



Chemicals

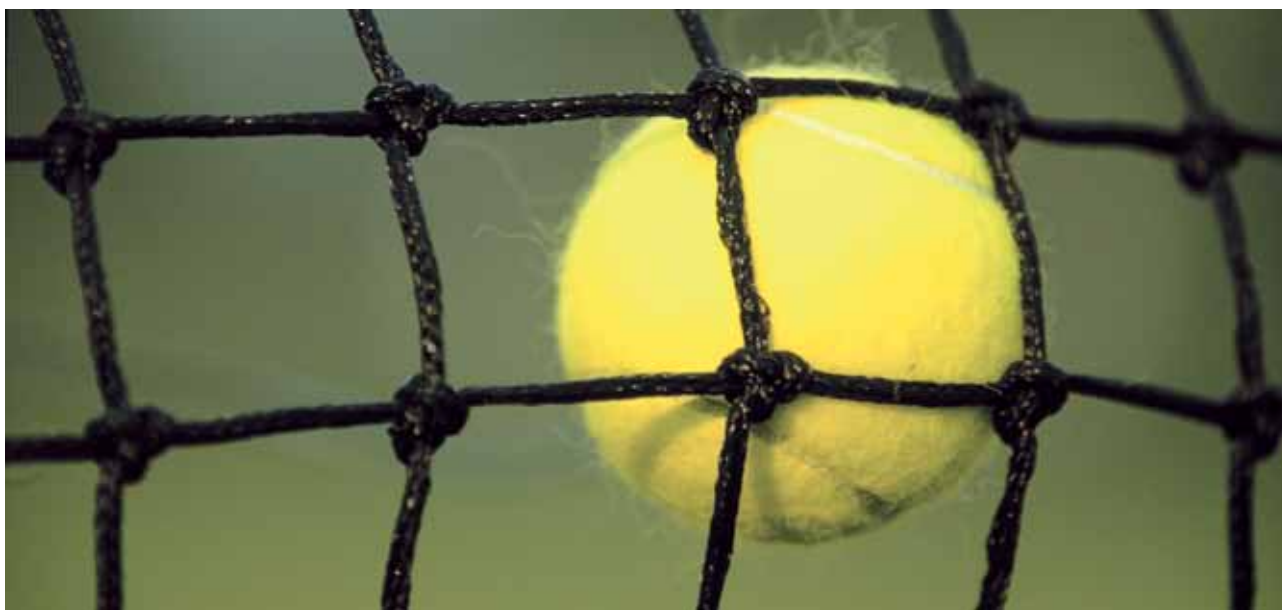
Fibres Alcudia® Polyethylene/ Isplen® Polypropylene

Chemicals

In its chemical activity, Repsol produces and markets a wide variety of products, ranging from base petrochemicals to derivatives.

Repsol's chemical production in Europe is based at three large petrochemical complexes, two in Spain, in Puertollano and Tarragona, and one in Sines, Portugal.

The Polyolefin Business Unit has a production capacity of over 1,400,000 tonnes a year, distributed among low density polyethylene (LDPE) and high density polyethylene (HDPE), ethylene vinyl acetate copolymers (EVA), ethylene butyl acrylate copolymers (EBA) and polypropylene (PP).



Fibres: bonded by commitment

As proof of its firm commitment to clients, Repsol is increasing its investment, acquiring new production technologies and developing new applications.

The acquisition of the Petrochemical Complex in Sines, has enabled Repsol to extend its product range with a new application: high-density polyethylene fibre.

This application gives the company the edge over its European competitors in technology and range: grades for easy processability tapes, with excellent optical and mechanical properties, and grades for production of medium to very high-toughness monofilaments. A vast range of products for manufacturing:

- Fishing nets
- High strength mooring ropes
- Ropes and twines
- Nets for packaging
- High-toughness tapes
- Protective netting

It is from this ability to adapt grades to our clients' needs, helping them to create better products, from which Repsol draws its inspiration to move ahead.

Polypropylene

NON-WOVEN TEXTILES

Grade	MFI	Properties	Applications
	ISO1133-g/10' 190°C		
	2,16 kg		
PP050Y1E	6	Good mechanical properties, general purposes	Tapes and monofilaments for general purposes. Very high toughness staple fibre
PP070Y1E	12	Gas fading resistance	Multifilament yarns and high toughness staple fibre
PP084Y1E	19	Narrow MWD, gas fading resistance	High tenacity BCF/CF, technical and hygienic low tittle non-woven, spunbonded and staple fibre
PP086Y1E	25	Narrow MWD, gas fading resistance	High speed lines, BCF/CF, POY yarns, technical and hygienic low tittle non-woven and staple fibre
PP086Y2E	25	Excellent processability, narrow MWD, gas fading resistance	High speed lines, BCF/CF, POY yarns, technical and hygienic low tittle non-woven and staple fibre
PP086U6E	25	Narrow MWD, gas fading resistance, UV light resistance	High speed lines, BCF/CF, POY yarns, technical and hygienic low tittle non-woven and staple fibre
PP089Y1E	30	Very narrow MWD, Gas fading resistance	High speed lines, technical and hygienic very low tittle non-woven and staple fibre
NW110M1	1200	Easy processing	Melt blown



