## **Polypropylene** Products and Properties

NORTH AMERICA



## Innovation, Technology and Sustainability

As the leading producer of thermoplastic resins in the Americas and the world's largest producer of biopolymers, Braskem is constantly innovating by launching new products in partnership with clients, bringing improvements to society and the environment.





# Polypropylene PP

## **Braskem:**

Expanding horizons with products and services

With installed resin production capacity of over 20 million tons per year, Braskem has supported the plastic chain by developing innovative products, providing technical know-how and expanding production capacity.

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. In addition to 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.

HEADQUARTERS: Philadelphia, PA

INNOVATION & TECHNOLOGY CENTER: Pittsburgh, PA

MANUFACTURING UNITS: Marcus Hook, PA Neal, WV Oyster Creek, TX La Porte, TX Seadrift, TX





## **Compression Molding**

### Compression Molding - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural N (0.05 in/min,	Aodulus 1% secant)	Notche Stren	d Izod Impact gth @ 23°C	Te @ \	nsile Strength /ield (2 in/min)
AS	TM Method	D1238	D79	0A	[	D256A		D638
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра
S	이 TI4150WR	15	220,000	1,517	1.5	80	4,600	32
HE		Excellent mold release, very high flexural m						

#### NOMENCLATURE

- HOMO = Homopolymer
- RACO = Random Copolymer
- HECO = Heterophasic Copolymer
- HCHP = High Crystalline Homopolymer

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 values in this report can be modified without prior communication from Braskem.

For product questions or to discuss other applications, contact Braskem Technical Service Engineers.

# Blow Molding

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#### Blow Molding - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural (0.05 in/mir	Modulus 1, 1% secant)	Notched Iz Strength	od Impact n @ 23°C	Tensile S @ Yield (i	Strength 2 in/min)		
AS	TM Method	D1238	D7	90A	D2	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
	6030	1.9	150,000	1,035	1.1	59	3,900	27		
	0020	Consistent processability, good regrind, good gloss and clarity, low taste and odor transfer								
	D121_02A	1.9	150,000	1,035	1.1	59	3,900	27		
	RISTOZA	Consistent processability,	good regrind, good glo	ss and clarity, low taste	and odor transfer, cont	ains an antistatic addit	ive			
8	600204	1.9	155,000	1,069	5.5	294	4,100	28		
RA	ODOSOA	Consistent processability, low plate-out, good regrind, good gloss and clarity, low taste and odor transfer, contains clarifying additive, high lzod impact								
	60.834	1.9	155,000	1,069	5.5	294	4,100	28		
	ODOSK	Consistent processability,	good regrind, good glo	ss and clarity, low taste	and odor transfer, cont	ains clarifying additive,	high Izod impact			
	PD650	2.0	170,000	1,172	1.2	64	4,600	32		
	RP650	High flexural modulus ne	vt generation clarifier r	providing superior aesth	etics and enhanced ont	ical properties				

### **Polypropylene** Products and Properties

# Film



### BOPP

### BOPP - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural (0.05 in/mir	Modulus 1, 1% secant)	Notched Iz Strength	rod Impact n @ 23°C	Tensile S @ Yield (2	itrength 2 in/min)		
AS	TM Method	D1238	D79	90A	D2!	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
		2.0	270,000	1,862	0.7	37	5,600	39		
	INSPIRE 6025	Broad processing window, high stiffness material enables downgauging								
Ð	5500050	3.0	210,000	1,448	0.8	43	4,900	34		
Р	FF030F2	Designed for oriented film	applications, provides	excellent color and pro	ocessing stability, superi	or optical and mechan	ical properties, broad pro	ocessing window		
		8.0	175,000	1,206	0.7	37	4,600	32		
	PG80Q	Excellent color and overal	I manufacturing perfor	rmance, superior optica	al and mechanical prope	rties, broad processing	window			
		0.3	210,000	1,448	NB	NB	4,200	29		
<u>с</u>	114003F	Exceptional Izod impact, v	very high flexural modu	Ilus, good low temperat	ture drop impact					
HE		0.5	215,000	1,483	NB	NB	4,350	30		
	TI4003F INSPIRE 114	Improved stiffness, heat resistance, puncture strength, and toughness over polyethylene films								
	INSPIRE 114	1.9	150,000	1,035	1.1	59	3,900	27		
	6D20	Superior gloss and clarity,	low taste and odor tra	nsfer						
		5.0	80,000	551	1.7	91	2,750	19		
	DS6D81	Superior optical propertie	s, designed for heat sea	al applications						
0		7.0	80,000	551	1.7	91	2,750	19		
RAG	DR376_01	Excellent processability fo	or cast film with except	ional edge flow and spe	eed, designed for heat se	eal applications, outsta	nding catastrophic tear	resistance		
		7.0	80,000	551	1.7	91	2,750	19		
	DS6D82	Superior optical propertie	s, designed for heat sea	al applications						
		8.0	110,000	758	0.9	48	3,620	25		
	DS6D21	Particularly suited for app	lications requiring high	clarity and gloss, desig	ned for metalizing and	printing applications				

