

# Polypropylene

European brochure



# PP

## Polypropylene

Braskem:  
expanding  
horizons with  
products and  
services

### Nomenclature

#### PP

HOMO = HOMOPOLYMER  
RACO = RANDOM COPOLYMER  
ICP = IMPACT COPOLYMER

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## Extrusion

Typical Properties		MFR (230 °C / 2.16 kg)	Flexural Modulus	Charpy Notched Impact Strength		Additives **
				23 °C	-20°C	
Method		ISO 1133	ISO 178	ISO 179-1/1eA		-
Units		g/10 min	MPa	kJ/m <sup>2</sup>		
HOMO	Inspire 206	0.6	1500	8.5	-	
	TPV compounds – Enhanced process stabilization, high melt strength, excellent rigidity					
	PG107H	0.8	1500	8.5	-	-
	Enhanced process stabilization, high melt strength, excellent rigidity					
	Inspire 215	2.1	1700	5	-	N, AS
	superior stiffness/impact balance, high temperature resistance, excellent optical/organoleptic properties; sheet extrusion, thermoformed food packaging					
	F030HC	3,3	2150	3,5	-	N
	high crystallinity for superior stiffness; high temperature resistance for hot filling, good organoleptics; sheet extrusion, thermoformed food packaging					
RACO	H357-09RSB	9.5	1400		-	S, AB
	High stiffness and heat resistance, sterilisable – Food packaging, stationary films and general packaging.					
	DH362.01	9.5	1400		-	S
	High stiffness and heat resistance, sterilisable – Food packaging, stationary films and general packaging.					
	HSP165G	16.5	1500		-	AGF
High stiffness and heat resistance, sterilisable and easy flow – Food packaging, stationary films and general packaging.						
RACO	Inspire 318	1.8	900	22	2.5	N
	Superior optical properties, low level of gels and softness – multilayer structures, sealant and lamination films					
RACO	RSP080R	8.0	700	7	2.5	-
	Excellent optical properties and high toughness and sealing properties – Food packaging, lamination films, textile packaging and stretch films					

\*\*Additives: S = Slip, AB = Antiblock N = Nucleated, AS = Antistatic, R = Rheology controlled, AGF = Antigasfading



## Extrusion



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				23 °C	-20°C	
Method		ISO 1133	ISO 178	ISO 179-1/1eA		-
Units		g/10 min	MPa	kJ/m <sup>2</sup>		
ICP	CSP030N	0.3	1300	70	6	N
	Fittings (DIN EN1852), heat stabilized, high molecular weight					
	Inspire 118	0.3	1750	60	2.5	N
	Sewer pipes, DIN EN1852, heat stabilized					
	Inspire 114EU	0.5	1500	65	4.5	-
	High molecular weight, high melt strength					
	Inspire 007	0.8	600	68	-	-
	Softness, high toughness, good mechanical resistance at low temperatures and very low level of gels - soft films, breathable films					
	Inspire 137	0.8	1000	40	3	-
	Excellent stiffness/toughness balance, melt strength and very low level of gels - stand up pouch film, multilayer structures, siliconised, technical and lamination films.					
	C123-01N	1.2	1350	15	6	N
	Fittings, fast cycletime					
CG15	1.5	1300	45	5.5	-	
Excellent stiffness/toughness balance, low level of gels, retortable - lamination films, MDO films, stand up pouch films						
Inspire 122	2.2	1400	50	-	N	
Next generation ICP, extremely high impact strength, excellent optics, good organoleptics; extrusion, thermoformed sheets for thin wall containers						
DC7056.05	3.5	1000	14	4	-	
Booster for mechanical properties, low level of gels, retortable - lamination films, stretch films, stand up pouch films						
DC7057.02	8.5	1100	8	3.3	-	
Excellent stiffness/toughness balance and good mechanical resistance at low temperatures - lamination films						

