Polyolefins

Products and Properties

Europe

Braskem

PP · Polypropylene

Nomenclature

PP
HOMO = Homopolymer
RACO = Random Copolymer

This information reflects typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Analysis are considered as guarantee of the product.

The mentioned values in this report can be changed at any moment without Braskem previous communication.

Braskem Europe GmbH does not support the use of the product as described in this document in any medical application regardless of the Medical Device Classification (Directive 93/42/EEC). The use of this product into any medical applications regardless of classification or intended use, requires written approval from Braskem Europe GmbH.

For usage doubts or to discuss other applications, contact our Technical Service Engineers.

Braskem: expanding horizons with products and services

Braskem, the leading producer of thermoplastic resins in the Americas and the world's largest producer of biopolymers, has constantly innovated by launching new products in partnership with Clients, bringing about improvements to society and the environment. With installed resin production capacity of over 8 million tons a year, Braskem has supported the plastic chain by developing more modern and innovative products, sponsoring expositions and events related to the plastics industry and by providing technical know-how and defending the manufacturing industry.

Braskem constantly invests in expanding production capacity – whether through acquisitions, or by opening new plants, such as the recently inaugurated units, in Alagoas to produce PVC. Investments of over R$ 1 billion went into these projects, mobilizing diverse sectors of the economy, especially local players.

Investments are not restricted to Brazil alone. In 2011 Braskem aquired two PP plants in Europe, Schkopau and Wesseling. In Europe Braskem invested in a new Technology Center at the Wesseling site which was inaugurated in October 2016. Braskem also invests in other projects across Latin America: the Ethylene XXI project is a petrochemical complex installed in Mexico in partnership with Idesa, which will supply 1 million tons/year of polyethylene to the market. Investments of around US$ 4.5 billion have gone into this project, which has started up in Q1-2016.

The global presence does not translate merely into investments. The operational synergy between Braskem's plants and offices around the world enables it to better meet the growing needs of both our global and local Clients through the supply of products and services.

Besides offering products and services that promote sustainability, Braskem constantly monitors and seeks ways to reduce water and energy consumption, as well as waste and effluent generation, further reducing the environmental impact of its operations in Brazil and around the world.

Innovation, technology, sustainability and the unceasing quest for the best way to serve translate into dreams come true for Clients, and in each new partnership, Braskem creates new ways to look at the world.

PP · Polypropylene

Injection Molding

	Typical Properties	Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed
	ISO Method	ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
	Units	g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	Inspire 153	2,2	0,9	1300	28	9	9	2,5	80
		Durable goods, thermoforming, rigid packaging							
	DC7056.05	3,5	0,9	1050	24	9	14	4	76
		Durable goods, thermoforming, rigid packaging							
	CSP70H	7	0,9	1200	27	7	8	4	78
		Batteries, appliances and automotive							
	CG70	7	0,9	1200	28	7	7,5	4	76
		Rigid packaging, consumer goods, automotive, general compounding							
	DC7057.02	8,5	0,9	1150	25	8	8	3,5	79
		Rigid packaging, consumer goods, automotive, general compounding							
	CP396XP*	11	0,9	850	19	7,5	60	9,5	78
		Rigid packaging, consumer goods, automotive, general compounding							
	C715-12NHP	12	0,9	1450	28	8	10	4,5	100
		Rigid packaging, consumer goods, automotive, general compounding							
	EP440N*	12	0,9	1050	22	6	12	5	97
		Rigid packaging, consumer goods, home appliances, toys, technical parts in general							
	CG150	14,5	0,9	1100	24	6	11	6	80
		Automotive, general compounding							
	C765-15NA	15	0,9	1200	26	10	12	6,5	90
		Rigid packaging, consumer goods, automotive, general compounding							
	C706-21NAHP	21	0,9	1450	27	8	8	4,5	100
		Thin wall packaging, consumer goods, other injection molding articles							
	CP202XP*	26	0,9	1500	30	5	6,5	3	116
		Thin wall packaging, consumer goods, other injection molding articles							
	C7082-30NA	30	0,9	1300	25	5	8,5	5	98
		Thin wall consumer goods, thin wall rigid packaging							
	C7070-35N	35	0,9	1350	25	4	5,5	3	104
		Thin wall consumer goods, thin wall rigid packaging							
	C705-44NAHP	44	0,9	1450	28	5	7	4	100
		Thin wall consumer goods, thin wall rigid packaging							
	DC705.01	50	0,9	1250	28	5	7	4	95
		Thin wall consumer goods, thin wall rigid packaging, high flow, excellent organoleptic properties							
	C711-70RNA	70	0,9	1250	24	5	8	4	95
		Thin wall consumer goods, thin wall rigid packaging							
	DC707.01	75	0,9	1300	25	5	6	3	104
		Thin wall consumer goods, thin wall rigid packaging, very high flow, excellent organoleptic properties							
	C7069-100NA	100	0,9	1500	28	5	4	2,5	104
		Thin wall consumer goods, thin wall rigid packaging, very high flow resin							