### **BLOWN FILM**

Blown Film - Ty	pical Properties									
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus (0.05 in/min, 1% secant)		Notched Izod Impact Strength @ 23°C		Tensile Strength @ Yield (2 in/min)			
AS	TM Method	D1238	D79	AOG	D2!	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi Mpa			
	INSPIRE 6025	2.0	270,000	1,862	0.7	37	5,600	39		
ο <sub>Σ</sub>	INSPIRE 0025	Broad processing window	ı, high stiffness materia	l enables downgauging						
어	PM25	3.0	270,000	1,862	0.7	37	5,600	39		
		Broad processing window and excellent stiffness in a non-nucleated, non-phosphite polymer								
	T14003E	0.3	210,000	1,448	NB	NB	4,200	29		
8	1140031	Exceptional Izod impact,	very high flexural modu	llus, good low temperat	ure drop impact					
Ξ	INSPIDE 11/	0.5	215,000	1,483	NB	NB	4,350	30		
		Improved stiffness, heat	resistance, punctur e st	rength, and toughness	over polyethylene films					
S	6020	1.9	150,000	1,035	1.1	59	3,900	27		
RA	5520	Superior gloss and clarity	, low taste and odor tra	nsfer						

### **CAST FILM**

Cast Film - Typ	ical Properties									
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural (0.05 in/mir	Flexural ModulusNotched Izod Impact(0.05 in/min, 1% secant)Strength @ 23°C		Tensile Strength @ Yield (2 in/min)				
AS	TM Method	D1238	D79	AOG	D25	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
	INSPIRE 6025	2.0	270,000	1,862	0.7	37	5,600	39		
ο <sub>Ψ</sub>	INSPIRE 0025	Broad processing window,	high stiffness material	enables downgauging						
ЮН	PC 900	8.0	175,000	1,206	0.7	37	4,600	32		
	POODQ	Excellent color and overall manufacturing performance, superior optical and mechanical properties, broad processing window-								
		2.5	300,000	2,068	0.7	37	5,700	40		
H	INSPIRE 0025IN	High performance, high cr	ystalline homopolymer	with exceptional stiffn	ess and good optical pr	operties				
Н	PG80Q Excellent color and   INSPIRE 6025N 2.5   High performance 8.0   D218_00 Excellent clarity, so   TI4015F 1.6   Darianed for upper	8.0	315,000	2,171	0.7	37	5,800	40		
	0210_00	Excellent clarity, superior	stiffness and heat resis	tance over conventiona	I polypropylene in blow	n film, cast film, and sh	Tensile Strength @ Yield (2 in/minD633/mpsiM375,6003374,6003d processing window-375,7004375,70044375,8004at film, and shet extrusion33NB3,8003ions, performs at low temperatures1333,7001333,7003itance912,750484,6003483,6203inting applications5			
	D218_00	1.6	175,000	1,207	NB	NB	3,800	26		
S	114015F	Designed for superior bala	ince of stiffness and im	pact strength, high mel	t strength for blown filr	m applications, perform	as at low temperatures			
H	KN-501	8.0	170,000	1,172	2.5	133	3,700	26		
	KN-501	Excellent color and proces	s stability, excellent lon	g term heat aging prop	erties, wet/dry environ	ment resistance				
	DP276 01	7.0	80,000	551	1.7	91	2,750	19		
	DK370_01	Excellent processability fo	r cast film with excepti	onal edge flow and spee	ed, designed for heat se	al applications				
0	PG700	7.0	180,000	1,241	0.9	48	4,600	32		
RA	K070Q	Consistent processability,	high clarity and gloss							
	DS6D21	8.0	110,000	758	0.9	48	3,620	25		
	DSSDZT	Particularly suited for casi	t film applications requi	iring high clarity and glo	ss, designed for metaliz	zing and printing applic	ations			

