Pharmaceutical packaging and medical devices

Polypropylene, polyethylene, and EVA copolymers
Differentiated solutions for the healthcare industry

**Repsol offer**
- High quality products
- Ready to be part of new projects
- Capable of developing tailor-made grades
- Excellent logistics service
- Technical service and development

**Our drive**
- To fulfill our customers’ needs:
- Product reliability and traceability
- Compliance
- Long term commitment

**Commitment**
Dedicated storage facilities and quality management protocols to ensure the highest quality standards.

**Guarantee**

**Service**
Aligning our Quality System with the Good Manufacturing Practices required by the industry.
Repsol. A global multi-energy company

With over 8 decades of experience

It is leading the energy transition with its ambition of achieving zero net emissions by 2050.

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

© REPSOL QUIMICA, S.A. 2024. All rights reserved.
Chemicals

Our goal

To manufacture and sell polyolefins or pharmaceutical packaging and medical devices, offering the maximum quality, service, commitment, and compliance worldwide, keeping the patients’ safety as our number one priority.

Over 40 years of experience producing and selling polyolefins

Growing from our strengths

Over 40 years of experience producing and selling polyolefins with a well-built prestige in Europe.

Three integrated production facilities in the Iberian Peninsula. We have experience launching products with the maximum cleanliness and stringent manipulation procedures.

Food packaging: we supply regularly to the food packaging industry.

Qualified in pharmaceutical applications: Repsol’s propylene glycol USP/EP is qualified and approved for use as an excipient in pharmaceutical applications.
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.

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 are therefore apt for healthcare packaging and medical devices.

We have obtained ISCC PLUS certification for circular and traceable polyolefins that use plastic waste as raw material. Moreover, our wide range of polyolefins is 100% recyclable.

Our ambition is to produce 10% of our polyolefins as biobased and circular products by 2030, a move that will promote the circular economy. This initiative, in conjunction with other initiatives in Repsol’s circular economy strategy, will support the company’s goal of achieving 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.
Because we care. At Repsol we believe that our society needs a transition towards a new Circular Economy, and we are fully committed to developing solutions, minimizing the impact of our polymers on the environment.

We have strengthened our commitment to sustainability by submitting our voluntary pledge in response to the European Commission’s call for stakeholders to come forward with pledges to boost the uptake of recycled plastics. The European Commission target is for 10 million tons of recycled plastics to find their way into products in the EU by 2025.

To meet this ambitious EU target, Repsol has the ambition of recycling the equivalent of 20% of our polyolefin production by 2030. Thanks to Repsol’s commitment, in less than 10 years, 360 kty of plastic waste will be diverted from landfill and will become raw materials to produce new chemical products.
30 grades for healthcare

Polyolefins for pharmaceutical packaging and medical devices

Repsol takes another step in differentiating its solutions and offers.

- A suitable range of polyolefins: high and low density polyethylene (HDPE, LDPE), ethylene vinyl acetate copolymers (EVA) and polypropylene (PP).
- An outstanding and differentiated level of service.
- Eager to continue developing differentiated products.
- We put your needs first, always. Our tailor-made solutions are proof of our commitment to your singular cause.
- Our industry is full of challenges awaiting inspired solutions. That’s where we come in.

