circular polyolefins have the same properties and quality as virgin material and hold Food Contact Approval.

We have obtained ISCC PLUS certification for circular and traceable polyolefins that use plastic waste as raw material.

Furthermore, we offer a full Repsol Reciclex® ISCC Plus Certified Polyolefin Bio-based range, including first-generation Bio [1G] from sustainably sourced crops, following the ISCC EU 202 best environmental, social, and economic practices; and second-generation bio-based circular polyolefins [2G] from renewable waste.

Moreover, our wide range of polyolefins is 100% recyclable. Our ambition is to recycle by 2030 the equivalent of 20% of the polyolefins we produce to support, in conjunction with the other initiatives in Repsol’s circular economy strategy, the goal we announced in December 2019: to reach net zero emissions by 2050.

To contribute to the company’s emissions neutrality goal, our chemicals business has launched its 3030 Plan, intended to cut our carbon intensity by 30% by 2030.

Advancing the circular economy and lowering carbon intensity in our chemicals business will contribute towards transforming Repsol’s industrial operations, as well as developing high-value-added raw materials, making it possible to manufacture an infinite number of products that improve human well-being, safety, and quality of life while enhancing the environment.
Repsol Reciclex® range

Advancing the sustainability circle

- **Repsol Reciclex® products** support our clients in their sustainability goals in a comprehensive way.

- With three ranges to support each project in a personalized way.

- With a vocation to continue advancing and supporting the goal of **zero net emissions**.
How do we name our sustainable grades?

All our mechanical & chemical recycling grades are branded under Repsol Reciclex®.

**Mechanical recycling** grades equivalent to standard grades include RX in their nomenclature.

- For **LDPE/LLPE/HDPE** grades
  Repsol Reciclex® 00RXYYY, i.e.: Repsol Reciclex® 70RX5203 (incorporating 70% recycled content)

- For **PP** grades
  Repsol Reciclex® RXP/RXYYY, i.e.: Repsol Reciclex® RX52BG00

**Chemical recycling** grades equivalent to standard grades include CIRC before their regular nomenclature Repsol Reciclex® CIRCYYYYYY, i.e.

- Repsol Primeva® P28400 ↔ Repsol Reciclex® CIRC P28400

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**MECHANICAL RECYCLING**

- Over 30 grades with high proportions of recycled content.
- Applications in film, rigid packaging, auto, blow molding, compounding and others.
- Non-food applications.
- Low carbon footprint.
- Recycal traceability certificate.
- Consistent quality and homogeneity.
- 100% recyclable.

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**CHEMICAL RECYCLING**

- 100% recycled plastic raw material.
- Completes the material life cycle.
- Full Repsol range across all applications.
- Same properties as standard range.
- Suitable for sensitive applications: food, hygiene and medical use.
- Low carbon footprint.
- ISCC Plus certificate.
- 100% recyclable.

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The range that fosters circularity

Advancing towards a circular economy
How do we name our sustainable grades?

All our bio-based grades are branded under Repsol Reciclex®:

- **Bio (1G)** grades equivalent to standard grades include BIO to their regular nomenclature Repsol Reciclex® BIOYYYYY, i.e.: Repsol Primeva® P28400 > Repsol Reciclex® BIO P28400

- **Bio Circular (2G)** grades equivalent to standard grades include CBIO to their regular nomenclature Repsol Reciclex® CBIOYYYYY, i.e.: Repsol Primeva® P28400 > Repsol Reciclex® CBIO P28400

**The negative carbon footprint polyolefin range**

**Advancing towards a circular economy**

**BIO-BASED**

- Ranges includes (Bio 1G) Bio vegetable origin made from sustainable crops (palm oil, soja oil, shea nuts oil and, [Bio 2G] Bio Circular, bio-waste origin, i.e., EVA made from vegetable oil or animal waste like UCO’s or brown animal grease.

- Complies with all Food Safety regulations and, like the rest of our range, they are 100% recyclable to close the circle of sustainability.