### Polypropylene Products and Properties



## Extrusion

#### Extrusion - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural (0.05 in/min	Modulus , 1% secant)	Notched Iz Strength	od Impact n @ 23°C	Tensile S @ Yield ()	Tensile Strength @ Yield (2 in/min)			
AS	STM Method	D1238	D79	AO	D2!	56A	D6	38			
	Units	g/10'	psi	MPa	ft-lb/in	J/m	psi	MPa			
	5006500	0.5	200,000	1,379	1.3	69	4,900	34			
ę	F006EC2	Multipurpose, suitable for a wide range of	applications, enhanc	ed long term heat ag	ging						
ЮН	11504	3.6	240,000	1,655	0.7	37	5,400	37			
	H521	General purpose, low water carryover									
£	D240.00	8.0	315,000	2,171	0.7	37	5,800	40			
НС	D218_00	ontains antiblock and nucleating additives, high flexural modulus									
	7140005	0.3	210,000	1,448	NB	NB	4,200	29			
	1140031	Exceptionally high Izod impact, very high f	flexural modulus, goo	d low temperature d	rop impact						
	INCDIDE 114	0.5	215,000	1,483	NB	NB	4,350	30			
	INSPIRE 114	High melt strength, high toughness, excellent processability, high impact, high heat resistance									
	TI4007G	0.7	175,000	1,207	NB	NB	4,200	29			
S	1140070	Exceptionally high Izod impact, superior lo	w temperature drop	impact							
Ŭ	TIAO1EE	1.6	175,000	1,207	NB	NB	3,800	26			
	114015F	Superior balance of stiffness and impact s	trength								
	TI4020N	2.0	220,000	1,517	NB	NB	4,000	28			
	1140201	Exceptionally high Izod impact, superior lo	w temperature drop	impact, good organo	oleptic properties, nu	ucleated					
	C7054 07NA	7.0	155,000	1,069	NB	NB	3,220	22			
	C/054-0/NA	High stiffness, high toughness, contains n	ucleating and antista	tic additives							
8	DP276_01	2.0	170,000	1,172	1.2	64	4,600	32			
RA	DK370_01	High flexural modulus with superior aesth	etics and enhanced o	ptical properties							



Fiber - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural I (0.05 in/min	Modulus , 1% secant)	Notched Izod Impact Strength @ 23°C		Tensile Strength @ Yield (2 in/min)			
AS	TM Method	D1238	D79	0A	D2!	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
	DOSEME	3.6	240,000	1,655	0.7	37	5,400	37		
	D036W6	General purpose, low water	carryover							
	H521	3.6	240,000	1,655	0.7	37	5,400	37		
		General purpose, low water carryover								
	D080T	8.0	230,000	1,586	0.6	32	5,400	37		
	00001	Multipurpose, suitable for a	wide range of applicati	ons						
	D1154	11	230,000	1,586	0.5	27	5,200	36		
	DTISA	Multipurpose, good color, e	xcellent process stabilit	у						
Q	D120C	14	220,000	1,517	0.5	27	5,400	37		
Ю	Disoc	Suitable for fine denier staple fiber and high speed fiber spinning								
	D180M	18	190,000	1,310	0.5	27	5,100	35		
	DISON	Multipurpose, suitable for a	wide range of application	ons, low gas fade						
	D18042	18	220,000	1,517	0.7	37	5,100	35		
	DIOORE	Multipurpose, suitable for a	wide range of applicati	ons, excellent melt sta	bility					
	CP250H	25	170,000	1,172	0.4	21	4,700	32		
	CF25011	Narrow molecular weight d	istribution, low smoke/o	condensate						
	СВЗЕОН	34	170,000	1,172	0.4	21	4,700	32		
	СР360Н	Narrow molecular weight d	istribution. low smoke/o	condensate						

