



Polypropylene

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Braskem: expanding horizons with products and services

The 8,000 Team Members of Braskem strive every day to improve people's lives through sustainable solutions of chemistry and plastic, engaged in value chain to strengthen the Circular Economy. With its 41 industrial units in Brazil, USA, Mexico and Germany and net revenues of R \$ 58 billion (US \$ 15.8 billion), Braskem has annual production of more than 20 million tons of plastic resins and chemical products and exports to Customers in approximately 100 countries.

In addition to its 16 regional offices in other countries, with the objective of developing partnerships and creating integrated solutions for Clients.





PP

Polypropylene



Nomenclature

PP

HOMO = HOMOPOLYMER

RACO = RANDOM COPOLYMER

HECO = HETEROPHASIC 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 Quality are considered as guarantee of the product.

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

Braskem does not recommend the use of its products for storage or contact with parenteral solutions, except where explicitly indicated.

For usage questions or to discuss other applications, contact our Application Engineering team.

PP • Polypropylene

Blown Film

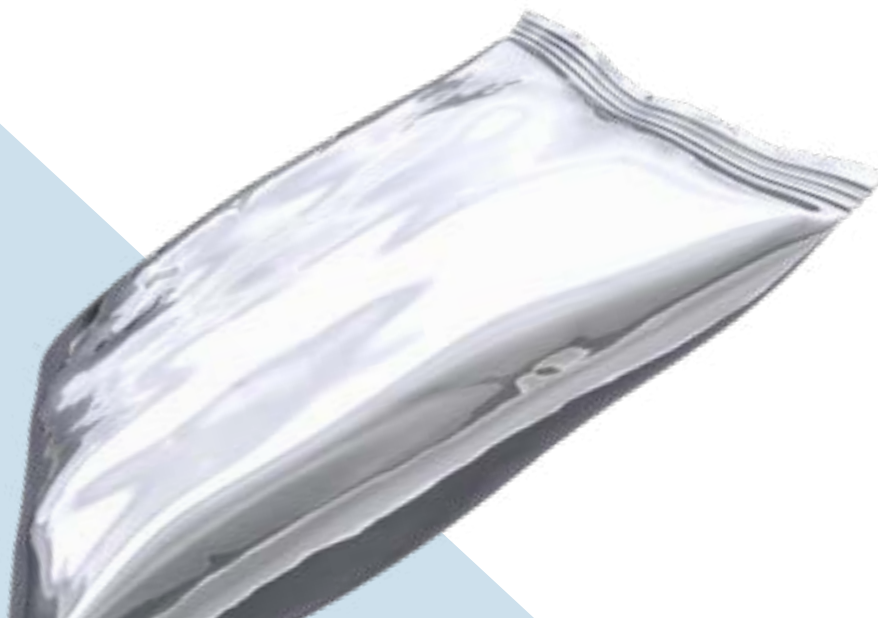
Typical Properties		MFR (230 °C/ 2.16 kg)	Flexural Modulus	Film Thickness	Tensile Modulus (1% Secant) MD/TD	Tensile Strength at Break MD/TD	Elongation at Break MD/TD	Elmendorf Tear Resistance MD/TD	Gloss 45°	Haze
ISO Method		ISO 1133	ISO 178	-	ASTM D882	ASTM D882	ASTM D882	ASTM D1942	ASTM D2457	ASTM D1003
Units		g/10 min	MPa	µm	MPa	MPa	%	gf	-	%
HOMO	Inspire® 215	2.1	1700	50	600/580	60/35	700/500	20/80	> 60	< 8
	Good optical properties, broad processing window and high stiffness material enabling downgauging									
RACO	DR155.01	1.8	900	50	450/420	50/40	650/690	45/125	> 60	< 8
	Superior optical properties, low level of gels and softness									
HECO	Inspire® 114EU	0.5	1400	50	510/380	45/25	600/480	30/90	-	-
	Outstanding melt strength conferring excellent bubble stability. High stiffness and impact resistance.									
	Inspire® 137	0.8	1000	50	380/370	65/45	700/800	45/580	-	-
Excellent stiffness/toughness balance, melt strength and low level of gels. Ideal for specialty films, technical films, multilayer structures and lamination films.										
	DC7056.05	3.5	1050	50	390/360	60/50	760/740	140/150	-	-
Booster for mechanical properties, low level of gels										

Obs.: Injection molded specimen according to ISO 294.