- 100% bio-based.


- Suitable for food, hygiene and medical use.

- 100% recyclable.

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We are embarking on partnerships to find solutions together. We are committed to innovating to increase the circularity and efficient use of plastic materials.

- Incorporating mechanically and chemically recycled plastics.
- Giving plastic waste a new life to avoid it ending up in landfill.
- Reducing fossil raw material consumption.
- Reducing carbon footprint.
- Committing to technical requirements.
- Helping to meet voluntary commitments and legislative targets.

Close to 30 grades of Repsol Reciclex®

Flexible packaging
Injection molding
Fibers molding
Caps and closures
Blow molding
Sheet & general extrusion
Wire & cable
100% recycled material

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# Flexible packaging

## LDPE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>LLDEP content (%)</th>
<th>MFI (g/10 min, 190 ºC/2.16 kg)</th>
<th>Density (kg/m²)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>50RX2404F</td>
<td>50</td>
<td>PE033/2203F</td>
<td>Natural</td>
<td>15-25</td>
<td>0.4</td>
<td>924</td>
<td>Thin shrink film, medium duty industrial bags, films for general packaging.</td>
</tr>
<tr>
<td>70RX2805F</td>
<td>70</td>
<td>2805F</td>
<td>Natural</td>
<td>35-45</td>
<td>0.8</td>
<td>925</td>
<td>Shrink film, medium duty industrial bags, films for general packaging.</td>
</tr>
<tr>
<td>80RX3235G</td>
<td>60</td>
<td>3235FGA</td>
<td>Natural</td>
<td>35-45</td>
<td>2</td>
<td>923</td>
<td>Hygiene overwrap films and easy tear films.</td>
</tr>
<tr>
<td>80RX2310F</td>
<td>80</td>
<td></td>
<td>Natural</td>
<td>40-50</td>
<td>1</td>
<td>921</td>
<td>Packaging and medium-capacity bags.</td>
</tr>
<tr>
<td>85RX2310F</td>
<td>85</td>
<td></td>
<td>Natural</td>
<td>45-55</td>
<td>1</td>
<td>921</td>
<td>Packaging and medium-capacity bags.</td>
</tr>
</tbody>
</table>

## LLDPE/mLLDPE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>LLDPE content (%)</th>
<th>MFI (g/10 min, 190 ºC/2.16 kg)</th>
<th>Density (kg/m²)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>70RX2110G</td>
<td>70</td>
<td>MF1810FG</td>
<td>Natural</td>
<td>70-85</td>
<td>1</td>
<td>923</td>
<td>Carrier bags, refuse bags with demanding properties.</td>
</tr>
<tr>
<td>72RX2110F</td>
<td>72</td>
<td>MF1810F</td>
<td>Natural</td>
<td>70-85</td>
<td>1</td>
<td>923</td>
<td>Medium duty industrial bags, films for general packaging.</td>
</tr>
<tr>
<td>55RX1830F</td>
<td>55</td>
<td>MF1835F</td>
<td>Natural</td>
<td>85-95</td>
<td>3</td>
<td>918</td>
<td>Stretch film.</td>
</tr>
</tbody>
</table>

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**Sustainability**
Materials that incorporate plastic post-consumer waste lower the carbon footprint.

**Less energy**
High fluidity, excellent processability.

**Downgauging**
Film thickness reduction.

**Blow molding**

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Flexible packaging

LDPE

Monomaterial solutions that facilitate the recyclability of industrial film. They incorporate post-consumer recycled materials, improving their sustainability and maintaining excellent properties.

