QUALITY FITS.

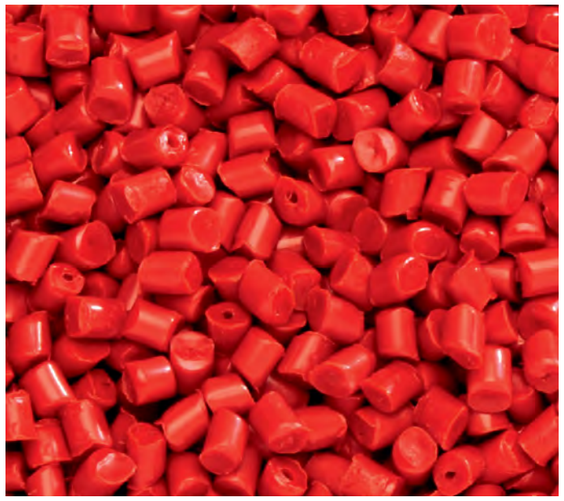
Product range injection molding grades with reference data

Pocan®

QUALITY WORKS.

LANXESS
Energizing Chemistry

POCAN®
COLOR NOMENCLATURE



Pocan® is available in a large number of colors. We use a six-digit number to precisely characterize the color, which follows on after the grade designation. The first two digits specify the color class, while the remaining digits are used for administrative purposes in the color laboratory. The material's natural color generally has the designation "000000".

Color class	First two digits
NATURAL	00
WHITE	01
YELLOW	10
ORANGE	20
RED	30
PURPLE	40
BLUE	50
GREEN	60
GREY	70
BROWN	80
BLACK	90

Example: Pocan® B 3235 000000: natural color
Pocan® B 3235 901510: black

HIGH PERFORMANCE MATERIALS

Plastics with growth potential

Durethan® and Pocan® are plastic materials on the rise, offering outstanding potential for growth and innovation. Thanks to our efficient production facilities and intensive product and application development, we are one of the most competitive providers in the field.

The production of Durethan® and Pocan® is further supported by our manufacture of strategically relevant pre-production products. Our facilities in Krefeld-Uerdingen and Antwerp, among the largest of their kind, produce caprolactam and glass fibers on a global scale.

Industries and areas of application

Durethan® has a property profile that makes it ideal for applications in the automotive and electrical/electronics industries and in the construction sector.

Pocan® is used primarily in the electrical/electronics industry, although applications for this versatile material can also be found in the automotive and commercial vehicles industry, in medicine, and in the sports and leisure sectors.

Key brands and products:

Durethan®: Engineering resins based on polyamide 6, polyamide 66 and co-polyamides

Pocan®: Engineering resins based on polybutylene terephthalate

Tepex®: Continuous fiber reinforced thermoplastic composite sheets

HiAnt®: Engineering expertise and joint promotion of innovation

THE POWER OF INNOVATION

HiAnt®

In the development of innovative applications we support our customers with extensive technical service and know-how. The name HiAnt® stands for our expertise in this area. It is derived from the words “high-tech” and “ant”. Ants are renowned for their well-organized teamwork, industriousness, interlinking through effective communication, and success through combined effort.

We make a distinction between the following key areas:

HiAnt® material development:
Tailored material to satisfy demanding customer requirements.

HiAnt® concept development:
Leadership in lightweight technology to drive evolutions.

HiAnt® Computer Aided Engineering:
Top-notch simulation methods for exact prediction of ompo-nent performance.

HiAnt® part testing:
State-of-the-art testing facilities for practice-oriented component qualification.

HiAnt® processing:
Development of material-process combinations to enable new applications.

RANGE OF GRADES

NON FLAME-RETARDANT GRADES

NON-REINFORCED

			PAGE
General Purpose	B 1305	PBT	7
	B 1503	PBT, medium viscosity	7
	B 1505	PBT, medium viscosity	7
	DP 1105	PBT, improved flowability	6
Improved Toughness	B 1205 XF	PBT, improved flowability	7
	B 1205 HR	PBT, hydrolisis stabilized	7
	S 1506	PBT, high toughness	7
	S 1517	PBT, medium toughness	7
	KU 2-7018 S1	PBT, medium viscosity	7
	DP C 1502	(PBT + PC), low tendency to warp, UV-stabilized	8
Reduced Warpage	C 1202	(PBT + PC), improved impact strength, UV-stabilized	8
	C 1202 LT	(PBT + PC), improved impact strength, UV-stabilized, improved laser-transparency	8
Improved Heat Resistance	C 1206	(PET + PC), improved impact strength	8
Miscellaneous	B 1301	PBT, for food contact	7
	B 1501	PBT, medium viscosity, for food contact	7
	B 1204	PBT, improved impact strength, for head lamp bezels	6
	KU 2-7003 POS042	PBT, easy flow, for head lamp bezels	6