# Injection Molding



Injection Mold	ing - Typical Propertie	S								
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus (0.05 in/min, 1% secant)		Notched Izod Impact Strength @ 23°C		Tensile Strength @ Yield (2 in/min)			
AST	TM Method	D1238	D79	90A	D2	56A	D638			
	Units	g/10'	psi	Мра	ft-lb/in	-lb/in J/m psi Mpa				
	RP350	12	155,000	1,069	1.1	59	4,300	30		
		Processing stability, low or	dor, good flow and set-u	up behavior, superior cla	rity, aesthetics and enh	anced optical properties	s, excellent mold release	2		
	TD2250CW/2	31	155,000	1,069	1.0	53	4,100	28		
	TR3330CW2	Good mold release, superior processing stability, superior clarity, nucleated, superior aesthetics and enhanced optical properties								
8	TD32EOMS	35	125,000	862	1.0	53	3,600	25		
RA	18330003	High impact performance, excellent mold release, superior clarity, excellent processability								
	DD250	35	170,000	1,172	1.0	53	4,500	31		
	RP250	Superior processing stabil	ity, superior clarity, aest	hetics and enhanced op	otical properties, excelle	nt mold release				
	P7021_50PNIA	50	155,000	1,069	1.0	53	4,000	28		
	R7021-50RNA	Good impact properties, e	excellent optics, fast cyc	cle times, contains clarif	ier and antistatic additi	ves				

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural f (0.05 in/min,	Modulus , 1% secant)	Notched Iz Strength	od Impact @ 23°C	Tensile St @ Yield (2	trength in/min)
AST	M Method	D1238	D79	OA	D25	6A	D63	8
	Units	Meit Flow (230°C, 2.16 kg)Flexural Hodulus (0.05 in/min, 1% secant)Notched StrengD1238DT=0Mpaft-lb/in (1207D1238g/10'psiMpaft-lb/in (1207D1238g/10'175,0001.207NBD1238Exceptionally high lzod Im=et, superior low temperature drop impactNotched (1207D1237Exceptionally high lzod Im=et, superior low temperature drop impactNBD1238Exceptionally high lzod Im=et, superior low temperature drop impact, superior low temperatureNBD1238Exceptionally high lzod TemperatureSuperior drop impact at refferention temperature drop impactNBD12384.0205,0001,4143.5D1238Superior drop impact at refferention temperatureNBD1238D123870155,0001,069NBD1238115220,0001,1722.5D1238126120,0001,0343.5D1359138180,0001,0343.5D1359138180,0001,049NBD14141155,0001,069NBD14135135,0009314.2D14135135,0001,069NBD1414135135,0001,3791.4141135135,0001,3791.4141135,0001,3791.4D15141135,0001,3791.4D15141135,0001,3791.4<		J/m	psi	Мра		
		0.7	175,000	1,207	NB	NB	4,200	29
	11400/G	Exceptionally high Izod imp	act, superior low tempe	erature drop impact				
		2.0	220,000	1,517	NB	NB	4,000	28
	TI4020N	Exceptionally high Izod imp	act, superior low tempe	erature drop impact, go	ood organoleptic propert	ies, nucleated		
		3.8	140,000	966	NB	NB	3,100	21
	TI6035NB	Exceptionally high Izod imp	act, superior low tempe	erature drop impact				
		4.0	205,000	1,414	3.5	187	4,400	30
	TI4040WT	Superior drop impact at ref	rigeration temperature	, very high flexural moc	dulus, nucleated, good m	old release		
		7.0	155,000	1,069	NB	NB	3,220	22
	C7054-07NA	High stiffness, high toughne	ess, contains a nucleatir	ng and antistatic additi	ve			
		8.0	170,000	1,172	2.5	133	3,700	26
	KN-501	Excellent color and process	stability, excellent long	term heat aging prope	rties, wet/dry environm	ent resistance		
		15	220,000	1,517	1.5	80	4,600	32
	TI4150WR	Very good mold release, ver	y high flexural modulus	5				
		18	150,000	1,034	3.5	187	3,000	21
	C702-20	High impact performance, s	suitable for a wide rang	e of injection molded a	pplications			
		18	180.000	1.241	3.5	187	3.300	23
	C702-20NA	High impact performance, o	contains a nucleating a	nd antistatic additive				
		25	155.000	1.069	NB	NB	3.200	22
	C7079-25RNA	Consistent processability, e	xcellent toughness, goo	od surface gloss				
		35	135.000	931	4.2	224	2.800	19
0	TI6350WV	Superior low temperature in	npact, nucleated, antis	tatic additive				
HEC		35	155.000	1.069	3.5	187	3.000	21
	C719-35RNHP	High impact, contains nucle	eating agent	.,			-,	
		35	200.000	1,379	14	75	4000	28
	TI4340L2	Good balance of stiffness a	nd impact strength. exc	cellent organoleptic pro	operties. ultra violet stab	ilization	1,000	20
		35	200.000	1,379	14	75	4000	28
	TI4350P	Good balance of stiffness a	nd impact strength, exc	cellent organoleptic pro	operties, high melt flow		.,	
		35	200.000	1,379	14	75	4000	28
	TI4355W2	Good balance of stiffness a	nd impact strength, exc	cellent organoleptic pro	operties, antistatic addit	ive	1,000	20
		35	210 000	1448	14	75	3700	26
	TI4360P3	Good balance of stiffness a	nd impact strength, exc	cellent organoleptic pro	operties	, 0	0,700	20
		35	220.000	1 517	12	64	4 0 0 0	28
	C700-35N	Good mold fillability, high st	iffness, fast set-up, co	ntains a nucleating age	ent		1,000	20
		50	140.000	966	23	123	3 200	22
	C7100-50NA	Freezer temperature impac	t resistance, high flow p	processing ease, easy m	nold release, fast cycle ti	me, good organoleptic	properties, contains nuc	leating
		and antistatic additives	190.000	1 310	18	96	3.400	23
	TI6550WV	High melt flow, good low to	mperature impact puc	leated, good mold relea	ase, antistatic additive	50	DB3       psi     Mpa       4,200     29       4,000     28       3,100     21       3,200     22       3,700     26       3,700     21       3,700     26       3,700     21       3,700     26       3,300     21       3,300     21       3,300     21       3,300     21       3,300     21       3,300     21       3,300     22       3,300     21       3,300     21       3,300     21       4,000     28       4,000     28       3,700     26       3,700     22       3,700     22       3,200     22       3,300     21       3,300     21       3,300     21       3,300     21       3,300     21       3,300     21	
		70	180.000	1 241	12	64	3 900	27
	TI4700P2	High stiffness nucleated	100,000	1,6-71	1.2	0.	0,000	LI
		80	155.000	1069	23	123	3,000	21
	TI6800WV			1,003	2.5	123	3,000	21
			200.000	1.270	1 4	75	2 7 2 0	26
	C758-80NA	Good meld fillet itter att		1,379	1.4	/S	5,730	20
		Soou molu mability with go	sou balance of impact s	a engui anu sunness, o	contains a nucleating an	a antistatic auditive		