POLYPROPYLENE TECHNICAL TEXTILES

Grade	MFI	Properties	Applications
	ISO1133-g/10' 190°C		
	2,16 kg		
PP020G3E	0,90	Good mechanical properties, high thermal resistance	High toughness strapping, tapes, thermoforming and profiles
PP030G1E	1,70	Good balance of processability and properties, general purposes	High toughness tapes and monofilaments, extruded nets, twines and ropes
PP031G1E	2	Good balance of processability and properties, general purposes	High toughness tapes and monofilaments, extruded nets, twines and ropes
PP040G1E	3	Good processability, general purposes	Textile tapes, monofilaments and ropes
PP045G1E	4	Good processability	Textile tapes, monofilaments



Abbreviations **MWD:** Molecular Weight Distribution. **BCF/CF:** Bulked Continuous Filament/Continuous Filament. **POY:** Partial Oriented Yarn.

The information contained herein is based on REPSOL QUÍMICA's current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUÍMICA 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 QUÍMICA warns that this information may undergo variations or improvements; therefore REPSOL QUÍMICA is not obliged to reflect these in this document or to communicate them to whoever 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 QUÍMICA, S.A. 2011. All rights reserved.

Polyethylene

POLYETHYLENE TECHNICAL TEXTILES

Grade	MFI	Density	Polydispersity	Properties	Applications
	ISO1133-g/10' 190°C	ISO 1183 kg/m ³			
	2,16 kg				
R4805EP	0,55	948	Medium	Low fibrillation tendency, high tensile strength at break, easy processing	Blown film for stretched tapes, Iso Mayer textile applications, tapes for webs and ropes
R4805D1	0,55	948	Medium	Low fibrillation tendency, high tensile strength at break, easy processing	Blown film for stretched tapes, high speed textile lines, tapes for webs and ropes
R4806HT	0,60	948	Narrow	Low fibrillation tendency, high tensile strength at break, easy processing	Blown film for stretched tapes, high speed textile lines, tapes for webs and ropes
M5204	0,45	952	Narrow	Highest toughness, high stretching ratios	Monofilaments for fishing nets with very high strenght
M5206	0,60	952	Narrow	Very high toughness	Monofilaments for fishing nets with very high strenght
M5305	0,50	953	Medium	High toughness	Ropes, fishing nets
M5309	0,95	953	Medium	Medium toughness, soft yarns	Monofilament for textile applications (nets and webs)

The information contained herein is based on REPSOL QUÍMICA's current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUÍMICA 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 QUÍMICA warns that this information may undergo variations or improvements; therefore REPSOL QUÍMICA is not obliged to reflect these in this document or to communicate them to whoever 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 QUÍMICA, S.A. 2011. All rights reserved.





Quality, Safety and the Environment

All the petrochemical sites and those belonging to subsidiaries run by Repsol Chemicals use management systems which comply with current ISO 9001:2000 standards, referring to the Quality of processes ranging from manufacture to distribution, transport management and end product warehousing; OHSAS 18001 (Occupational Health and Safety Assessment Series), in all matters related to Safety and Occupational Health, and ISO 14001, concerning Environmental issues in its installations.

Technical Data Sheets and MSDS are available on: www.chemicals.repsol.com

The information contained herein is based on REPSOL QUÍMICA's current knowledge and experience and is presented in good faith for guidance only. Although REPSOL QUÍMICA 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 QUÍMICA warns that this information may undergo variations or improvements; therefore REPSOL QUÍMICA is not obliged to reflect these in this document or to communicate them to whoever 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 QUÍMICA, S.A. 2011. All rights reserved.

December 2011



Corporate Headquarters

Pº de la Castellana, 278-280
28046 Madrid (España)
Tel.: +34 91 753 81 00
Fax: +34 91 348 89 91

Offices & Customer Service

Spain

Pº de la Castellana, 280
28046 Madrid
Customer service
Tel.: + 34 901 11 63 92
Tel.: + 34 91 348 82 54
sacrq@repsol.com

Portugal

Av. República
Edifício República, 1º - Escritorio H
Alcoitão, 2645-143 Alcabideche
Customer service
Tel.: + 800 73 776 543
Tel.: +34 91 348 59 99
sacrq@repsol.com

France

6 rue Jean Jaurés
Immeuble Cofonca, 12 ème étage
92807 Puteaux
Customer service
Tel.: + 800 00 737 765
Tel.: +34 91 348 29 52
sac.france@repsol.com

Italy

Caldera Business Park
Via Caldera, 21 C/2
20153 Milano
Customer service
Tel.: + 800 73 776 522
Tel.: +34 91 348 29 54
sac.italia@repsol.com

Germany

Friedensstraße 11/Kaiserplatz
D-60311 Frankfurt am Main
Customer service
Tel.: + 800 73 776 566
Tel.: +34 91 348 29 50
sac.deutschland@repsol.com

United Kingdom

British Columbia House
No 1 Regent Street
London SW1Y 4NS
Customer service
Tel.: + 800 73 776 533
Tel.: +34 91 348 29 56
sac.uk@repsol.com

Rest of the world

exportchemicals@repsol.com



Technical Service & Development Repsol Technology Centre

Ctra. de Extremadura A5, km 18
28931 Móstoles (Madrid)
Tel.: +34 91 348 86 00
atd_poliiolefinas@repsol.com