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## Blow molding

### HDPE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material (%)</th>
<th>Similar reference</th>
<th>Color</th>
<th>MFI (g/10 min)</th>
<th>Density (kg/m³)</th>
<th>Tensile strength at break (MPa)</th>
<th>ESCR (h)</th>
<th>Flexural modulus (MPa)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>50RX5503</td>
<td>50</td>
<td>5503</td>
<td>Natural and grey</td>
<td>0.25 *</td>
<td>955</td>
<td>20</td>
<td>100</td>
<td>1100</td>
<td>Blow molded containers up to 10 liters for liquid detergents and chemicals.</td>
</tr>
<tr>
<td>70RX5203</td>
<td>70</td>
<td>5203</td>
<td>Natural</td>
<td>0.25 *</td>
<td>955</td>
<td>20</td>
<td>60</td>
<td>1100</td>
<td>Blow molded containers up to 10 liters for liquid detergents and chemicals.</td>
</tr>
<tr>
<td>100RX5203G</td>
<td>100</td>
<td>5203</td>
<td>Grey</td>
<td>0.3 *</td>
<td>955</td>
<td>17</td>
<td>40</td>
<td>1150</td>
<td>Blow molded containers up to 10 liters for liquid detergents and chemicals.</td>
</tr>
<tr>
<td>80RX55050</td>
<td>80</td>
<td>55050</td>
<td>Light grey</td>
<td>10.5 **</td>
<td>960</td>
<td>25</td>
<td>200</td>
<td>950</td>
<td>Blow molding of jerrycan containers and industrial packaging for ADR.</td>
</tr>
</tbody>
</table>

* MFI (190 ºC / 2.16 kg)
** MFI (190 ºC / 21.6 kg)

### Carbon footprint saving

The results are based on Repsol internal study, has not undergone ISO critical reviews.

![Carbon footprint saving graph](image)

**Reference HDPE**

- 50RX5503: 0.88
- 70RX5203: 0.88
- 100RX5203G: 0.88
- 80RX55050: 0.88

**Carbon footprint saving**

- 50RX5503: 32%
- 70RX5203: 51%
- 100RX5203G: 69%
- 80RX55050: 58%
Injection molding

Polypropylene

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>MFI (g/10 min)</th>
<th>Density (kg/m³)</th>
<th>Flexural modulus (MPa)</th>
<th>Charpy impact strength 23ºC, notched (kJ/m²)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXP48AH000</td>
<td>40 (%) PCR</td>
<td>PP080G2M Light grey (RAL 7038)</td>
<td>Light grey</td>
<td>16</td>
<td>905</td>
<td>1550</td>
<td>4</td>
<td>Containers and rigid packaging, garden, and domestic furniture, base product for compounds, caps, and closures.</td>
</tr>
<tr>
<td>RXP52BH000</td>
<td>50 (%) PCR</td>
<td>PB170G2M Light grey (RAL 7038)</td>
<td>Light grey</td>
<td>10</td>
<td>910</td>
<td>1100</td>
<td>10</td>
<td>Domestic and leisure furniture, square boxes and round storage containers for consumer appliances, flowerpots, buckets.</td>
</tr>
<tr>
<td>RXP49AG000</td>
<td>40 (%) PCR</td>
<td>PB190G2M Light grey (RAL 7038) and dark grey (RAL 9016)</td>
<td>Light grey and ivory (RAL 9016)</td>
<td>30</td>
<td>905</td>
<td>1200</td>
<td>7.9</td>
<td>Domestic and leisure furniture, square boxes and round storage containers for consumer appliances, flowerpots, buckets.</td>
</tr>
<tr>
<td>RXP50AT000 / RXP50AT790</td>
<td>50 (%) PCR</td>
<td>PB196K1M Light grey (RAL 7038)</td>
<td>Light grey (RAL 7038) and ivory (RAL 9016)</td>
<td>40</td>
<td>935</td>
<td>1450</td>
<td>4</td>
<td>Domestic and leisure furniture, square boxes and round storage containers for consumer appliances, flowerpots, buckets.</td>
</tr>
<tr>
<td>RXP80AT000</td>
<td>80 (%) PCR</td>
<td>PB190G2M Light grey (RAL 7038)</td>
<td>Light grey (RAL 7038)</td>
<td>40</td>
<td>940</td>
<td>1200</td>
<td>4.5</td>
<td>Domestic and leisure furniture, square boxes and round storage containers for consumer appliances, flowerpots, buckets.</td>
</tr>
<tr>
<td>SRXPP091I</td>
<td>50 (%) PCR</td>
<td>Black</td>
<td>Black</td>
<td>35</td>
<td>3000</td>
<td></td>
<td>4</td>
<td>Automotive and structural parts; under the bonnet parts subjected to severe mechanical stresses (light housings, heat, and ventilation housings, filters), technical pieces, and furniture.</td>
</tr>
<tr>
<td>RXP77AT000</td>
<td>80 (%) PCR</td>
<td>Black</td>
<td>Black</td>
<td>12</td>
<td>1600</td>
<td></td>
<td>4.5</td>
<td>Pallets, furniture, and technical parts, in general.</td>
</tr>
</tbody>
</table>