# Injection Molding

#### Injection Molding - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus (0.05 in/min, 1% secant)		Notched Iz Strength	Notched Izod Impact Strength @ 23°C		Strength 2 in/min)		
AST	M Method	D1238	D79	90A	D25	6A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
	5006500	0.5	200,000	1,379	1.3	69	4,900	34		
	F006EC2	Excellent long term heat a	ging							
	LIE 21	3.6	240,000	1.655	0.7	37	5,400	37		
	1321	General purpose, low wate	er carryover							
	D115A	11	230,000	1,586	0.5	27	5,200	36		
	DIISA	Multipurpose, good color and process stability								
	FT120W/2	12	230,000	1,586	0.6	32	5,400	37		
	TTLOWE	Antistatic, good mold rele	ase							
	FT120W/B2	12	230,000	1,586	0.6	32	5,400	37		
	THEOWER	Superior antistatic proper	ties, excellent mold rele	ase						
	FT120WV	12	240,000	1,655	0.7	37	5,600	38		
	11120000	Antistatic, nucleated, goo	d mold release							
	F180A	17	220,000	1,517	0.7	37	5,100	35		
OM		Multipurpose, suitable for	a wide range of applicat	tions						
Н	FT200WV	20	255,000	1,759	0.7	37	5,600	39		
		Good mold release, nucleated, excellent rigidity and hardness								
	ZS-751	22	270,000	1,862	0.4	21	5,500	38		
		Superior stiffness, excelle	nt mold release, nucleat	ed						
	EPT300E	30	200,000	1,379	0.7	37	4,800	33		
		Good mold release, excelle	ent part finish (low bloor	m)						
	CP360H	34	170,000	1,172	0.4	21	4,700	32		
	er ocorr	Narrow molecular weight	distribution, low smoke/	/condensate						
	CP350WV	35	240,000	1,655	0.5	27	5,500	38		
		Narrow molecular weight	distribution, antistatic, r	nucleated, good mold r	elease					
	FPT350WV3	35	240,000	1,655	0.5	27	5,500	38		
		Narrow molecular weight	distribution, antistatic, r	nucleated, very good m	old release					
	5E16S	40	195,000	1,345	0.5	27	4,600	32		
	02100	Good processability, contains antistatic additive								
ЧН	F1000HC	115	300,000	2,068	0.3	16	5,950	41		
E E E E E E E E E E E E E E E E E E E	11000110	Very high flexural modulus	s, high melt flow							