BOPP Film

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength	Heat Deflection Temperature Under 0.45 Mpa load, Unannealed
							23 °C	
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA	ISO 75-2/B
Units		g/10 min	g/cm³	MPa	MPa	%	kJ/m²	°C
HOMO	HP 523J*	3.1	0.905	1200	33	9	3.3	70
	BOPP film by the plan process (stenter) or balloon (double bubble), BOPP film with high reten on property of the surface treatment, adhesive tapes, food packaging, labels, pearlized opaque films and metalized film							

Obs.: Injection molded specimen according to ISO 294.



Cast Film

Typical Properties		MFR (230 °C/ 2.16 kg)	Flexural Modulus	Film Thickness	Tensile Modulus (1% Secant) MD/TD	Tensile Strength at Break MD/TD	Elongation at Break MD/TD	Elmendorf Tear Resistance MD/TD	Gloss 45°	Haze
ISO Method		ISO 1133	ISO 178	-	ASTM D882	ASTM D882	ASTM D882	ASTM D1942	ASTM D2457	ASTM D1003
Units		g/10 min	MPa	µm	MPa	MPa	%	gf	-	%
HOMO	Inspire® 215	2.1	1700	50	600/580	60/35	700/500	20/80	> 60	< 8
	Good optical properties, broad processing window and high stiffness material enabling downgauging									
	DH383.01	9.5	1400	50	630/620	55/35	770/470	20/25	-	-
	High stiffness and heat resistance. Food packaging, stationary films and general packaging									
H357-09RSB	9.5	1400	50	630/620	55/35	770/470	20/25	-	-	
	High stiffness and heat resistance. Food packaging, stationary films and general packaging									
DH362.01	9.5	1400	50	630/620	55/35	770/470	20/25	-	-	
	High stiffness and heat resistance. Food packaging, stationary films and general packaging									
RACO	DR155.01	1.8	900	50	450/420	50/40	650/690	45/125	> 60	< 8
	Superior optical properties, low level of gels and softness									
	DR352.01	8	700	50	390/350	45/30	720/600	35/50	> 60	< 8
Excellent optical properties and high toughness. Food packaging, lamination films, textile packaging, stretch films										
RP225M*	8	900	50	460/430	55/40	700/575	70/90	> 60	< 8	
	Flexible packaging with excellent gloss, transparency and sealing properties, for general purpose, food and textile packaging									
HECO	DC7056.05	3.5	1050	50	390/360	60/50	760/740	140/150	-	-
	Booster for mechanical properties, low level of gels									
DC7057.02	8.5	1150	50	408/343	42/30	760/656	46/45	-	-	
	Excellent stiffness/toughness balance and good mechanical resistance at low temperatures									

Obs.: Injection molded specimen according to ISO 294.

Blow Molding

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength			Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	Haze 39.4 mil (1000 µm)
							23 °C	0 °C	-20 °C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA			ISO 75-2/B	ASTM D1003
Units		g/10 min	g/cm³	MPa	MPa	%	kJ/m²			°C	%
HECO	Inspire® 114EU	0.5	0.9	1400	28.5	7.5	65	-	4.5	95	-
	Rigid packaging, consumer goods, 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	6.5	4.5	87	-	
	Bottles with excellent impact resistance at low temperatures										
HOMO	HP500D*	0.7	0.905	1150	36	6	4	-	-	85	-
	Pipes, Profiles, Straps, Sheets, bottles by extrusion blow molding										
RACO	DR155.01	1.7	0.9	900	30	12	22	2.5	-	80	12
	Rigid packaging, high transparency, excellent organoleptic properties										
DR7051.01	10	0.9	1200	28	12	6	2	-	85	8	
	Rigid packaging, ISBM bottle with high transparency, cosmetic packaging, caps & closures, excellent organoleptic properties										

Obs.: Injection molded specimen according to ISO 294.