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Carbon footprint saving

The results are based on Repsol internal study; has not undergone ISO critical reviews.

Reference PP: Repsol Polypropylene

-22% RXP48AH000
-26% RXP52BH000
-22% RXP49AG000
-32% RXP50AT000 / RXP50AT790
-21% RXP80AT000
-61% SRXPP091I
-55% RXP77AT000
-64% RXP50AT000
## Sheet and general extrusion

### Polypropylene

<table>
<thead>
<tr>
<th>Grade</th>
<th>Type of recycled material</th>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>MFI</th>
<th>Density</th>
<th>Flexural modulus</th>
<th>Charpy impact strength</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXPS28G000</td>
<td>PCR</td>
<td>50</td>
<td>PB130G1F</td>
<td>RAL 7038</td>
<td>1.5</td>
<td>910</td>
<td>1400</td>
<td>10</td>
<td>Sheet extrusion. Boards and profiles.</td>
</tr>
<tr>
<td>RXIS26G000</td>
<td>PIR</td>
<td>50</td>
<td>PB130G1F</td>
<td>Natural</td>
<td>1</td>
<td>905</td>
<td>1500</td>
<td>10</td>
<td>Sheet extrusion. Boards and profiles.</td>
</tr>
</tbody>
</table>

### Carbon footprint saving

The results are based on Repsol internal study. has not undergone ISO critical reviews.

![Carbon footprint saving graph](carbon_footprint.png)

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Fibers molding
Polypropylene

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<table>
<thead>
<tr>
<th>Grade</th>
<th>Type of recycled material</th>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>MFI (g/10 min) 230 ºC/2,16 kg</th>
<th>Flexural modulus (MPa)</th>
<th>Charpy impact strength (kJ/m²)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXP33AA000</td>
<td>PCR</td>
<td>30</td>
<td>PP020G1E / PP030G1E</td>
<td>Grey</td>
<td>2</td>
<td>1600</td>
<td>5</td>
<td>Monofilament, strap and sheet extrusion.</td>
</tr>
<tr>
<td>RXP39HY000</td>
<td>PR</td>
<td>30</td>
<td>PP086Y3E</td>
<td>Natural</td>
<td>25</td>
<td>1600</td>
<td>4</td>
<td>Spunbond, BCF and CF.</td>
</tr>
<tr>
<td>RXP59HY000</td>
<td>PR</td>
<td>50</td>
<td>PP086Y3E</td>
<td>Natural</td>
<td>25</td>
<td>1600</td>
<td>4</td>
<td>Spunbond, BCF and CF.</td>
</tr>
</tbody>
</table>

Carbon footprint saving
The results are based on Repsol internal study; has not undergone ISO critical reviews.