Polypropylene homopolymer

Low density polyethylene

Heterophasic polypropylene copolymer

High density polyethylene

Polypropylene random copolymer

EVA copolymer

© REPSOL QUIMICA, S.A. 2024. All rights reserved.
Polypropylene homopolymer

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI</th>
<th>Charpy impact strength notched</th>
<th>Melting point °C</th>
<th>Flexural modulus ISO 1718</th>
<th>Additives</th>
<th>Compliance</th>
<th>Biocompatibility</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPP08G</td>
<td>8</td>
<td>4</td>
<td>164</td>
<td>1500</td>
<td>-</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Pharmaceutical packaging, closures, pouches and medical films.</td>
</tr>
<tr>
<td>HPP09M</td>
<td>9</td>
<td>3</td>
<td>164</td>
<td>1500</td>
<td>Slip agent / Antiblock</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Pharmaceutical packaging, caps and closures.</td>
</tr>
<tr>
<td>HPP12G</td>
<td>12</td>
<td>4</td>
<td>164</td>
<td>1550</td>
<td>-</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Injection molding, caps and closures and pharmaceutical packaging.</td>
</tr>
<tr>
<td>HPP25G</td>
<td>25</td>
<td>3</td>
<td>164</td>
<td>1600</td>
<td>-</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Syringe parts, caps and closures, pharmaceutical packaging, injection molding items.</td>
</tr>
<tr>
<td>HPP25G1</td>
<td>25</td>
<td>4</td>
<td>157</td>
<td>1250</td>
<td>-</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Improved impact resistance. Syringe parts, pharmaceutical packaging, caps and closures, injection molding items.</td>
</tr>
<tr>
<td>HPP40N</td>
<td>40</td>
<td>2.5</td>
<td>164</td>
<td>1700</td>
<td>Nucleating agent</td>
<td>3.1.3/3.1.6</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Thin wall injection molding, labware, dispensers.</td>
</tr>
<tr>
<td>HPP55RMD</td>
<td>55</td>
<td>2.5</td>
<td>164</td>
<td>1900</td>
<td>Clarifying agent / Radiation Resistant *</td>
<td>661.1</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Gamma ray and E-beam resistant high fluidity PP resin. Offers stiffness and excellent transparency.</td>
</tr>
<tr>
<td>HPP55CMD</td>
<td>55</td>
<td>2.5</td>
<td>164</td>
<td>1900</td>
<td>Clarifying agent / Antistatic *</td>
<td>661.1</td>
<td>USP 87 USP Cytotoxicity (Elution Test) USP 88 class VI ISO 10993-4, -5, -6, -10, -11</td>
<td>Injection molding medical applications and labware. Offers stiffness and high transparency.</td>
</tr>
</tbody>
</table>

* Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur) and United States Pharmacopoeia (USP), please contact Repsol’s Technical Service & Development Department atd_poliolefinas@repsol.com

All our polypropylene grades are phthalate free.

The information contained herein is based on REPSOL QUINICA’s current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUINICA declares to have been most diligent when including the information contained herein, taking into account that several and different factors may affect the processing, application or use of the products, the converter shall be responsible in every case for the conditions under which the products are transformed as well as for the final use given to them. REPSOL QUINICA warns that this information may undergo variations or improvements; therefore REPSOL QUINICA is not obliged to reflect these in this document or to communicate them to whomever may have access to it. Moreover, these readers should be aware that some or all of the products might be protected by intellectual property rights. © REPSOL QUINICA, S.A. 2023. All rights reserved.
Heterophasic polypropylene copolymer

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI</th>
<th>Charpy impact strength notched</th>
<th>Melting point °C</th>
<th>Flexural modulus (MPa)</th>
<th>Additives</th>
<th>Compliance</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPB15NMD</td>
<td>15</td>
<td>6</td>
<td>164</td>
<td>1600</td>
<td>Nucleating agent</td>
<td>In composition</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
</tr>
</tbody>
</table>

* Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur.) and United States Pharmacopoeia (USP), please contact Repsol’s Technical Service & Development Department at d_poliolefinas@repsol.com

Polypropylene homopolymer & Heterophasic polypropylene copolymer

The information contained herein is based on REPSOL QUIMICA’s current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUIMICA declares to have been most diligent when including the information contained herein, taking into account that several and different factors may affect the processing, application or use of the products, the converter shall be responsible in every case for the conditions under which the products are transformed as well as for the final use given to them. REPSOL QUIMICA warns that this information may undergo variations or improvements; therefore REPSOL QUIMICA is not obliged to reflect these in this document or to communicate them to whomever may have access to it. Moreover, these readers should be aware that some or all of the products might be protected by intellectual property rights. © REPSOL QUIMICA, S.A. 2024. All rights reserved.
## Polypropylene random copolymer