REINFORCED/FILLED

General Purpose	B 3215	PBT GF10	9
	KL 1-7265	PBT GF15	9
	B 3217 XF	PBT GF16, improved flowability, improved impact strength	9
	B 3225	PBT GF20	9
	B 3225 XF	PBT GF20, improved flowability, improved impact strength	9
	B 3235	PBT GF30	11
	B 3235 XF	PBT GF30, improved flowability	11
Improved Toughness	B 3215 XF	PBT GF10, improved flowability	9
	TS 3220	(PBT + PET) GF20, low tendency to warp, improved surface finish	10
	TS 3221	(PBT + PET) GF20, low tendency to warp, improved surface finish, UV-stabilized	11
	KL 1-7033	PBT GF30	11
	C 5210	(PC + PET) MD15, improved impact strength, low tendency to warp, improved surface finish	13
Improved Hydrolysis Stability	B 3216 HR	PBT GF16, improved impact strength	9
	B 3233 HR	PBT GF30, improved flowability	11
Improved Surface Finish	KU 1-7313	(PBT + PET) GF15, increased temperature peak load	10
	ECO T 3215	(PBT + PET) GF15, contains recycled material, increased temperature peak load	10
	T 7323	(PBT + PET) GF20, increased temperature peak load	11
	ECO T 3220	(PBT + PET) GF20, contains recycled material, increased temperature peak load	11
	T 7331	(PBT + PET) GF30, increased temperature peak load	12
	ECO T 3230	(PBT + PET) GF30, contains recycled material, increased temperature peak load	12
	T 7391	(PBT + PET) GF45, increased temperature peak load	12
	ECO T 3240	(PBT + PET) GF45, contains recycled material, increased temperature peak load	12
Improved UV-resistance	KL 1-7265 POS151	PBT GF15	10
	B 3235 POS151	PBT GF30	11
	T 7323 POS151	(PBT + PET) GF20, increased temperature peak load	11
	T 7331 POS151	(PBT + PET) GF30, increased temperature peak load	12
	T 7391 POS151	(PBT + PET) GF45, increased temperature peak load	12
Reduced Warpage	A 3121	(PBT + ASA) GF20, improved surface finish	9
	A 3131	(PBT + ASA) GF30, improved surface finish	11
	B 7616	(PBT + PC) GF15, improved surface finish	10
	KU 1-7625	(PBT + PC) GF20, improved surface finish	10
	B 7425	PBT, GB20, improved surface finish	13
	C 3230 XF	(PBT + PC) GF30, improved flowability, improved surface finish	11
	T 3150 XF	(PBT + PET) GF55, improved flowability, increased temperature peak load, increased strength and increased modul	12
	B 5220 XF	PBT, GB20, improved flowability, improved impact strength	13

NON FLAME-RETARDANT GRADES

NON-REINFORCED

			PAGE
High Light Reflection	DP 7318	PBT, 17% white pigment, low tendency to warp	12
	KU 2-7317	PBT, 17% white pigment, low tendency to warp, enhanced toughness	13
	B 7375	PBT, 25% white pigment, low tendency to warp	13
	T 7245	PET (GF+MD)45	13
Improved Heat Resistance	T 7141	(PET + PBT) GF40, improved flowability, high thermal dimension stability	13
	ECO T 7142	(PET + PBT) (GF+MD)40, contains recycled material, high thermal dimension stability	13
Improved Laser-Transparency	KU 1-7625 LT	(PBT + PC) GF20, improved surface finish, improved laser-transparency	10
	B 3235 LT	PBT GF30, improved laser-transparency	11
	B 3235 HR LT	PBT GF30, improved laser-transparency, improved hydrolysis stability	11
Laser Direct Structuring	DP 7102	PBT MD32	13
	DP T 7140 LDS	PBT (GF+MD)44, high thermal dimension stability	13

FLAME-RETARDANT GRADES

NON-REINFORCED

			PAGE
General Purpose	B 2505	PBT, UL94V-0 (0.75 mm)	14
Improved Toughness	S 7926	PBT, UL94V-0 (1.5 mm)	14
	S 7020	PBT, higher light stability, UL94V-0 (1.5 mm)	14
Reduced Warpage	DP CF 2200	(PBT + PC), improved impact strength, UL94V-0 (0.75 mm)	15
	KU 2-7604	(PBT + PC), improved impact strength, low tendency to warp, UL94V-0 (0.75 mm)	15
Thin Wall Application	KU 2-7503/1	PBT, UL94V-0 (0.38 mm)	14
Halogen-free	DP 2004	PBT, UL94V-2 (0.75 mm)	14