- RXP33AA000: 1.38, -15% reduction
- RXP39HY000: 1.38, -15% reduction
- RXP59HY000: 1.16, -29% reduction

New PP grade incorporate recycled material while ensuring consistency in quality and functionality.
Wire & cable

LDPE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material (%)</th>
<th>Similar reference</th>
<th>Color</th>
<th>LLDPE content (%)</th>
<th>MFI  (g/10 min) 190 ºC/2.16 Kg</th>
<th>Density (g/cm³)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>60RX3235G</td>
<td>60</td>
<td>3235FGA</td>
<td>Natural</td>
<td>35-45</td>
<td>2</td>
<td>923</td>
<td>LDPE for jacketing and bedding compounds.</td>
</tr>
</tbody>
</table>

LLDPE/mLLDPE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material (%)</th>
<th>Similar reference</th>
<th>Color</th>
<th>LLDPE content (%)</th>
<th>MFI  (g/10 min) 190 ºC/2.16 Kg</th>
<th>Density (g/cm³)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>70RX2110G</td>
<td>70</td>
<td>MF1810FG</td>
<td>Natural</td>
<td>70-85</td>
<td>1</td>
<td>923</td>
<td>LLDPE for jacketing and bedding compounds.</td>
</tr>
<tr>
<td>72RX2110F</td>
<td>72</td>
<td>MF1810F</td>
<td>Natural</td>
<td>70-85</td>
<td>1</td>
<td>923</td>
<td>LLDPE for jacketing and bedding compounds.</td>
</tr>
<tr>
<td>55RX1830F</td>
<td>55</td>
<td>MF1835F</td>
<td>Natural</td>
<td>85-95</td>
<td>3</td>
<td>918</td>
<td>LLDPE for jacketing and bedding compounds.</td>
</tr>
</tbody>
</table>

Carbon footprint saving

The results are based on Repsol internal study, has not undergone ISO critical reviews
Caps and closures

Polypropylene

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<table>
<thead>
<tr>
<th>Recycled material</th>
<th>Similar reference</th>
<th>Color</th>
<th>MFI</th>
<th>Density</th>
<th>Flexural modulus</th>
<th>Charpy impact strength</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(%) PCR</td>
<td></td>
<td>[g/10 min]</td>
<td>(g/cm³)</td>
<td>(MPa)</td>
<td>23ºC, notched (kJ/m²)</td>
<td></td>
</tr>
<tr>
<td>RXP96AG000</td>
<td>100</td>
<td>Light grey (RAL 7038)</td>
<td>18-25</td>
<td>915</td>
<td>1000</td>
<td>4.5</td>
<td>Caps and closures / general purpose.</td>
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<td>RXP97AG000</td>
<td>100</td>
<td>Light grey (RAL 7000)</td>
<td>17-27</td>
<td>910</td>
<td>1000</td>
<td>4</td>
<td>Caps and closures / general purpose.</td>
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<tr>
<td>RXP50AT000 / RXP50AT790</td>
<td>50</td>
<td>PB19S1M Light grey (RAL 7038) and white (RAL 9016)</td>
<td>40</td>
<td>935</td>
<td>1450</td>
<td>4</td>
<td>Caps and closures / general purpose.</td>
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</tbody>
</table>

Carbon footprint saving

The results are based on Repsol internal study, has not undergone ISO critical reviews.

[Graph showing carbon footprint saving]
100% Recycled materials

Polypropylene

<table>
<thead>
<tr>
<th>Grade</th>
<th>Recycled material</th>
<th>Color</th>
<th>MFI</th>
<th>Density</th>
<th>Flexural modulus</th>
<th>Charpy impact strength</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>RXP97AG000</td>
<td>100</td>
<td>Light grey (RAL 7038)</td>
<td>17-27</td>
<td>910</td>
<td>1100</td>
<td>4</td>
<td>Auto-formulation of compounding grades, compounding and masterbatch of additives.</td>
</tr>
<tr>
<td>RXP96AG000</td>
<td>100</td>
<td>Light grey (RAL 7038)</td>
<td>18-25</td>
<td>915</td>
<td>1100</td>
<td>4.5</td>
<td>Auto-formulation of compounding grades, compounding and masterbatch of additives.</td>
</tr>
<tr>
<td>RXP99AG000</td>
<td>100</td>
<td>Light grey (RAL 7038)</td>
<td>40-55</td>
<td>915</td>
<td>1100</td>
<td>4</td>
<td>Auto-formulation of compounding grades, compounding and masterbatch of additives.</td>
</tr>
<tr>
<td>RXP95AT000</td>
<td>100</td>
<td>Black</td>
<td>9-15</td>
<td>950</td>
<td>1200</td>
<td>20</td>
<td>Auto-formulation of compounding grades, compounding and masterbatch of additives.</td>
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Carbon footprint saving