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI</th>
<th>Charpy impact strength notched</th>
<th>Melting point</th>
<th>Flexural modulus</th>
<th>Additives</th>
<th>Compliance</th>
<th>Biocompatibility</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 1133 g/10 min 210 °C / 2.16 kg</td>
<td>ISO 179 kJ/m²</td>
<td>°C</td>
<td>ISO 179 MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPR02CMD</td>
<td>1.6</td>
<td>&gt;9</td>
<td>143</td>
<td>800</td>
<td>Clarifying agent</td>
<td>+</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Medical packaging, film and pouches, vials.</td>
</tr>
<tr>
<td>HPR02W</td>
<td>1.8</td>
<td>&gt;9</td>
<td>143</td>
<td>800</td>
<td>-</td>
<td>3.1.3 / 3.1.6</td>
<td>661.1 USP B8 class VIISO 10993-4</td>
<td>Large volume parenteral BFS bottles apt for autoclave sterilization at 121°C. Medical packaging, film and pouches. Injection molding items.</td>
</tr>
<tr>
<td>HPR09S</td>
<td>9</td>
<td>8</td>
<td>145</td>
<td>950</td>
<td>Slip agent/ Antiblock</td>
<td>3.1.3 / 3.1.6</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Barefoot grade. Medical packaging, films and pouches. Gamma and E-beam rad.</td>
</tr>
<tr>
<td>HPR09MR</td>
<td>9</td>
<td>7</td>
<td>150</td>
<td>1100</td>
<td>-</td>
<td>3.1.3 / 3.1.6</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Contains slip and antiblock. Medical packaging, labware, caps and closures and ISBM.</td>
</tr>
<tr>
<td>HPA35CMD</td>
<td>30</td>
<td>6</td>
<td>149</td>
<td>1050</td>
<td>Clarifying agent/ Antistatic</td>
<td>*</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Caps and closures, syringe parts, medical device components.</td>
</tr>
<tr>
<td>HPR35AMD</td>
<td>38</td>
<td>6</td>
<td>149</td>
<td>1050</td>
<td>Clarifying agent/ Radiation resistance</td>
<td>*</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Caps and closures, syringe parts, tubes, labware. Gamma and E-beam rad.</td>
</tr>
<tr>
<td>HPR75CMD</td>
<td>75</td>
<td>6</td>
<td>149</td>
<td>1050</td>
<td>Clarifying agent/ Properties Antistatic</td>
<td>*</td>
<td>USP B7 USP Cytotoxicity</td>
<td>Small syringes, thin wall parts.</td>
</tr>
</tbody>
</table>

* Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur) and United States Pharmacopoeia (USP), please contact Repsol’s Technical Service & Development Department at d_poliolefinas@repsol.com

**Properties**
- **MFI**: Melt Flow Index
- **Charpy impact strength notched**: Notched Charpy impact strength
- **Melting point**: Melting point
- **Flexural modulus**: Flexural modulus
- **Additives**: Additives
- **Compliance**: Compliance
- **Biocompatibility**: Biocompatibility

**Applications**
- ISO 1133 g/10 min 210 °C / 2.16 kg
- ISO 179 kJ/m²
- °C
- ISO 179 MPa

**Compliance**
- USP B7 USP Cytotoxicity
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4

**Biocompatibility**
- USP B7 USP Cytotoxicity
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4
- USP B8 class VI ISO 10993-4

**Applications**
- Medical packaging, film and pouches, vials.
- Large volume parenteral BFS bottles apt for autoclave sterilization at 121°C. Medical packaging, film and pouches, injection molding items.
- Barefoot grade. Medical packaging, films and pouches. Gamma and E-beam rad.
- Caps and closures, syringe parts, medical device components.
- Caps and closures, syringe parts, tubes, labware. Gamma and E-beam rad.
- Small syringes, thin wall parts.
Polypropylene Random copolymer

Flexural Modulus (MPa)
ISO 178

MFI [g/min 230 °C, 2.16 kg]
ISO 1133

Heterophasic polypropylene copolymer
Low density polyethylene

© REPSOL QUIMICA, S.A. 2024. All rights reserved.
## Low density polyethylene

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI (g/min 190 °C / 2.16 kg)</th>
<th>Density (kg/m³)</th>
<th>Melting point (°C)</th>
<th>Additives</th>
<th>Compliance</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLD01S</td>
<td>0.55</td>
<td>920</td>
<td>117</td>
<td>No additives</td>
<td>ISO 1183, USP</td>
<td>Small volume parenteral bottles and ampoules for steam autoclave treatment.</td>
</tr>
<tr>
<td>HLD02S</td>
<td>2</td>
<td>920</td>
<td>110</td>
<td>No additives</td>
<td>ISO 1183, USP</td>
<td>Very flexible grade for ampoules. LDPE for pharmaceutical bags, pouches and medical devices.</td>
</tr>
<tr>
<td>HLD02G</td>
<td>2</td>
<td>920</td>
<td>110</td>
<td>Antioxidants/ AntiBlock/Slip agent</td>
<td>ISO 1183, USP</td>
<td>Soft LDPE containing slip and antiBlock. For pharmaceutical packaging, caps and closures and other medical devices.</td>
</tr>
<tr>
<td>HLD08S</td>
<td>8</td>
<td>920</td>
<td>109</td>
<td>No additives</td>
<td>ISO 1183, USP</td>
<td>Extrusion coating and medical films. Components.</td>
</tr>
<tr>
<td>HLD20S</td>
<td>22</td>
<td>923</td>
<td>104</td>
<td>No additives</td>
<td>ISO 1183, USP</td>
<td>Caps and lids. Injection molded parts that require flexibility.</td>
</tr>
</tbody>
</table>

*Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur) and United States Pharmacopoeia (USP), please contact Repsol's Technical Service & Development Department at d_poliolefinas@repsol.com

The information contained herein is based on REPSOL QUIMICA’s current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUIMICA declares to have been most diligent when including the information contained herein, taking into account that several and different factors may affect the processing, application or use of the products, the converter shall be responsible in every case for the conditions under which the products are transformed as well as for the final use given to them. REPSOL QUIMICA warns that this information may undergo variations or improvements; therefore REPSOL QUIMICA is not obliged to reflect these in this document or to communicate them to whomever may have access to it. Moreover, these readers should be aware that some or all of the products might be protected by intellectual property rights. © REPSOL QUIMICA, S.A. 2024. All rights reserved.