Extrusion

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength		Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	Haze 39.4 mil (1000 µm)
							23 °C	-20°C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA		ISO 75-2/B	ASTM D1003
Units		g/10 min	g/cm ³	MPa	MPa	%	kJ/m ²		°C	%
HECO	CSP030N	0.3	0.905	1300	27.5	9	70	-	89	-
	Films, sheets and pipes									
	Inspire® 114EU	0.5	0.9	1400	28.5	7.5	65	-	95	-
	Extruded consumer goods and durable goods									
	Inspire® 137	0.8	0.9	1000	24.5	11.5	40	-	74	-
	Flexible packaging, speciality film, durable sheets									
	C123-01N	1.2	0.9	1350	27	7	14	-	87	-
	Sheets, corrugated boards and profiles									
	Inspire® 153	2.3	0.9	1300	28	9	9	-	80	-
Durable goods, technical molded goods										
DC7056.05	3.5	0.9	1050	24	9	14	-	76	-	
Flexible packaging, speciality film										
CG70	7	0.9	1200	28	7	7.5	-	76	-	
Speciality film and injection molding										
DC7057.02	8.5	0.9	1150	25	8	8	-	79	-	
Flexible and rigid packaging, speciality film										
HOMO	HP500D*	0.7	0.905	1150	36	6	4	-	85	-
	Pipes, Profiles, Straps, Sheets, bottles by extrusion blow molding									
	H 605*	2.1	0.905	1600	37	11	2	-	106	23
	Sheets, rigid packaging, excellent transparency and organoleptics									
	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										
Prisma 6810*	2	0.9	1310	30	-	-	-	-	-	
Sheets, rigid packaging, excellent transparency										
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										

Obs.: Injection molded specimen according to ISO 294.





Fiber Extrusion

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength		Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	Haze 39.4 mil (1000 µm)
							23 °C	-20°C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA		ISO 75-2/B	ASTM D1003
Units		g/10 min	g/cm ³	MPa	MPa	%	kJ/m ²		°C	%
HOMO	HSP165G	16.5	0.905	-	-	-	-	-	-	-
	Fiber extrusion, non-wovens produced by meltblown process									
	PF 260GQ*	26	0.905	-	-	-	-	-	-	-
	Continuous filament for sewing thread, high-speed fiber spinning, high tenacity fibers, nonwoven Fibers, high performance spunbonded nonwovens for hygienic disposables and hospital products									
	CP360H*	34	0.905	-	-	-	-	-	-	-
Low title and high-speed spinning multifilaments, nonwovens for furniture and decoration, high performance spunbonded nonwovens for hygienic disposables and hospital products										
PF 350GQ*	38	0.905	-	-	-	-	-	-	-	-
Low title and high-speed spinning multifilaments, nonwovens for furniture and decoration, high performance spunbonded nonwovens for hygienic disposables and hospital products										
H 155*	1250	0.905	-	-	-	-	-	-	-	-
Fiber extrusion, non-wovens produced by meltblown process										

Obs.: Injection molded specimen according to ISO 294.

Thermoforming

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength		Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	
							23 °C	-20°C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA		ISO 75-2/B	
Units		g/10 min	g/cm ³	MPa	MPa	%	kJ/m ²		°C	
HOMO	Inspire® 215	2.1	0.9	1700	36	10	5	-	100	
	Rigid packaging, transparent and excellent organoleptics									
	H 605*	2.1	0.905	1600	37	11	6	-	106	
Sheets, rigid packaging, excellent transparency and organoleptics										
H 502HC*	3.3	0.905	2200	39	7	3	-	130		
Rigid packaging, excellent stiffness										
HECO	Prisma 6810*	2	0.9	1310	30	-	-	-	-	
	Sheets, rigid packaging, excellent transparency									
DC7056.05	3.5	0.9	1050	24	9	14	4	76		
Rigid packaging, sheet and thermoforming										

Obs.: Injection molded specimen according to ISO 294.