* Imported from outside Europe

Injection Molding

	Typical Properties	Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed
	ISO Method	ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 75-2/B
	Units	g/10min	g/cm³	MPa	MPa	%	kJ/m²	°C
HOMO	DH362.01	9,5	0,9	1350	33	10	4	94
		Flexible and rigid food packaging						
	H357-09RSB	9,5	0,9	1400	33	10	4	84
		Flexible and rigid food packaging, textile applications						
	FT120WV	12	0,9	1650	39	8	3	100
		Rigid packaging, cosmetic packaging, caps & closures, excellent organoleptic properties						
	HSP165LG	16,5	0,9	1500	34	9	3,5	85
		Nonwovens, general compounding						
	HSP250NA	25	0,9	1650	36	8	3	108
	DH789.01	50	0,9	1700	37	8	2,5	102
		Thin wall consumer goods, thin wall rigid packaging, high flow, excellent organoleptics						
	H734-52RNA	52	0,9	1700	37	9	2,5	105
		Thin wall consumer goods, thin wall rigid packaging						

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Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (0°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed	Haze (39.4 mil (1000 µm))
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 179-1/1eA	ASTM D1003
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	kJ/m²	%
RACO	DR7051.01	10	0,9	1200	28	12	6	2	85	8
		Rigid packaging, cosmetic packaging, caps & closures, excellent organoleptic properties								
	DR7037.01	23	0,9	1200	29	12	6	2	88	8
		Rigid packaging, cosmetic packaging, caps & closures, general compounding								
	Inspire 364	42	0,9	1050	27	12	5,5	1,5	80	8
		Thin wall consumer goods, thin wall rigid packaging, high flow, excellent organoleptics properties								
	Inspire 382	70	0,9	1050	27	13	5	1,5	85	9
		Thin wall consumer goods, thin wall rigid packaging, high flow, excellent organoleptics properties								
	DR7032.06	100	0,9	1050	27	13	4,5	1,5	86	9

Blown Film

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature – under load66 psi (0.45 MPa), Unannealed
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	Inspire 137	0,8	0,9	1000	24,5	11,5	40	3	74
		Flexible packaging, speciality film, durable sheets							
	DC7056.05	3,5	0,9	1050	24	9	14	4	76
		Flexible packaging, speciality film							

Blown Film

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (0°C)	Heat Deflection Temperature – under load66 psi (0.45 MPa), Unannealed	Haze (39.4 mil (1000 µm))
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 179-1/1eA	ASTM D1003
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	kJ/m²	%
RACO	DR155.01	1,7	0,9	900	30	12	22	2,5	80	12
		Flexible packaging, speciality film, high transparency, excellent organoleptic properties								

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Blow Molding

	Typical Properties	Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed
	ISO Method	ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
	Units	g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	Inspire114EU	0,5	0,9	1400	28,5	7,5	65	4,5	95
		Rigid packaging, consumer goods, durable goods							
Impact Copolymer	Inspire 137	0,8	0,9	1000	24,5	11,5	40	3	74
		Flexible packaging, speciality film, durable sheets							

Blow Molding

	Typical Properties	Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (0°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed	Haze (39,4 mil (1000 µm))
	ISO Method	ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 179-1/1eA	ASTM D1003
	Units	g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	kJ/m²	%
RACO	DR155.01	1,7	0,9	900	30	12	22	2,5	80	12
		Flexible packaging, speciality film, high transparency, excellent organoleptic properties								

Thermoforming

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature – under load66 psi (0.45 MPa), Unannealed
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	DC7056.05	3,5	0,9	1050	24	9	14	4	76
		Rigid packaging, sheet and thermoforming							
HOMO	Inspire 215	2,1	0,9	1700	36	10	5	-	100
		Rigid packaging, transparent and excellent organoleptics							
	H 605*	2,1	0,9	1650	36	10	6	-	100
		Rigid packaging, transparent and excellent organoleptics							
	H 502HC*	3,3	0,9	2200	39	7	4	-	120
		Rigid packaging, excellent stiffness							