REINFORCED/FILLED

General Purpose	BF 4212	PBT GF15, UL94V-0 (0.75 mm)	15
	B 4215	PBT GF15, UL94V-0 (0.75 mm)	15
	BF 4222	PBT GF20, UL94V-0 (0.75 mm)	16
	B 4225	PBT GF20, UL94V-0 (1 mm)	17
	BF 4232	PBT GF30, UL94V-0 (0.75 mm)	16
	B 4235	PBT GF30, UL94V-0 (1.5 mm)	16
Improved Toughness	BF 4222 Z	PBT GF25, UL94V-0 (0.75 mm)	16
	B 4235 Z	PBT GF30, UL94V-0 (1.5 mm)	17
Thin Wall Application	BF 4409	PBT GF7, UL94V-0 (0.4 mm)	15
	BF 4215	PBT GF12, UL94V-0 (0.4 mm)	15
	BF 4225	PBT GF20, UL94V-0 (0.4 mm)	15
	B 4239	PBT GF30, UL94V-0 (0.38 mm)	17
	BF 4235	PBT GF30, UL94V-0 (0.25 mm)	17
Improved Hydrolysis Stability	BF 4232 HR	PBT GF30, UL94V-0 (0.4 mm)	17
Reduced Warpage	AF 4120	(PBT + ASA) GF20, UL94V-0 (0.4 mm)	16
	AF 4130	(PBT + ASA) GF30, UL94V-0 (0.75 mm)	17
Halogen-free	BFN 4211	PBT GF13, UL94V-0 (0.4 mm)	15
	BFN 4231	PBT GF25, UL94V-0 (0.4 mm)	16
	DP 4035	(PBT + PET) GF30, UL94V-2 (0.38 mm)	17

REFERENCE DATA

Pocan®

NON FLAME-RETARDANT PBT AND PBT BLENDS

NON-REINFORCED

				PBT		
			GRADE	DP 1105	B 1204	KU 2-7003 POS042
			COLOR	000000	000000	000000
BRIEF OUTLINE	**UNITS**	**TEST CONDITIONS**	**STANDARDS**			
General purpose grade				■		
Improved flowability				■	■	
Improved toughness						
Improved hydrolysis stability						
Reduced warpage						■
Good surface quality					■	■
High light-reflecting properties						
Food contact						
Proportion of recyclate						
GENERAL PROPERTIES (23 °C)[1]						
Glass fiber/glass bead/filler content	%	–	–	–	–	–
Density	kg/m³	–	ISO 1183	1310	1310	1300
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	260 °C; 2.16 kg *	ISO 1133-1	42 (250/1.2)	60	60
MECHANICAL PROPERTIES (23 °C/50 % R.H.)						
Tensile modulus	MPa	1 mm/min	ISO 527-1,-2	2850	2600	2800
Yield stress	MPa	50 mm/min	ISO 527-1,-2	65	60	55
Yield strain	%	50 mm/min	ISO 527-1,-2	9.0	9.0	8.0
Nominal strain at break	%	50 mm/min	ISO 527-1,-2	10		> 20
Stress at break	MPa	5 mm/min	ISO 527-1,-2			
Strain at break	%	5 mm/min	ISO 527-1,-2			
Flexural strain at flexural strength	%	2 mm/min	ISO 178-A	6.5	6.0	6.0
Flexural stress at 3.5 % strain	MPa	2 mm/min	ISO 178-A	80	80	80
Charpy impact strength 23 °C	kJ/m²	+23 °C	ISO 179-1eU	135	180	200
Charpy impact strength -30 °C	kJ/m²	-30 °C	ISO 179-1eU	110		100
Charpy notched impact strength 23 °C	kJ/m²	+23 °C	ISO 179-1eA	< 10	< 10	< 10
Charpy notched impact strength -30 °C	kJ/m²	-30 °C	ISO 179-1eA	< 10		< 10
Izod impact strength 23 °C	kJ/m²	+23 °C	ISO 180-1U	80	125	
Izod impact strength -30 °C	kJ/m²	-30 °C	ISO 180-1U	70		
Izod notched impact strength 23 °C	kJ/m²	+23 °C	ISO 180-1A	< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	-30 °C	ISO 180-1A	< 10		< 10
THERMAL PROPERTIES						
Melting temperature	°C	10 °C/min	ISO 11357-1,-3	223	225	225
HDT, Method Af	°C	1.80 MPa	ISO 75-1,-2	65	70	60
HDT, Method Bf	°C	0.45 MPa	ISO 75-1,-2	160	160	160
Coefficient of linear thermal expansion, parallel	10^{-4}/K	23 to 55 °C	ISO 11359-1,-2	1.0		1.2
Coefficient of linear thermal expansion, across	10^{-4}/K	23 to 55 °C	ISO 11359-1,-2	1.0		1.2
FIRE BEHAVIOR						
Burning behavior UL 94	Classification	(mm)	UL 94	HB (0.75)		
Glow Wire Flammability Index (GWFI)	°C	(mm)	IEC 60695-2-12	700 (2.0)		
Glow Wire Ignition Temperature (GWIT)	°C	(mm)	IEC 60695-2-13			
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)						
Relative permittivity; 1 MHz	–	1 MHz	IEC 60250	3.2		
Dissipation factor; 1 MHz	10^{-4}	1 MHz	IEC 60250	224		
Volume resistivity	Ohm·m		IEC 60093	1E14		
Surface resistivity	Ohm		IEC 60093	1E17		
Comparative tracking index (CTI)	Rating	Test solution A	IEC 60112	350		600
SHRINKAGE (Plaque 60 x 60 x 2 mm)						
Processing conditions for shrinkage plaques	°C/°C/bar	Melt-/mold temp./holding pressure		250/80/600	250/80/600	260/80/600
Molding shrinkage, parallel	%		ISO 294-4	2.2	2.0	1.7
Molding shrinkage, across	%		ISO 294-4	2.4	2.0	1.7
Post-shrinkage, parallel; 120 °C; 4 h	%		ISO 294-4	0.3	0.3	0.3
Post-shrinkage, across; 120 °C; 4 h	%		ISO 294-4	0.1	0.3	0.3