A comprehensive range of products designed according to the standards of pharmaceutical packaging and medical devices.
## High density polyethylene

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI (g/min 190 ºC)</th>
<th>MFI (g/min 190 ºC)</th>
<th>Density (kg/m³)</th>
<th>Melting point</th>
<th>Additives</th>
<th>Compliance</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHD48D</td>
<td>0.55</td>
<td>-</td>
<td>948</td>
<td>133</td>
<td>Antioxidants, slip</td>
<td>USP 87 USP Cytotoxicity (Elution Test)</td>
<td>Typical extrusion blow molding grade for pill jars, offering increased density and barrier properties. Typically also converted in IBM process.</td>
</tr>
<tr>
<td>HHD55G</td>
<td>0.25</td>
<td>-</td>
<td>955</td>
<td>135</td>
<td>Antioxidants</td>
<td>USP 87 USP Cytotoxicity (Elution Test)</td>
<td>Blow molding HDPE grade presenting stiffness and excellent stress cracking resistance. Grade used for pill jars and containers for pharmaceutical packaging.</td>
</tr>
<tr>
<td>HHD58G</td>
<td>0.25</td>
<td>-</td>
<td>958</td>
<td>135</td>
<td>Antioxidants</td>
<td>USP 87 USP Cytotoxicity (Elution Test)</td>
<td>Packaging, diagnostic and tubes, blow molding bottles.</td>
</tr>
<tr>
<td>HHD58G1</td>
<td>-</td>
<td>0.25</td>
<td>955</td>
<td>136</td>
<td>Antioxidants</td>
<td>USP 87 USP Cytotoxicity (Elution Test)</td>
<td>Extrusion blow molding HDPE grade for pharmaceutical packaging including BFS processes. Good process stability.</td>
</tr>
</tbody>
</table>

* Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur.) and United States Pharmacopoeia (USP), please contact Repsol’s Technical Service & Development Department: atd_paliolefas@repsol.com

---

### Low density polyethylene

![Low density polyethylene](image)

**A helping hand on technical matters to obtain the best performance**

---

*The information contained herein is based on REPSOL QUIMICA’s current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUIMICA declares to have been most diligent when including the information contained herein, taking into account that several and different factors may affect the processing, application or use of the products, the converter shall be responsible in every case for the conditions under which the products are transformed as well as for the final use given to them. REPSOL QUIMICA warns that this information may undergo variations or improvements; therefore REPSOL QUIMICA is not obliged to reflect these in this document or to communicate them to whomever may have access to it. Moreover, these readers should be aware that some or all of the products might be protected by intellectual property rights. © REPSOL QUIMICA, S.A. 2024. All rights reserved.*
## EVA copolymer

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFI</th>
<th>VA content</th>
<th>Additives</th>
<th>Compliance</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVA08G</td>
<td>2</td>
<td>7.5</td>
<td>Antioxidants</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
<td>It is used for transdermal patches but can also be used for small blow molding, injection molding or tubing.</td>
</tr>
<tr>
<td>HVA18G1</td>
<td>0.7</td>
<td>18</td>
<td>Antioxidants</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
<td>Extrusion of medical film and production of medical bags, seals.</td>
</tr>
<tr>
<td>HVA18G</td>
<td>2</td>
<td>18</td>
<td>Antioxidants</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
<td>Medical film and bags, tubing, seals and closures.</td>
</tr>
<tr>
<td>HVA28G1</td>
<td>3.5</td>
<td>27.5</td>
<td>Antioxidants</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
<td>Medical film.</td>
</tr>
<tr>
<td>HVA28G2</td>
<td>7</td>
<td>28</td>
<td>Antioxidants</td>
<td>USP B7 USP Cytotoxicity (Elution Test)</td>
<td>Injection molding medical devices.</td>
</tr>
</tbody>
</table>

* Repsol Healthcare grades are DMF listed. For more detailed information on DMF listing, European Pharmacopoeia (Ph Eur) and United States Pharmacopoeia (USP), please contact Repsol’s Technical Service & Development Department: tdd_paliolefinas@repsol.com

---

**Qualified in more pharmaceutical applications**

Repsol’s propylene glycol USP/EP is qualified and approved for use as an excipient in pharmaceutical applications.
Sterilization

The information contained herein is based on REPSOL QUIMICA's current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUIMICA declares to have been most diligent when including the information contained herein, taking into account that several and different factors may affect the processing, application or use of the products, the convertor shall be responsible in every case for the conditions under which the products are used. Moreover, these readers should be aware that some or all of the products might be protected by intellectual property rights. © REPSOL QUIMICA, S.A. 2024. All rights reserved.

