

Innovation and modern
technology prepared for
tomorrow's needs



Chemicals

Polyolefins for the
Automotive Industry



Repsol

A universal response for the automotive industry

Repsol is an integrated oil and gas company with presence in the whole energy value chain, including exploration, production, refining, transport, chemicals, and new energies. The company has specialised in deep water exploration for hydrocarbons, providing some of the world's largest finds in recent years.

In its Chemicals activity, Repsol manufactures and markets a wide variety of products, ranging from base petrochemicals to derivative, benefiting from a high degree of integration with the group's oil refining division.

It is on the basis of this integration and its strategy of constantly generating value that Repsol has succeeded in securing its customers' trust, with highly innovative products and services, ensuring a measure of sound business growth in the medium and long term, and marketing its products in more than 95 countries. Base petrochemicals produces ethylene, propylene, butadiene and benzene.

Derivative chemical production includes:

- Polyolefins, embracing polypropylene (PP) and its compounds, both high and low-density polyethylene (HDPE and LDPE), as well as ethylene vinyl acetate (EVA) and ethylene butyl acrylate (EBA) copolymers.
- Intermediate products, including propylene oxide (PO), styrene (SM), polyether polyols for rigid and flexible foams, CASE polyols and propylene glycols.
- Synthetic rubbers, comprising hydrogenated rubbers (SEBS), thermoplastics (SBS) and solution-based styrene butadiene rubber (SSBR).

The products from Repsol's Chemicals Division are used to manufacture everyday articles which improve people's quality of life, wellbeing and safety.

The quality of our products is tested in professional motorsports, and in the world's most demanding markets.

Repsol in the world

We sell our products in more than 95 countries.



Innovation, experience and development for an industry that moves the world

- Repsol has a long tradition in supplying products to the automotive industry, from fuels and motor oils to polyolefins (polypropylene and polyethylene) and polyols for rigid and flexible foams.
- Our experience and commitment enable us to provide the motor industry with a wide range of products, which we are equipped to supply worldwide.
- Our unique range of polyolefins is technically adapted to each market and each manufacturer, to make our customers supremely competitive.
- We approach OEMs and automotive suppliers, combining all needs to obtain the best performance to ensure the highest value all through the supply chain.

Interior

- / Low emissions.
- / Thermal & UV stability.
- / Excellent scratch resistance.
- / Aesthetics.
- / All colour range.

Exterior

- / Stiffness and high impact resistance.
- / Resistance to UV and heat.
- / Good behaviour at low temperatures.
- / Low density materials for lighter parts.



Tanks

- / HDPE Fuel tanks according to PlasFuelSys guidelines.

Under-the-hood

- / Very high stiffness.
- / Dimensional stability under high heat load.
- / Reduced warpage.
- / Excellent chemical resistance.

Innovation and modern technology prepared for tomorrow's needs

Repsol's Research Centre, just outside Madrid, is one of the most advanced in Europe.

With 400 researchers busily creating the future inside a 14-acre facility. Their work within the automotive industry focuses on:

- Repsol's flexibility allows for agile implementation of technical solutions.
- Our facilities have the necessary equipment to undergo the tests required by the OEMs for homologations.
- We are experts in developing specific aesthetic properties and colours, and we ensure the standards throughout the total project life.



We answer the principal market trend: our customers' needs

- As a polyolefins manufacturer, Repsol guarantees the quality of the raw materials and offers its customers the full potential of its technology to develop new materials. Repsol has over 25 years of experience developing polypropylene compounds.
- Repsol's facilities include a polypropylene pilot plant, with an innovative design and high versatility. This pilot plant is a key element when exploring new process conditions, reaction parameters, catalysts... while it allows for innovative development and shorter time-to-market cycles.
- Additionally, Repsol has several extrusion lines with different size and configurations that allow the company to offer the market an extensive range of materials and technical possibilities.



Material description	Grade	Density	MFI	Flexural Modulus	Charpy impact strength notched		HDT	Typical application
		ISO 1183 kg/m ³	ISO 1133 g/10min 230°C/2.16kg	ISO 178 MPa	ISO 179 kJ/m ² 23°C	Low temperature	ISO 75 °C 0.45 MPa	
HDPE	45060	945	6.0 [190°C/2.16 kg]	1000	23	16 [-30°C]	-	Fuel tanks
P/E	PB176N4M	905	15	1600	6	4 [-20°C]	93	Interior trims
P/E	PB182G2M	905	20	1000	9	5.5 [0°C]	77	Interior trims
P/E	PB190K2M	905	40	1350	4.5	3 [0°C]	94	Interior trims
PP	PF150S1M	905	150	1700	2.5	1.5 [0°C]	95	Under the hood components
P/E-T10	PM162AV	970	10	1800	4	3 [-20°C]	81	Dashboards trims, interior trims
P/E-T15	PM276EV	990	15	1700	9	2.7 [-20°C]	73	Interior trims, door panels inserts
P/E-HI-T15	PM279EV	990	17	1500	20	5 [-20°C]	73	Dashboard, door panels
P/E-HI-T17	PM278GV	992	18	1800	10	3 [-20°C]	73	Dashboard, pillars, door panels
P/E-T20	PM281AV	1040	26	2200	3	2.5 [0°C]	91	Pillars, interior trims
P/E-T30	PM364AT	1130	9	3200	7.5	5 [0°C]	115	Instrument panel lower parts
PP-T20	PM270AV	1050	12	2600	2.2	1.4 [0°C]	109	Cowl grille, exterior trims
PP-T20	PM270AT	1050	15	2600	2.2	1.4 [0°C]	109	Air ducts, HVAC, covers
PP-T30	PM360AT	1140	9	3700	2.25	1.7 [0°C]	119	Interior trims
PP-T40	PM440DT	1230	3	4100	2.85	3 [0°C]	124	Light housing, under the hood components, air filters
PP-GF20	PG270AS	1030	12	3400	5.5	5 [-20°C]	155	Light housing, housing parts, battery supports
PP-GF30	PG370AT	1140	12.5	5800	10	8 [-20°C]	158	Light housing, housing parts, battery supports

This table is a sample of our portfolio. All materials are available in different grades and properties (colours, MFI, scratch resistance, etc.).

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