NON FLAME-RETARDANT PBT AND PBT BLENDS

NON-REINFORCED

	PBT									
GRADE	B 1205 HR	B 1305	B 1205 XF	B 1301	B 1505	B 1503	B 1501	S 1506	S 1517	KU 2-7018 S1
COLOR	000000	000000	000000	000000	000000	000000	000000	000000	000000	000000
BRIEF OUTLINE										
General purpose grade		■			■					
Improved flowability	■		■			■				
Improved toughness			■					■	■	■
Improved hydrolysis stability	■									
Reduced warpage										
Good surface quality										
High light-reflecting properties										
Food contact				■			■			
Proportion of recyclate										
GENERAL PROPERTIES (23 °C)[1]										
Glass fiber/glass bead/filler content	–	–	–	–	–	–	–	–	–	–
Density	1290	1310	1290	1310	1310	1300	1310	1200	1240	1220
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	50	47 (250/2.16)	50 (250/2.16)	60	16 (250/2.16)	18	16 (250/2.16)	14 (260/5)	27 (260/5)	37 (270/5)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)										
Tensile modulus	2600	2800	2500	2700	2700	2600	2600	1700	1900	1750
Yield stress	55	60	55	60	60	55	60	35	45	40
Yield strain	3.5	9.0	5.0	9.0	9.0	8.0	4.0	4.5	5.1	4.5
Nominal strain at break		> 10	10	> 10	> 15	> 20	> 15	> 50	> 50	> 50
Stress at break										
Strain at break										
Flexural strain at flexural strength	5.6	6.0	5.9	6.0	6.0	6.0	6.0	6.0	5.8	6.0
Flexural stress at 3.5 % strain	75	80	75	80	80	80	75	50	60	55
Charpy impact strength 23 °C	150	180	140	180	N	N	N	N	N	N
Charpy impact strength -30 °C	100	150	120	150	180	180	195	N	N	N
Charpy notched impact strength 23 °C	< 10	< 10	< 10	< 10	< 10	< 10	< 10	75	50	65
Charpy notched impact strength -30 °C		< 10	< 10	< 10	< 10	< 10	< 10	25	13	18
Izod impact strength 23 °C	120	125	110	125	N	N	N	N	N	N
Izod impact strength -30 °C	65	90	90	90	150	150	200	N	N	N
Izod notched impact strength 23 °C	< 10		< 10	< 10	< 10	< 10	< 10	70	45	60
Izod notched impact strength -30 °C		< 10	< 10	< 10	< 10	< 10	< 10	20	13	15
THERMAL PROPERTIES										
Melting temperature	225	225	225	225	225	225	225	225	225	225
HDT, Method Af	75	65	60	65	60	60	55	55	55	50
HDT, Method Bf	140	155	150	140	150	160	150	90	115	90
Coefficient of linear thermal expansion, parallel		1.1	1.2	1.1	1.2	1.2	1.1	1.3	1.3	1.3
Coefficient of linear thermal expansion, across		1.1	1.2	1.1	1.2	1.2	1.1	1.3	1.3	1.3
FIRE BEHAVIOR										
Burning behavior UL 94		HB (0.75)	HB (0.75)	HB (0.75)	HB (0.75)		HB (0.75)	HB (0.75)	HB (0.75)	HB (0.75)
Glow Wire Flammability Index (GWFI)		750 (2.0)		750 (2.0)	750 (2.0)		750 (2.0)	650 (2.0)	650 (2.0)	
Glow Wire Ignition Temperature (GWIT)										
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)										
Relative permittivity; 1 MHz		3.2		3.2	3.2		3.2	3.1	3.1	
Dissipation factor; 1 MHz		190		190	190		190	170	190	
Volume resistivity		> 1E13		> 1E13	> 1E13		> 1E12	> 1E13	> 1E13	
Surface resistivity		> 1E15		> 1E15	> 1E15		> 1E15	> 1E15	> 1E15	
Comparative tracking index (CTI)		600	600	600	600		600	600	600	600
SHRINKAGE (Plaque 60 x 60 x 2 mm)										
Processing conditions for shrinkage plaques	250/80/600	250/80/600	250/80/600	260/80/600	250/80/600		250/80/600	260/80/600	260/80/600	250/80/600
Molding shrinkage, parallel	2.1	2.0	2.1	1.8	2.1		1.8	2.0	2.0	2.0
Molding shrinkage, across	2.1	2.0	2.1	1.8	2.1		1.8	1.8	2.0	2.0
Post-shrinkage, parallel; 120 °C; 4 h	0.3	0.3	0.3	0.3	0.2		0.3	0.3	0.3	0.3
Post-shrinkage, across; 120 °C; 4 h	0.3	0.3	0.3	0.3	0.2		0.3	0.4	0.3	0.3