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Safety and quality are our priority

Excellence is intrinsic to Repsol’s values. It infuses our daily work and helps guide our decisions and actions, contributing to achieve the commitment made to our customers, stakeholders, employees, suppliers / partners, and society to build a better future.

Petrochemical complexes and logistics centers all have ISO 45001. **We are food safety leaders.** All our facilities are FSSC 22000 certified in recognition of our food safety risk management processes throughout the supply chain.

Technical Data Sheets and MSDS are available on: [www.repsol.com](http://www.repsol.com)

All petrochemical plants are compliant with the current ISO 9001 standards, for the quality of processes from manufacture to distribution, transport management and end product warehousing.

In February 2019 we obtained the ISCC PLUS certification in all our polyolefin production centers. **We are one of the leading companies in the production of circular polyolefins that use recycled plastic waste as raw material,** and this certification is an example of our commitment to promote the Circular Economy of our materials.

**Certifications**

<table>
<thead>
<tr>
<th>Petrochemical plants, plants and logistics</th>
<th>All industrial complex</th>
<th>Puertollano, Tarragona and Monzón plants</th>
<th>Puertollano and Monzón plants</th>
<th>Puertollano, Tarragona and Sines</th>
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</thead>
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<tr>
<td>ISO 45001</td>
<td>FSSC 22000</td>
<td>IATF 16949</td>
<td>Recyclash</td>
<td>ISO 50001 ISO 14001 ISO 14064</td>
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<td>ISCC Plus</td>
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</tbody>
</table>

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Environment

Repsol’s purpose is to become a net-zero emissions company by 2050, and our 2021-2025 Strategic Plan enables us to continue successfully advancing our multi-energy commitment.

We have set up and deployed an ambitious CO₂ program reduction that pursues a 40% reduction in SCOPE 1 & 2 emissions by 2030 [2017 as reference year] and zero emissions before 2050. Energy efficiency programs to reduce energy consumption and GHG emissions are one of the key elements of our strategy in the short term, followed by deep process electrification and CCUS. Biofeedstocks and renewable electricity will have a relevant role in this transition.

These programs pursue long-term targets made public to facilitate their progress by the stakeholders. In this sense, Repsol Química is committed to a reduction of 0.26 million tons per year of GHG emissions in the 2021-2025 Strategic Plan and a 1.3 million tons per year reduction until 2030 with a roadmap to be a net-zero company before 2050.

Regarding SCOPE 3 emissions, Repsol Química will contribute to the CO₂ emissions reduction at the plastics’ end of life with our circularity projects, while we offer sustainable solutions for our clients: 100% recyclable polyolefins.

All petrochemical complexes have ISO 14001 certification for their environmental management and the reduction of the impact of their facilities, and ISO 14064 for the annual verification of greenhouse gas [GHG] emissions. In addition, the chemical area of our complexes in Tarragona [2015], Puertollano [2013], and Sines [2016] has implemented an Energy Management System according to the requirements indicated in the International Standard ISO 50001. This system is dedicated to developing and implementing our organization’s energy policy and managing the energy aspects of our activities, products, or services. The objective is to increase and improve our energy efficiency based on systems implementation aimed at continuous energy performance improvement, thus contributing to more efficient and sustainable energy use.

Repsol Química has released on a yearly frequency the carbon footprint of all its product families since 2020, considering the “cradle to gate” scope based on ISO 14067.
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