* Imported from outside Europe

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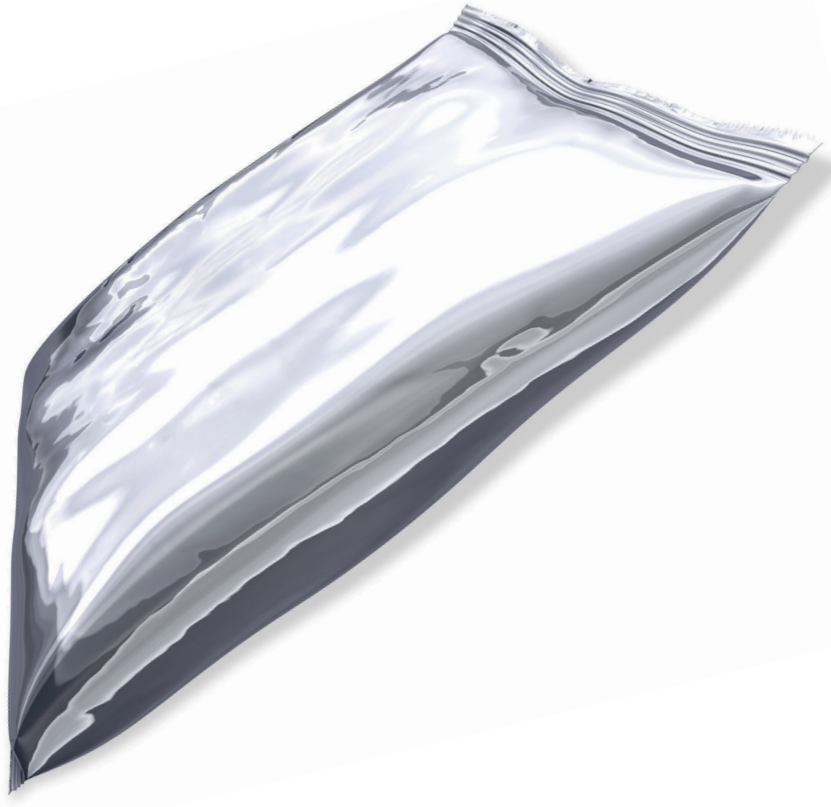
Extrusion Film Coating

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	DC7057.02	8,5	0,9	1150	25	8	8	3,5	79
		Speciality film							
RACO	DR352.01	8	0,9	700	21,5	13	7	2,5	71
		Speciality film							
HOMO	H357-09RSB	9,5	0,9	1400	33	10	4	-	84
		Speciality film							



Extrusion

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (-20°C)	Heat Deflection Temperature – under load66 psi (0.45 MPa), Unannealed
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 75-2/B
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	°C
Impact Copolymer	CSP030N	0,3	0,905	1300	27,5	9	70	6	89
		Films, sheets and pipes							
	Inspire 114EU	0,5	0,9	1400	28,5	7,5	65	4,5	95
		Extruded consumer goods and durable goods							
	Inspire 137	0,8	0,9	1000	24,5	11,5	40	3	74
		Flexible packaging, speciality film, durable sheets							
	C123-01N	1,2	0,9	1350	27	7	14	4,5	87
		Sheets, corrugated boards and profiles							
	Inspire 153	2,3	0,9	1300	28	9	9	2,5	80
		Durable goods, technical molded goods							
	DC7056.05	3,5	0,9	1050	24	9	14	4	76
		Flexible packaging, speciality film							
	CG70	7	0,9	1200	28	7	7,5	4	76
		Speciality film and injection molding							
	DC7057.02	8,5	0,9	1150	25	8	8	3,5	79
		Flexible and rigid packaging, speciality film							

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Extrusion

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Charpy Notched Impact Strength (0°C)	Heat Deflection Temperature – under load66 psi (0.45 MPa), Unannealed	Haze (39,4 mil (1000 µm))
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 179-1/1eA	ISO 179-1/1eA	ASTM D1003
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	kJ/m²	kJ/m²	%
RACO	DR155.01	1,7	0,9	900	30	12	22	2,5	80	12
		Rigid packaging, high transparency, excellent organoleptic properties								
	DR352.01	8	0,9	700	21,5	13	7	2,5	130	-
		Flexible packaging								

Extrusion

Typical Properties		Melt Flow Rate	Density	Flexural Modulus (MPa)	Tensile Stress (MPa)	Tensile Strain (%)	Charpy Notched Impact Strength (23°C)	Heat Deflection Temperature - under load66 psi (0.45 MPa), Unannealed
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 75-2/B
Units		g/10min	g/cm³	MPa	MPa	%	kJ/m²	°C
HOMO	HP500D*	0,7	0,9	1150	36	6	5	85
		Pipes, Profiles, Straps, Sheets						
	H357-09RSB	9,5	0,9	1400	33	10	4	84
		Flexible and rigid packaging						
	DH362.01	9,5	0,9	1350	33	10	4	94
		Flexible and rigid packaging						
	FT120WV	12	0,9	1650	39	8	3	100
		Rigid packaging, cosmetic packaging, caps & closures, excellent organoleptic properties						

* Imported from outside Europe

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