* deviant figures in parentheses **for color information and other wall thicknesses see UL Yellow Card * also as POS151
N = no failure

**PLEASE NOTE THAT OUR PRODUCT INFORMATION AND DATA ARE SUBJECT TO CONTINUOUS EXAMINATION AND UPDATES.
MAKE SURE YOU REFER TO FURTHER INFORMATION AND THE LATEST UPDATES AT WWW.POCAN.COM**

REFERENCE DATA

Pocan®

NON FLAME-RETARDANT PBT AND PBT BLENDS

		NON-REINFORCED			
		PBT + PC			
	GRADE	C 1202 LT	C 1202	DP C 1502	C 1206
	COLOR	904040	000000	000000	000000
BRIEF OUTLINE	**UNITS**				
General purpose grade					
Improved flowability					
Improved toughness		■	■	■	■
Improved hydrolysis stability					
Reduced warpage		■	■	■	■
Good surface quality					
High light-reflecting properties					
Food contact					
Proportion of recyclate					
GENERAL PROPERTIES (23 °C)[1]					
Glass fiber/glass bead/filler content	%	–	–	–	–
Density	kg/m³	1210	1210	1210	1220
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	45 (270/5)	45 (270/5)	35 (270/5)	30 (260/5)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)					
Tensile modulus	MPa	2100	2100	2100	2200
Yield stress	MPa	50	50	50	50
Yield strain	%	4.0	4.0	3.8	4.5
Nominal strain at break	%	10	10	> 40	10
Stress at break	MPa				
Strain at break	%				
Flexural strain at flexural strength	%	5.5	5.5	5.5	5.0
Flexural stress at 3.5 % strain	MPa	70	70	65	65
Charpy impact strength 23 °C	kJ/m²	N	N	N	N
Charpy impact strength -30 °C	kJ/m²	N	N	N	N
Charpy notched impact strength 23 °C	kJ/m²	55	55	60	55
Charpy notched impact strength -30 °C	kJ/m²	18	18	19	20
Izod impact strength 23 °C	kJ/m²	N	N	N	N
Izod impact strength -30 °C	kJ/m²	N	N	N	N
Izod notched impact strength 23 °C	kJ/m²	50	50	60	50
Izod notched impact strength -30 °C	kJ/m²	17	17	17	15
THERMAL PROPERTIES					
Melting temperature	°C	225	225	225	250
HDT, Method Af	°C	75	75	70	90
HDT, Method Bf	°C	100	100	105	120
Coefficient of linear thermal expansion, parallel	10^{-4}/K	0.9	0.9	1.1	0.9
Coefficient of linear thermal expansion, across	10^{-4}/K	0.9	0.9	1.1	0.8
FIRE BEHAVIOR					
Burning behavior UL 94	Classification			HB (0.75)	HB (0.75)
Glow Wire Flammability Index (GWFI)	°C			750 (4.0)	
Glow Wire Ignition Temperature (GWIT)	°C				
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)					
Relative permittivity; 1 MHz	–				
Dissipation factor; 1 MHz	10^{-4}				
Volume resistivity	Ohm·m				
Surface resistivity	Ohm				
Comparative tracking index (CTI)	Rating				
SHRINKAGE (Plaque 60 x 60 x 2 mm)					
Processing conditions for shrinkage plaques	°C/°C/bar	250/70/600	250/70/600	250/70/600	270/80/600
Molding shrinkage, parallel	%	1.0	1.0	1.2	0.7
Molding shrinkage, across	%	1.0	1.0	1.2	0.7
Post-shrinkage, parallel; 120 °C; 4 h	%				0.3
Post-shrinkage, across; 120 °C; 4 h	%				0.3

[1] See page 1 of the table for test conditions and standards * deviant figures in parentheses ** for color information and other wall thicknesses see UL Yellow Card + also as POS151
N = no failure

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NON FLAME-RETARDANT PBT AND PBT BLENDS