## Thermoforming

Thermoformin	g - Typical Properties									
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus Notche (0.05 in/min, 1% secant) Stree		Notched Iz Strength	od Impact @ 23°C	Tensile Strength @ Yield (2 in/min)			
AS	TM Method	D1238	D79	AO	D25	6A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
		2.0	255,000	1,759	0.6	32	5,500	37		
δ	INSPIRE 6021N	High performance nuclea	ted homopolymer with	good physical properti	es					
ЮН		2.0	255,000	1,759	0.6	32	5,500	37		
	INSPIRE 6023N	High performance nuclea	ted homopolymer with	good physical properti	es					
H	INSPIRE 6025N	2.5	300,000	2,068	0.7	37	5,700	40		
Я	INSPIRE 0025IN	High performance, high c	igh performance nucleated homopolymer with good physical properties     2.5   300,000   2,068   0.7   37   5,700     igh performance, high crystalline nucleated homopolymer with exceptional stiffness and good optical properties   0.5   215,000   1,483   NB   NB   4,350     igh melt strength, high toughness, excellent processability, high heat resistance, designed for large part thermoforming   Colspan="4">Colspan="4"Co							
	INSPIRE 114	0.5	215,000	1,483	NB	NB	4,350	30		
		High melt strength, high t	oughness, excellent pro	ocessability, high heat r	esistance, designed for l	arge part thermoformir	ıg			
	TI4015F	1.6	175,000	1,207	NB	NB	3,800	26		
	1140151	Superior balance of stiffness and impact strength								
	PRISMA 6810	2.0	190,000	1,310	NB	NB	4,300	30		
0		Next generation clear imp	oact copolymer designe	d for a great balance o	f stiffness, toughness, ai	nd clarity				
뿔	TI4020N	2.0	220,000	1,517	NB	NB	4,000	28		
	11402011	Exceptionally high Izod in	pact, excellent low tem	perature drop impact,	good organoleptic prop	erties, nucleated				
	TI6035NB	3.8	115,000	793	NB	NB	3,100	22		
	110033115	Exceptionally high Izod in	pact, superior low temp	perature drop impact						
	TI4040WT	4.0	205,000	1,414	3.5	187	4,400	30		
		Superior drop impact at r	efrigeration temperatu	res, very high flexural n	nodulus, nucleated, good	d mold release				
Q Q	RP650	2.0	170,000	1,172	1.2	64	4,600	32		
R		High flexural modulus, su	perior aesthetics and er	nhanced clarity and op	tical properties					

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## Polypropylene Products and Properties