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## Injection Molding



Typical Properties		MFR (230 °C / 2.16 kg)	Flexural Modulus	Charpy Notched Impact Strength		Additives **
				23 °C	-20°C	
Method		ISO 1133	ISO 178	ISO 179-1/1eA		
Units		g/10 min	MPa	kJ/m <sup>2</sup>		
HOMO	HSP250NA	25	1650	3	-	N, AS
	High stiffness and heat resistance; low warpage and short cycle times					
	H7058-25R	25	1400	3	-	R
	Caps for general use, narrow MWD					
	F350HC	35	2100	2	-	N
	High crystallinity for superior stiffness; high temperature resistance; improved VOC performance					
	DH789.01	50	1700	2,5	-	N, AS
Balanced physical properties, excellent organoleptics; easy processing, low warpage; thin wall injection molding, short cycle times						
RACO	H734-52RNA H734-52RNA2	52	1800	2,5	-	N, AS, R
	Balanced physical properties; easy processing, low warpage; thin wall injection molding, short cycle times					
	Inspire 252	52	1950	3	-	N, AS
	Specially clarified HomoPP, high flowability, excellent optics (low haze!), superior organoleptics, hot filling; thin wall injection molding, microwave applications					
	F1000HC2	110	2200	1,5	-	N
	High crystallinity for superior stiffness, high flowability; designed for thin wall Injection molding and compounding					
RACO	RSP100NA	10	1200	6	-	N, AS
	High transparency injection molded caps, flip-top					
	RSP230NA	23	1200	5	-	N, AS
	Balance of stiffness & impact resistance, very good optical properties, easy processing, good organoleptics; thin wall injection molding; caps & closures					
	RG450NA	42	1050	5.5	-	N, AS
	High flowability, excellent optics organoleptics (low taste and odor), balance of mechanical properties; thin wall injection molding like food containers					
RACO	Inspire 364	42	1050	5.5	-	N, AS
	High flowability, excellent optics & organoleptics (low taste and odor), balance of mechanical properties; thin wall injection molding like food containers					
	Inspire 382	70	1050	5	-	N, AS
	High flowability, excellent optics & organoleptics (low taste and odor), balance of mechanical properties; thin wall injection molding for consumer products					
RACO	RSP1000NAR	100	1050	4.5	-	N, AS, R
Very high flowability, excellent optics, good stiffness/impact balance; thin wall injection molding for consumer goods, downgauging						

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## Injection Molding



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				23 °C	-20°C	
Method		ISO 1133	ISO 178	ISO 179-1/1eA		
Units		g/10 min	MPa	kJ/m <sup>2</sup>		
ICP	DCSP50.02	5.5	1400	17	6.5	-
	Containers, battery cases, automotive					
	CSP70H	7	1350	8	4	-
	Containers, battery cases, automotive					
	CG70	7	1200	7.5	4	-
	Rigid packaging, consumer goods, automotive, general compounding					
	CP396XPD	11	1050	60	11	N
	High stiffness and very high impact resistance, especially at low temperatures					
	C715-12NHP	12	1450	10	4.5	N
	High stiffness and impact strength					
	CP284RD	14	1150	50	7	N, AS
	Superior balance of stiffness and toughness, excellent impact strength					
CG150V	15	1300	11	6	-	
Low emissions copolymer (acc. VDA277, 278) for automotive interior applications						
C765-15NA	15	1200	12	6.5	N, AS	
Good balance of stiffness and toughness, very low shrinkage, very high elongation at break						
CP295D	20	850	60	10	-	
High flow and high impact resistance						
C706-21NAHP	21	1500	8	4.5	N, AS	
High stiffness and high impact resistance, excellent antistatic properties						
TI8300CD	30	950	55	9	N	
High flow and high impact resistance, superior low temperature drop impact						

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## Injection Molding



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				23 °C	-20°C	
Method		ISO 1133	ISO 178	ISO 179-1/1eA		
Units		g/10 min	MPa	kJ/m <sup>2</sup>		
ICP	C705-44NAHP	44	1500	7	4	N, AS
	High flowability, superior stiffness, good impact performance, excellent antistatic properties; thin wall injection molding for containers/consumers products					
	CD700NAQ	70	1200	8	3.5	N, AS, R
	High flowability, high impact strength at low temperature, low shrinkage & warpage; thin wall injection molding for houseware, pails, freezer applications					
	CG700NA	70	1350	6	3.5	N, AS
High flowability, good balance of mechanical properties even at low temperature, good organoleptics; thin wall injection molding for containers, houseware						
C7069-100NA	100	1500	5	2.5	N, AS	
Very high flowability, excellent balance of mechanical properties; short cycle time injection molding for thin wall containers, food consumer products, downgauging						

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## This is Medcol,

the Braskem solution that builds enduring, reliable bonds in the healthcare industry, co-creating unique customized solutions that care for people's lives.