		REINFORCED < 30% GF							
		PBT							PBT + ASA
	GRADE	B 3215 XF	B 3215	KL 1-7265+	B 3216 HR	B 3217 XF	B 3225 XF	B 3225+	A 3121
	COLOR	000000	000000	000000	000000	000000	000000	000000	000000
BRIEF OUTLINE	**UNITS**								
General purpose grade			■	■				■	
Improved flowability		■				■	■		
Improved toughness		■				■			
Improved hydrolysis stability		■			■	■	■		
Reduced warpage									■
Good surface quality									■
High light-reflecting properties									
Food contact									
Proportion of recyclate									
GENERAL PROPERTIES (23 °C)[1]									
Glass fiber/glass bead/filler content	%	10	10	15	16	16	20	20	20
Density	kg/m³	1350	1380	1420	1400	1400	1400	1460	1430
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	32	30	25	24	35	35	20	20 (270/2.16)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)									
Tensile modulus	MPa	4350	4900	6000	5900	6000	6500	7100	7000
Yield stress	MPa								
Yield strain	%								
Nominal strain at break	%								
Stress at break	MPa	80	90	105	100	105	105	120	110
Strain at break	%	4.0	4.0	3.5	3.7	3.2	3.5	3.4	2.9
Flexural strain at flexural strength	%	4.8	5.1	4.2	4.4	4.0	3.7	4.0	3.2
Flexural stress at 3.5 % strain	MPa	125	135	160	160	165	160	190	
Charpy impact strength 23 °C	kJ/m²	40	25	30	50	45	60	50	55
Charpy impact strength -30 °C	kJ/m²	30	25	30	35	35	40	45	40
Charpy notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Charpy notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Izod impact strength 23 °C	kJ/m²	30	20	25	45	40	50	45	50
Izod impact strength -30 °C	kJ/m²	25	20	25	30	30	40	40	45
Izod notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
THERMAL PROPERTIES									
Melting temperature	°C	225	225	225	225	225	225	225	225 - 260
HDT, Method Af	°C	185	190	195	190	200	200	205	175
HDT, Method Bf	°C	215	215	220	220	220	220	220	215
Coefficient of linear thermal expansion, parallel	10^{-4}/K	0.6	0.5	0.4	0.4	0.4	0.2	0.3	0.3
Coefficient of linear thermal expansion, across	10^{-4}/K	1.4	1.3	1.2	1.3	1.3	1.3	1.1	0.9
FIRE BEHAVIOR									
Burning behavior UL 94	Classification		HB (0.75)	HB (0.75)	HB (0.75)		HB (0.75)	HB (0.75)	HB (0.75)
Glow Wire Flammability Index (GWFI)	°C		750 (2.0)	650 (2.0)			750 (2.0)	650 (2.0)	
Glow Wire Ignition Temperature (GWIT)	°C						775 (2.0)		
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)									
Relative permittivity; 1 MHz	–		3.4	3.5				3.6	
Dissipation factor; 1 MHz	10^{-4}		180	200				200	
Volume resistivity	Ohm·m		> 1E13	> 1E13	> 1E13			> 1E13	
Surface resistivity	Ohm		> 1E15	> 1E15	> 1E15			> 1E15	
Comparative tracking index (CTI)	Rating	600	275	375	275	350	375	350	200
SHRINKAGE (Plaque 60 x 60 x 2 mm)									
Processing conditions for shrinkage plaques	°C/°C/bar	260/80/600	260/80/600	260/80/600	260/80/600	260/80/600	260/80/600	260/80/600	270/90/600
Molding shrinkage, parallel	%	0.9	0.9	0.7	0.6	0.6	0.5	0.5	0.3
Molding shrinkage, across	%	1.1	1.1	1.2	1.0	1.1	1.1	1.4	0.7
Post-shrinkage, parallel; 120 °C; 4 h	%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Post-shrinkage, across; 120 °C; 4 h	%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2