# Compounding



#### Compounding - Typical Properties

Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural (0.05 in/min	Modulus n, 1% secant)	Notched Izod Impact Strength @ 23°CD256Aft-lb/inJ/m1.3690.8430.737		Tensile Strength @ Yield (2 in/min)			
AS	STM Method	D1238	D79	AO	D25	56A	D6	38		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
	5006500	0.5	200,000	1,379	1.3	69	4,900	34		
	F006EC2	Enhanced long term heat a	aging							
	50085	0.8	190,000	1,310	0.8	43	5,200	36		
	FUU8F	High melt strength, excellent rigidity								
	11524	3.6	240,000	1,655	0.7	37	5,400	37		
	H521	General purpose, low water carryover								
	D040A	4.2	230,000	1,586	0.7	37	5,400	37		
	D040A	Injection molding, wet and	l dry long term heat ag	ing						
	DOROT	8.0	230,000	1,586	0.6	32	5,400	37		
	D080T	Multipurpose, suitable for	a wide range of applica	ations						
Q	D115A	11	230,000	1,586	0.5	27	5,200	36		
ЮН	DTISA	Multipurpose, good color and process stability								
	F1904	17	220,000	1,517	0.7	37	5,100	35		
	FIOUA	Multipurpose, suitable for a wide range of applications								
	CD2COLI	34	170,000	1,172	0.4	21	4,700	32		
	СРЭбон	Narrow molecular weight	distribution, low smoke	e/condensate						
	EDGEOW/V	65	240,000	1,655	0.3	16	5,500	38		
	FP050WV	Excellent Processability, n	ucleated							
	CB1000A	100	180,000	1,241	0.3	16	4,700	32		
	CPIOUA	High melt flow grade with	enhanced long term he	eat aging properties						
	CB1200B	126	180,000	1,241	0.3	16	4,700	32		
	CP1200B	Multipurpose, suitable for	a wide range of applica	ations, high melt flow						

Compounding - Typical Properties										
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus (0.05 in/min, 1% secant)		Notched Izod Impact Strength @ 23°C		Tensile Strength @ Yield (2 in/min)			
ASTM Method		D1238	D790A		D256A		D638			
Units		g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра		
High Melt Strength Grades	TI4003F	0.3	210,000	1,448	NB	NB	4,200	29		
		Extra high Izod impact, very high flexural modulus, good low temperature drop impact								
	INSPIRE 114	0.5	215,000	1,483	NB	NB	4,350	30		
		High melt strength, high toughness, excellent processability, high impact, high heat resistant								
	F006EC2	0.5	200,000	1,379	1.3	69	4,900	34		
		Enhanced long term heat aging								
	Amppleo 1025MA	2.5	330,000	2,276	0.7	37	6,000	41		
		High melt strength, excellent processability, enhanced foamability, and very good mechanical properties								
НСНР	INSPIRE 6025N	2.5	300,000	2,068	0.7	37	5,760	40		
		High performance, high crystalline homopolymer with exceptional stiffness and good optical properties								
	D218_00	8.0	315,000	2,171	0.7	37	5,800	40		
		Contains antiblock and nucleating additives, high flexural modulus								
	F350HC2	35	300,000	2,068	0.4	21	6,000	41		
		Very high flexural modulus, high melt flow								
	F1000HC	115	300,000	2,068	0.3	16	5,950	41		
		Very high flexural modulus, high melt flow								
High Crystalline HECO	TI2150C	15	235,000	1,620	1.5	80	4,600	32		
		Highly crystalline homopolymer phase, very high molecular weight EPR phase, very high flexural modulus, reduced emissions, reduced gels								
	TI2350C	40	235,000	1,620	1.0	53	4,600	32		
		Highly crystalline homopolymer phase, very high molecular weight EPR phase, very high flexural modulus, reduced emissions, reduced gels								
	TI2600C	66	235,000	1,620	0.9	48	4,900	34		
		Highly crystalline homopolymer phase, very high molecular weight EPR phase, very high flexural modulus, reduced emissions, reduced gels								
	TI2900C	110	235,000	1,620	0.7	37	4,900	34		
		Highly crystalline homopolymer phase, very high molecular weight EPR phase, very high flexural modulus, reduced emissions, reduced gels								
	T17900C	120	240,000	1,655	0.7	37	4,800	33		
		Highly crystalline homopolymer phase, high molecular weight EPR phase, very high flexural modulus, reduced emissions, reduced gels								
	TI71000M	120	260,000	1,793	0.7	37	4,900	34		
		Highly crystalline homopo	olymer phase, high mole	cular weight EPR phase	e, very high flexural mod	lulus, nucleated, reduc	ed emissions, reduced ge	ls		