Injection Molding

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength			Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	Haze 39.4 mil (1000 µm)
							23 °C	0 °C	-20 °C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA			ISO 75-2/B	ASTM D1003
Units		g/10 min	g/cm ³	MPa	MPa	%	kJ/m ²			°C	%
HECO	Inspire® 153	2.2	0.9	1300	28	9	9	-	2.5	80	-
	Durable goods, thermoforming, rigid packaging										
	EP 445L*	6	0.9	1600	30	6	7	-	3	100	-
	Caps for water, caps for carbonated soft drinks										
	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										
	CP 396XP*	11	0.895	950	19	6	50	-	8	66	-
	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										
	EP 440N*	12	0.903	1050	24	6	46	-	6	88	-
	Rigid packaging, consumer goods, home appliances, toys, technical parts in general										
	CP 284R*	14	0.895	1050	22	5	52	-	6	106	-
	Houseware, Industrial pails and buckets										
	CG150	14.5	0.9	1100	24	6	11	-	6	80	-
	Automotive, general compounding										
TI2150C*	15	21:36	1620	32	7	-	-	-	-	-	
Injection parts, compounding, excellent resistance to tiger stripes flow marks											
C765-15NA	15	0.9	1200	26	10	12	-	6.5	90	-	
Rigid packaging, consumer goods, automotive, general compounding											
CP 295*	20	0.895	650	17	6	44	-	8	70	-	
Compounds, High impact resistance parts											
C706-21NAHP	21	0.9	1450	27	8	8	5	4.5	100	-	
Thin wall packaging, consumer goods, other injection molding articles											
CP 202XP*	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											
C705-44NAHP	44	0.9	1450	28	5	7	-	4	100	-	
Thin wall consumer goods, thin wall rigid packaging											
CS500NA	50	0.9	1250	28	5	7	-	4	95	-	
Thin wall consumer goods, thin wall rigid packaging, high flow, excellent organoleptic properties											
CG700NA	75	0.9	1300	25	5	6	4	3	104	-	
Thin wall consumer goods, thin wall rigid packaging											
C711-70RNA	70	0.9	1250	24	5	8	-	4	95	-	
Thin wall consumer goods, thin wall rigid packaging											
CP 191*	80	0.895	930	20	5	15	-	5.7	67	-	
Compounds, packaging for usage in low temperatures											
C7069-100NA	100	0.9	1500	28	5	4	-	2.5	104	-	
Thin wall consumer goods, thin wall rigid packaging, very high flow resin											
TI2900C*	115	0.9	1550	-	-	3	-	1	87	-	
Injection parts, compounding, excellent resistance to tiger stripes flow marks											

Obs.: Injection molded specimen according to ISO 294.

Injection Molding

Typical Properties		MFR (230 °C / 2.16 kg)	Density	Flexural Modulus	Tensile Stress	Tensile Strain	Charpy Notched Impact Strength			Heat Deflection Temperature Under 0.45 Mpa load, Unannealed	Haze 39.4 mil (1000 µm)
							23 °C	0 °C	-20 °C		
ISO Method		ISO 1133	ISO 1183	ISO 178	ISO 527-2	ISO 527-2	ISO 179-1/1eA			ISO 75-2/B	ASTM D1003
Units		g/10 min	g/cm ³	MPa	MPa	%	kJ/m ²			°C	%
HOMO	H 502HC*	3.3	0.905	2200	39	7	3	-	-	130	-
	Rigid packaging, excellent stiffness										
	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	0.905	1850	38	6	1.6	-	-	100	-
	Food packaging, cosmetic packaging, caps										
	HSP165G	16.5	0.9	1500	34	9	3.5	-	-	85	-
	Nonwovens, general compounding										
	ZS-751*	22	0.9	1860	38	13	-	-	-	-	-
	Caps and Closures, Overcaps, Cosmetic Packaging, Housewares										
HSP250NA	25	0.9	1650	36	8	3	-	-	108	-	
Caps & Closures, Cosmetic packaging, Houseware, Appliances											
F350HC2*	35	0.9	2070	41	5	-	-	-	-	-	
Compounding											
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											
F1000HC*	115	0.9	2070	41	4.5	-	-	-	-	-	
Compounding											
RACO	DR7051.01	10	0.9	1200	28	12	6	2	-	85	8
	Rigid packaging, ISBM bottle with high transparency, 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										
	RP 340S*	45	0.902	1250	31	12	2	-	-	78	-
	Thin wall injection molded high clarity parts										
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											
RP 149*	87	0.902	960	25	12	3.8	-	-	66	-	
Thin wall consumer goods, thin wall rigid packaging, high flow, excellent optical properties											
DR7032.06	100	0.9	1050	27	13	4.5	1.5	-	86	9	
Thin wall consumer goods, thin wall rigid packaging, high flow, excellent optical properties											

Obs.: Injection molded specimen according to ISO 294.