REFERENCE DATA

Pocan®

NON FLAME-RETARDANT PBT AND PBT BLENDS

		REINFORCED < 30% GF					
		PBT + PC			PBT + PET		
	GRADE	B 7616	KU 1-7625 LT	KU 1-7625	ECO T 3215	KU 1-7313	TS 3221
	COLOR	000000	904040	901510	000000	000000	901510
BRIEF OUTLINE	**UNITS**						
General purpose grade							
Improved flowability							
Improved toughness							■
Improved hydrolysis stability							
Reduced warpage		■	■	■			■
Good surface quality		■	■	■	■	■	■
High light-reflecting properties							
Food contact							
Proportion of recyclate					■		
GENERAL PROPERTIES (23 °C)[1]							
Glass fiber/glass bead/filler content	%	15	20	20	15	15	20
Density	kg/m³	1350	1400	1390	1430	1430	1390
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	17	40 (260/5)	30 (260/5)	16	18	18 (270/5)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)							
Tensile modulus	MPa	4600	5100	5500	6000	6100	5500
Yield stress	MPa						
Yield strain	%						
Nominal strain at break	%						
Stress at break	MPa	75	75	85	110	110	75
Strain at break	%	4.2	4.0	3.4	3.0	3.2	3.3
Flexural strain at flexural strength	%	4.7	4.5	3.5	3.8	3.8	3.8
Flexural stress at 3.5 % strain	MPa	120			165	165	
Charpy impact strength 23 °C	kJ/m²	45	35	40	30	30	50
Charpy impact strength -30 °C	kJ/m²	50		40	30	30	45
Charpy notched impact strength 23 °C	kJ/m²	< 10		< 10	< 10	< 10	< 10
Charpy notched impact strength -30 °C	kJ/m²	< 10		< 10	< 10	< 10	< 10
Izod impact strength 23 °C	kJ/m²	35	30	35	25	25	40
Izod impact strength -30 °C	kJ/m²	40		40		25	40
Izod notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10
THERMAL PROPERTIES							
Melting temperature	°C	225	225	225	225 - 250	225 - 250	225 - 250
HDT, Method Af	°C	105	110	115	190	185	140
HDT, Method Bf	°C	135		150	220	220	205
Coefficient of linear thermal expansion, parallel	10^{-4}/K	0.8		0.4	0.5	0.5	0.3
Coefficient of linear thermal expansion, across	10^{-4}/K	0.5		0.7	1.1	1.1	1.3
FIRE BEHAVIOR							
Burning behavior UL 94	Classification	HB (0.75)	HB (0.75)	HB (0.75)		HB (0.75)	
Glow Wire Flammability Index (GWFI)	°C	750 (2.0)				750 (2.0)	
Glow Wire Ignition Temperature (GWIT)	°C						
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)							
Relative permittivity; 1 MHz	–	3.4				3.5	
Dissipation factor; 1 MHz	10^{-4}	130				170	
Volume resistivity	Ohm·m	> 1E13				> 1E13	
Surface resistivity	Ohm	> 1E15				> 1E15	
Comparative tracking index (CTI)	Rating					225	250
SHRINKAGE (Plaque 60 x 60 x 2 mm)							
Processing conditions for shrinkage plaques	°C/°C/bar	250/80/600			270/90/600	270/90/600	270/90/600
Molding shrinkage, parallel	%	0.7			0.5	0.5	0.4
Molding shrinkage, across	%	0.5			1.0	1.0	0.7
Post-shrinkage, parallel; 120 °C; 4 h	%	0.4			0.1	0.1	0.1
Post-shrinkage, across; 120 °C; 4 h	%	0.2			0.2	0.2	0.1

[1] See page 1 of the table for test conditions and standards * deviant figures in parentheses ** for color information and other wall thicknesses see UL Yellow Card + also as POS151
N = no failure

PLEASE NOTE THAT OUR PRODUCT INFORMATION AND DATA ARE SUBJECT TO CONTINUOUS EXAMINATION AND UPDATES.
MAKE SURE YOU REFER TO FURTHER INFORMATION AND THE LATEST UPDATES AT WWW.POCAN.COM