<table>
<thead>
<tr>
<th>Material</th>
<th>Autoclave</th>
<th>ETO</th>
<th>Gamma and E-beam radiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene Homopolymer HPP</td>
<td></td>
<td>☑</td>
<td>Only for HPP55RMD</td>
</tr>
<tr>
<td>Polypropylene Random Copolymer HPR</td>
<td></td>
<td>☑</td>
<td>Only for HPR35RMD</td>
</tr>
<tr>
<td>Low Density Polyethylene HLD</td>
<td>☑</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>High Density Polyethylene HHD</td>
<td></td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>EVA Copolymer HVA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For specific information on sterilization resistance, please contact the Technical Service and Development Department.

**MEDICAL POLICY DISCLAIMERS**

- The use of this product in any Medical Device must comply with the following criteria:
- Class I Medical Devices (European Union and/or U.S. FDA): the product may only be used for this purpose with prior notification to REPSOL QUIMICA, S.A. of each specific final application.
- Class II Medical Devices (European Union and/or U.S. FDA): the product may only be used for this purpose with REPSOL QUIMICA, S.A.’s prior written approval.
- This product may not be used for implantable devices and for Class III Medical Devices (European Union and/or U.S. FDA).

- REPSOL QUIMICA, S.A. makes no warranties, express or implied, which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.
- Before using a product sold by REPSOL QUIMICA, S.A. users should make their own independent determination that the product is safe, lawful and technically suitable for the intended use.
- REPSOL QUIMICA, S.A. accepts no liability from the use of its materials in conjunction with other materials.
Safety and quality are our priority

All our petrochemical complexes and production plants meet the most stringent quality and safety standards.

Our petrochemical complexes, packaging production plants and logistics centers have rigorous food-safety management systems in place and hold ISO 45001. Their manufacturing, distribution, transport, and end-product storage processes are also certified to the ISO 9001 quality standard. The Chemicals units at our complexes operate under an Energy Management System. Our Certified Environmental Management System guarantees that Best Available Practices and Technologies are in place to minimize the impact of our sites.

IATF 16949 certified

In 2021 we have obtained the highest certification for our auto products, having adapted all our automotive materials production centers under the IATF 16949 standard, an international standard for quality management systems in the automotive industry. This standard is the most demanding for quality management systems in the automotive sector at an international level and one of the essential requirements that car manufacturers require from their suppliers.

Certifications

<table>
<thead>
<tr>
<th>All Repsol complexes and plants</th>
<th>All Repsol complexes</th>
<th>Puertollano, Tarragona and Sines</th>
<th>Puertollano, Tarragona and Monzón plants</th>
<th>Puertollano and Monzón plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 45001</td>
<td>ISO 9001</td>
<td>ISO 50001</td>
<td>IATF 16949</td>
<td>UNE–EN 15343</td>
</tr>
<tr>
<td>FSSC 22000</td>
<td>ISCC Plus</td>
<td>ISO 14001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Environment

Repsol’s purpose is to become a net-zero emissions company by 2050, and our 2024-2027 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.
Chemicals Customer Care

Spain
Tel.: 900 10 32 39
Tel.: +34 91 753 18 01

Italy
Tel.: 800 60 509 999
Tel.: +34 91 753 18 04

Portugal
Tel.: 800 60 501 111
Tel.: +34 91 753 18 05

Germany
Tel.: 800 60 504 444
Tel.: +34 91 753 18 00

France
Tel.: 800 60 503 333
Tel.: +34 91 753 18 02

United Kingdom
Tel.: 800 60 502 222
Tel.: +34 91 753 18 03

sacrq@repsol.com
www.repsol.com
Corporate Headquarters
Méndez Álvaro, 44
28045 Madrid. Spain
Tel.: +34 91 753 81 00
www.repsol.com

Technical Service & Development
Repsol Technology Lab
Agustín Betancourt, s/n
28935 Móstoles, Madrid. Spain
Tel.: +34 91 753 86 00
atd_poliolefinas@repsol.com