## Healthcare Polypropylene Portfolio

Typical Properties		MFR (230 °C / 2.16 kg)	Flexural Modulus	Charpy Notched Impact Resistance 23 °C	Melting Temperature	Regulatory EP, USP and ISO 10993
Method		ISO 1133	ISO 178	ISO 179	ISO 11357	-
Units		g/10 min	MPa	kJ/m <sup>2</sup>	°C	-
HOMO	Medcol V1070	7	1500	4	163	Yes
	Pouches for IV-solution, film for secondary packaging, aerosol devices, boxes for diagnostic products, dosing units, caps & closure.					
RANDOM	Medcol V4020	1,8	850	10	142	Yes
	Bottles for IV-solution, amoules for injectables, pouches for IV-solution.					
	Medcol V4080	8	850	6	142	Yes
Pouches for IV-solution, film for secondary packaging.						
	Medcol V4081	8	1000	5	150	Yes
Pouches for IV-solution, film for secondary packaging, caps & closures.						





# Sustainable solutions for you

Braskem offers a huge variety of sustainable products for compounds. Our portfolio ranges from grades made of bio-based material to recycled material. The material is certified and we offer a service to provide you with a life cycle analysis.

Our commercial team will support you in finding the right sustainable material for your needs.



## MASS BALANCE CERTIFIED BIO-ATTRIBUTED

- PP
- Blow molding, injection molding & extrusion
- Can be in contact with food\*
- ISCC mass balance certified bio-based
- Contributes to reduce dependence on fossil feeds
- Reduced carbon footprint



FOSTERING THE TRANSITION TO A CIRCULAR ECONOMY

## RECYCLED RESINS

- rHDPE, rLDPE, rPP
- Blow molding, injection molding & extrusion
- Made from post-consumer recycled plastic



## MASS BALANCE CERTIFIED RECYCLED

- PE, HPP, RPP and ICP
- Blow molding, injection molding & extrusion
- Can be in contact with food\*
- ISCC mass balance certified recycled

## LOW CARBON SOLUTIONS

- rHDPE, rPP
- Blow molding, injection molding & extrusion
- Measurable bio-based content

**Braskem can offer all PP products with an ISCC PLUS certificate.**

\*These applications are merely exemplary. The possibility of using this product for a specific purpose may vary according to the jurisdiction and should be analyzed by the interested party. Braskem does not warrant the suitability of the product for the intended use when combined with other substances. Please check the RIS or contact Braskem for specific regulatory information.

# Europe

**Rotterdam, Netherlands**  
Headquarters  
Start-up year: **2017**

**Schkopau, Leipzig Area**  
Capacity: **360 kt/yr**  
Technology: **Spheripol**  
Start-up year: **1998**

**Wesseling, Cologne Area**  
Capacity: **265 kt/yr**  
Technology: **Unipol**  
Start-up year: **1991**

 **Innovation & Technology Centre**  
Start-up year: **2016**


## Braskem in numbers

 Warehouses  
**Europe**

Antwerp | **Belgium**  
Tarragona | **Spain**  
Bologna | **Italy**

**297**  Team Members

 **2** Industrial Units:  
Wesseling and  
Schkopau (Germany)


PRODUCTION CAPACITY OF  
**625** kt/y  
of **PP** 

# Global presence

With a global vision of the future, oriented toward people and sustainability, Braskem is engaged in contributing to the value chain in order to strengthen the Circular Economy. Its almost 8,000 team members are dedicated to improving people's lives through sustainable solutions in chemicals and plastics.

With its corporate DNA rooted in innovation, Braskem offers a comprehensive portfolio of plastic resins and chemical products for diverse industries, such as food packaging, construction, manufacturing, automotive, agribusiness, health and hygiene, and more. Braskem is globally headquartered in Brazil and EMEA head office is based in Rotterdam/NL. In total, there are more than 40 industrial units in Brazil, the United States, Mexico, and Germany, exporting its products to clients in over 100 countries.

 **<8,000**  
Team Members

PRODUCTION OF OVER **20** MM TONS/YEAR  
 of thermoplastic resins & other chemicals products

**39** industrial units:  
 29 plants in Brazil  
5 plants in the United States  
2 plants in Germany  
4 plants in Mexico