Compounding - Typical Properties									
Family	Grade	Melt Flow (230°C, 2.16 kg)	Flexural Modulus (0.05 in/min, 1% secant)		Notched Izod Impact Strength @ 23°C		Tensile Strength @ Yield (2 in/min)		
ASTM Method		D1238	D790A		D256A		D638		
	Units	g/10'	psi	Мра	ft-lb/in	J/m	psi	Мра	
	TI4005P2	0.5	210,000	1,448	NB	NB	4,200	29	
		Exceptionally high Izod im	ipact, very high flexural r	modulus, good low terr	nperature drop impact, i	nucleated			
	TI4007G	0.7	175,000	1,207	NB	NB	4,200	29	
		Exceptionally high Izod im	pact, superior low temp	erature drop impact					
	TI6035NB	3.8	140,000	966	NB	NB	3,100	21	
		Exceptionally high Izod im	pact, superior low temp	erature drop impact					
	TI4040WT	4.0	205,000	1,414	3.5	187	4,400	30	
		Superior drop impact at re	efrigeration temperature	es, very high flexural m	odulus, nucleated, good	l mold release			
	KN-501	8.0	170,000	1,172	2.5	133	3,700	26	
		Excellent color and proces	ss stability, excellent long	g term heat aging prop	erties, wet/dry environr	nent resistance			
	TI6120Q4	12.0	115,000	793	NB	NB	2,750	19	
		Exceptionally high Izod im	pact, superior low temp	erature drop impact, g	ood paint adhesion				
	CSP120NA	12.5	165,000	1,138	NB	NB	3,300	23	
		Excellent balance of toug	hness and stiffness, uniq	ue dimensional stabili	ty, and excellent flow pr	operties			
	C702-20	18	150,000	1,034	3.5	187	3,000	21	
		High impact, suitable for a	a wide range of injection	molded applications					
	TI6200Q4	20	115,000	793	NB	NB	2,850	20	
		Exceptionally high Izod im	pact, superior low temp	erature drop impact, g	ood paint adhesion				
	C7079-25RNA	25	155,000	1,069	NB	NB	3,200	22	
		Consistent processability,	excellent toughness, go	od surface gloss					
<u>0</u>	TI8300C	30	135,000	931	NB	NB	2,700	19	
H		Exceptionally high Izod im	Exceptionally high Izod impact, superior low temperature drop impact, good paint adhesion						
	C700-35N	35	220,000	1,517	1.2	64	4,000	28	
		Good mold fillability, high	stiffness, fast set-up, co	ontains a nucleating ag	ent				
	TI6350WV	35	135,000	931	4.2	224	2,800	19	
		Superior low temperature	impact, nucleated, antis	static additive					
	TI4340L2	35	200,000	1,379	1.4	75	4,000	28	
		Good balance of stiffness	and impact strength, ex	cellent organoleptic p	roperties, ultra-violet st	abilization			
	TI4350P	35	200,000	1,379	1.4	75	4,000	28	
		Good balance of stiffness	and impact strength, ex	cellent organoleptic p	roperties, high melt flow	1			
	TI4355W2	35	200,000	1,379	1.4	75	4,000	28	
		Good balance of stiffness	and impact strength, ex	cellent organoleptic p	roperties, antistatic add	itive			
	TI4360P3	35	210,000	1,448	1.4	75	3,700	26	
		Good balance of stiffness	and impact strength, ex	cellent organoleptic p	roperties				
	C7100-50NA	50	140,000	966	2.3	123	3,200	22	
		Freezer Temperature Impact Resistance, High Flow Processing Ease, Easy Mold Release, Fast Cycle Time, Good Organoleptic Properties, Contains Nucleating and Antistatic Additives							
	TI4700P2	70	180,000	1,241	1.2	64	3,900	27	
		High stiffness, nucleated	High stiffness, nucleated						
	TI6800WV	80	155,000	1,069	2.3	123	3,00	21	
		Nucleated, excellent mole	l release, high impact pro	operties					
	TI4900M	115	210,000	1,448	0.7	37	4,300	30	
		Very high flexural modulu	s, high melt flow						



Every day, Braskem's 8,000 team members work to improve people's lives through sustainable solutions in chemistry and plastics and engage with partners throughout the value chain to advance the circular economy.

With 41 industrial units in Brazil, United States, Mexico and Germany, net revenue of R\$58 billion (US\$15.8 billion) and exports to around 100 countries, Braskem produces annually over 20 million tons of plastic resins and chemical products.

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