Hot melt adhesives
EVA & EBA
New!

100% circular EVA & bio-based ranges

Our Repsol Reciclex® range of EVA & EBA copolymers from chemical recycling, and our bio-based range work on carbon footprint reduction and circularity, helping our customers meet their value chain needs with high-value propositions.

We offer three new ranges to support your projects in a customized way:

- **100% circular EVA range ISCC Plus certified.**

- Entire ISCC Plus certified EVA & EBA bio-based range, including:
  - First generation Bio [1G] from sustainably sourced crops, following the ISCC EU 202 best environmental, social, and economic practices.

Join us in promoting the circularity & sustainability of plastics!
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.

Repsol Campus, Corporate Headquarters in Madrid

LEED® Platinum certificate, awarded by the prestigious U.S. Green Building Council (USGBC), for new buildings construction
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 RecycClass.

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 ISCC Plus Certified Polyolefin Bio-based range, including 1st generation Bio derived from sustainably sourced crops, following best practices, the ISCC 202 Sustainability Requirement, and 2nd generation Bio-Based Polyolefins Advanced Bio-Based Feedstock derived from bio and organic 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.
Understanding your needs

At Repsol we are committed with the development of new products for our clients. We are in constant search of innovative solutions to meet all your needs. Our goal is to develop cutting-edge products to offer reliable and quality solutions to enhance your business.

Due to this vision Repsol displays one of the widest ranges of EVA & EBA copolymers in the market.

Over 46 years of experience in the market

At Repsol, we have developed an integrated chemical business that allows us to control all critical factors of the value chain: research, development, manufacturing, and distribution.

But we know providing quality products is not enough. Ensuring availability and supply is also fundamental to run any business.

Therefore, Repsol is the partner you can trust when it comes to quality, flexibility and safety.

Over 50 grades EVA & EBA copolymers

Our versatility allows us to produce one of the most extensive ranges of copolymers in the market for a wide range of industrial sectors like:

- Agriculture
- Automotive
- Well-being & consumer products
- Building & infrastructure
- Packaging
- Healthcare
- Household

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Differentiated products for an industry that keeps the world bound together

Repsol displays one of the market’s most comprehensive ranges of EVA & EBA copolymers. Our production process enables us to increase our portfolio according to our client’s needs continuously.

We are the only producers of very low viscosity EVA grades.

Our products offer excellent processing, thermal stability, and adhesion properties to meet the requirements of the most demanding industries in adhesive applications.

Repsol Primeva® and Repsol Ebantix® can be blended to modulate hot-melt properties.

Our strong commitments:
- Ready to be part of new projects.
- Capable of developing tailor-made grades.
- Excellent Technical service and development.
- Fulfillment the highest quality standards and new food contact requirements.

All our EVA and EBA grades are available as circular and bio-based, including both bio [1G & 2G].

Designing cutting-edge products to offer reliable and quality solutions to enhance our client’s business.
Repsol circular and bio-based range for hot melt adhesives

**Advancing the sustainability circle**

- Contributing to meet voluntary commitments and legislative targets.
- Helping our customers to fully meet their sustainability targets.
- Two ranges to support every customer project.
- Vocation to boost the circular economy.

- We are embarking on partnerships to find solutions to diversify our bio-based and circular feedstock.
- We are committed to innovating to increase the circularity and efficient use of plastic materials.
- Reducing fossil raw material consumption and focus on carbon footprint savings.

Low carbon footprint 100% recyclable
New! Repsol Reciclex® circular and bio-based range

Two solutions to reduce carbon footprint and provide sustainability to your business:

- All our EVA and EBA grades are available as circular and bio-based, including both bio (1G & 2G).
- Same properties and functionality as the regular Repsol range but with a lower carbon footprint.
- Complies with all Food Safety regulations and, like the rest of our range, they are 100% recyclable to close the circle of sustainability.

CHEMICAL RECYCLING
The range that fosters circularity

- 100% recycled plastic raw material.
- 100% recyclable.
- Complements material life cycle.
- Full Repsol range available.
- Same properties as standard range.
- Suitable for food, hygiene and medical use.
- Low carbon footprint.
- ISCC Plus Certificate.

BIO-BASED
The negative carbon footprint polyolefin range

Two options:

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

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

- ISCC Plus certificate.
- Suitable for food, hygiene and medical use.
How do we name our sustainable grades?

Equivalent for our Repsol Primeva® P28400 standard grade:
- Repsol Reciclex® Circular: CIRCP28400
- Repsol Reciclex® Bio (1G): BIOP28400
- Repsol Reciclex® Bio Circular (2G): CBIOP28400

Equivalent for our Repsol Ebantix® E27150 standard grade:
- Repsol Reciclex® Circular: CIRCE27150
- Repsol Reciclex® Bio (1G): BIOE21750
- Repsol Reciclex® Bio Circular (2G): CBIOE21750

Even negative carbon footprint depending on the range

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, this certification is an example of our commitment to promote the circular economy of our materials.
Multiplying our EVA solutions

Trust
Developing products to meet our clients’ needs and supplying on a regular basis across Europe.

Safety
Reducing residual VA content beyond European Legislation.

Innovation
One of the largest portfolios in the industry, complying with the highest European certifications.

Unique added value of EBA copolymers to boost your business through

Versatility
Our production process enables us to continuously increase our portfolio according to our clients’ needs.

Unique attributes
Its flexibility and transparency make it suitable for film applications. Excellent processing, thermal stability, and adhesion properties to meet the requirements of cables and adhesive markets.

Two solutions. Countless advantages

- Two complementary ranges of copolymers.
- High quality products surpassing all European Standards.
- High consistency.
- High fluidity grades.
- For a wide range of adhesives.
- Constant product innovation.
- Research of new applications.
- Strong customer service orientation.
- An integrated chemical company, a reliable supplier.
Food contact leadership

Repsol has the commitment and willingness to offer the safest products for food contact. For this purpose, Repsol Primeva® and Repsol Ebantix® grades for hot melts are steadily being improved to ensure their compliance with the most demanding regulations through:

- The use of new additives approved for food contact.
- The substitution of additives with Specific Migration Limits or included in the list of SVHC.
- The reduction of residual VA content beyond European legislation for the Repsol Primeva® range.
- All our industrial complexes are FSSC 22000 certified for food contact.
The Repsol Primeva® grades for hot melt adhesives have been designed for the highest technical requirements of the hot melt industry as well as for the current and future needs of adhesive industry.

Repsol Primeva® portfolio for hot melt adhesives

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**Ultrastable Repsol Primeva® for hot melts**

All the Repsol Primeva® grades for hot melts have been designed to be ultrastable against thermal degradation, reducing the coloring of the adhesive and maintenance stops.

<table>
<thead>
<tr>
<th>Oxidation Induction Time 190 ºC, min</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA</td>
</tr>
<tr>
<td>38</td>
</tr>
</tbody>
</table>

Test carried out according to ISO 11357-6

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### Ageing test performance at 170º

<table>
<thead>
<tr>
<th>Grade</th>
<th>VA [%]</th>
<th>MFI g/10 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repsol Primeva® EVA</td>
<td>Internal method FTIR</td>
<td>ISO 1133</td>
</tr>
<tr>
<td>P1550M</td>
<td>15</td>
<td>*</td>
</tr>
<tr>
<td>P18150</td>
<td>18</td>
<td>150</td>
</tr>
<tr>
<td>P18500</td>
<td>18</td>
<td>500</td>
</tr>
<tr>
<td>P20320</td>
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<td>P2430</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>P2735</td>
<td>27</td>
<td>3.5</td>
</tr>
<tr>
<td>P2870</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>P28150</td>
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<td>P28304</td>
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<td>P28400</td>
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<td>P33015</td>
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<td>P33045</td>
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<td>45</td>
</tr>
<tr>
<td>P40055</td>
<td>40</td>
<td>55</td>
</tr>
</tbody>
</table>

* Viscosity= 5,000 cP (190° C) ** Viscosity= 3,600 cP (190° C)
The Repsol Ebantix® grades for hot melt adhesives have been designed to obtain the maximum performance of the final hot melt in a wide range of service temperatures, high adhesion, and very high stability against thermal degradation.

High adhesion to difficult substrates

Repsol Ebantix® for hot melt has high adhesion to those difficult substrates like polypropylene or aluminum.

Advanced mechanical and optical properties with good adhesion to several substrates and easy processing

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**Widest range of service temperatures**

Adhesives formulated with the Repsol Ebantix® grade E33150 show the widest range of service temperatures, with an especial good performance at low temperatures.

**Very high thermal stability**

All the Repsol Ebantix® products for hot melts have outstanding thermal stability, reducing coloration of the adhesive and maintenance time.

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### Repsol Ebantix® portfolio for hot melt adhesives

<table>
<thead>
<tr>
<th>Adhesive</th>
<th>MFI (190º C / 2.16 kg) [g/10 min]</th>
<th>Internal FTIR Method</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADH E33150</td>
<td>1.000.000</td>
<td>Internal FTIR</td>
<td>E33150</td>
</tr>
<tr>
<td>ADH E33040</td>
<td>800.000</td>
<td>Internal FTIR</td>
<td>E33040</td>
</tr>
<tr>
<td>ADH E1770</td>
<td>600.000</td>
<td>Internal FTIR</td>
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<td>ADH E20020</td>
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<td>Internal FTIR</td>
<td>E20020</td>
</tr>
<tr>
<td>ADH E27150</td>
<td>200.000</td>
<td>Internal FTIR</td>
<td>E27150</td>
</tr>
<tr>
<td>ADH E270255</td>
<td>100.000</td>
<td>Internal FTIR</td>
<td>E270255</td>
</tr>
<tr>
<td>ADH E27355</td>
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<td>Internal FTIR</td>
<td>E27355</td>
</tr>
<tr>
<td>ADH E33150</td>
<td>1.000.000</td>
<td>Internal FTIR</td>
<td>E33150</td>
</tr>
<tr>
<td>ADH E33040</td>
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<td>E33040</td>
</tr>
<tr>
<td>ADH E1770</td>
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<td>Internal FTIR</td>
<td>E1770</td>
</tr>
<tr>
<td>ADH E20020</td>
<td>400.000</td>
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<td>E20020</td>
</tr>
<tr>
<td>ADH E27150</td>
<td>200.000</td>
<td>Internal FTIR</td>
<td>E27150</td>
</tr>
<tr>
<td>ADH E270255</td>
<td>100.000</td>
<td>Internal FTIR</td>
<td>E270255</td>
</tr>
<tr>
<td>ADH E27355</td>
<td>0</td>
<td>Internal FTIR</td>
<td>E27355</td>
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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

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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<tr>
<td>ISO 45001</td>
<td>FSSC 22000</td>
<td>ISCC Plus</td>
<td>Recyclas</td>
<td>ISO 50001</td>
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<tr>
<td></td>
<td>All petrochemical plants</td>
<td>ISO 9001</td>
<td></td>
<td>ISO 14001</td>
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<td></td>
<td></td>
<td>IATF 16949</td>
<td></td>
<td>ISO 14064</td>
</tr>
</tbody>
</table>
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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