NON FLAME-RETARDANT PBT AND PBT BLENDS

	REINFORCED < 30% GF			REINFORCED 30% GF							
	PBT + PET			PBT						PBT + ASA	PBT + PC
GRADE	TS 3220	T 7323+	ECO T 3220	B 3233 HR	B 3235	B 3235 XF	B 3235 LT	B 3235 HR LT	KL 1-7033	A 3131	C 3230 XF
COLOR	901510	000000	000000	000000	000000	000000	904040	904040	000000	000000	000000
BRIEF OUTLINE											
General purpose grade					■		■				
Improved flowability						■					■
Improved toughness									■		
Improved hydrolysis stability				■		■		■			
Reduced warpage										■	■
Good surface quality	■	■								■	■
High light-reflecting properties											
Food contact											
Proportion of recyclate			■								
GENERAL PROPERTIES (23 °C)[1]											
Glass fiber/glass bead/filler content	20	20	20	30	30	30	30	30	30	30	30
Density	1380	1470	1470	1480	1550	1470	1520	1520	1460	1500	1430
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	18 (270/5)	15	15	15	17	20	20 (270/2.16)		13 (260/5)	40 (270/5)	25 (260/5)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)											
Tensile modulus	5500	7500	7500	9600	9800	9200	10000	10000	8000	9800	7500
Yield stress											
Yield strain											
Nominal strain at break											
Stress at break	75	120	120	125	140	125	140	140	95	135	95
Strain at break	3.0	3.2	3.2	2.9	2.9	2.7	2.8	2.8	4.0	2.4	2.6
Flexural strain at flexural strength	3.9	3.5	3.5	3.2	3.4	3.3	3.2	3.2	3.8	2.7	2.7
Flexural stress at 3.5 % strain		195	195						155		
Charpy impact strength 23 °C	50	40	40	65	65	60	62	60	65	55	45
Charpy impact strength -30 °C	45	35	35	55	60	60			65	55	50
Charpy notched impact strength 23 °C	< 10	< 10	< 10	< 10	10	10			12	< 10	10
Charpy notched impact strength -30 °C	< 10	< 10	< 10	< 10	< 10	10			10	< 10	< 10
Izod impact strength 23 °C	40	35	35	55	55	55	54	53	55	50	45
Izod impact strength -30 °C	40	35	35	55	55	55			55	50	45
Izod notched impact strength 23 °C	< 10	< 10	< 10	< 10	< 10	11			12	< 10	10
Izod notched impact strength -30 °C	< 10	< 10	< 10	< 10	< 10	10			10	< 10	< 10
THERMAL PROPERTIES											
Melting temperature	225 - 250	225 - 250	225 - 250	225	225	225	225	225	225	225 - 250	225
HDT, Method Af	155	195	195	205	210	205	195	190	195	185	120
HDT, Method Bf	215	220	220	220	220	220	215	215	220	220	165
Coefficient of linear thermal expansion, parallel	0.3	0.3	0.3	0.3	0.3	0.3	1.0	1.0	0.3	0.2	0.3
Coefficient of linear thermal expansion, across	1.3	0.9	0.9	1.3	1.1	1.1	0.2	0.2	1.0	1.0	0.8
FIRE BEHAVIOR											
Burning behavior UL 94		HB (0.75)		HB (0.75)	HB (0.75)	HB (0.75)			HB (0.75)	HB (0.75)	
Glow Wire Flammability Index (GWFI)		750 (2.0)		800 (0.8 - 3.0)	650 (2.0)	750 (2.0)			650 (2.0)		
Glow Wire Ignition Temperature (GWIT)				825 (0.8 - 3.0)		775 (2.0)					
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)											
Relative permittivity; 1 MHz		3.6			3.8				3.9		
Dissipation factor; 1 MHz		170			180				260		
Volume resistivity		> 1E13			> 1E13				> 1E12		
Surface resistivity		> 1E15			> 1E15				> 1E15		
Comparative tracking index (CTI)	250	250	250	450	350	450	300	300	600	300	
SHRINKAGE (Plaque 60 x 60 x 2 mm)											
Processing conditions for shrinkage plaques	270/90/600	270/90/600	270/90/600	260/80/600	260/80/600	260/80/600			260/80/600	270/90/600	250/80/600
Molding shrinkage, parallel	0.4	0.4	0.4	0.3	0.4	0.4			0.4	0.3	0.4
Molding shrinkage, across	0.7	1.0	1.0	1.0	1.1	1.0			0.9	0.8	0.6
Post-shrinkage, parallel; 120 °C; 4 h	0.1	0.1	0.1	0,1	0.2	0.1 (150/4)		0.05	0.1	0.1	0.2
Post-shrinkage, across; 120 °C; 4 h	0.1	0.2	0.2	0.1	0.2	0.1 (150/4)		0.2	0.2	0.1	0.2

REFERENCE DATA

Pocan®

NON FLAME-RETARDANT PBT AND PBT BLENDS

		REINFORCED > 30% GF					FILLER
		PBT + PET					PBT
	GRADE	T 7331+	ECO T 3230	ECO T 3240	T 7391+	T 3150 XF	DP 7318
	COLOR	000000	000000	000000	000000	000000	000000
BRIEF OUTLINE	**UNITS**						
General purpose grade							
Improved flowability						■	
Improved toughness							
Improved hydrolysis stability							
Reduced warpage							■
Good surface quality		■	■	■	■		
High light-reflecting properties							■
Food contact							
Proportion of recyclate			■	■			
GENERAL PROPERTIES (23 °C)[1]							
Glass fiber/glass bead/filler content	%	30	30	45	45	55	17 (MD)
Density	kg/m³	1550	1550	1690	1690	1770	1500
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	30 (260/5)	30 (260/5)	30 (260/5)	30 (260/5)	30 (270/5)	27
MECHANICAL PROPERTIES (23 °C/50 % R.H.)							
Tensile modulus	MPa	10400	10400	16000	16000	18500	3400
Yield stress	MPa						
Yield strain	%						
Nominal strain at break	%						
Stress at break	MPa	145	145	160	160	160	57
Strain at break	%	2.8	2.8	1.9	1.9	1.5	10
Flexural strain at flexural strength	%	3.0	3.0	2.1	2.1	1.9	6.0
Flexural stress at 3.5 % strain	MPa						
Charpy impact strength 23 °C	kJ/m²	65	65	60	60	50	125
Charpy impact strength -30 °C	kJ/m²	55	55	65	65	50	
Charpy notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	
Charpy notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	
Izod impact strength 23 °C	kJ/m²	55	55	55	55	45	110
Izod impact strength -30 °C	kJ/m²	55	55	60	60	45	
Izod notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	
THERMAL PROPERTIES							
Melting temperature	°C	225 - 250	225 - 250	225 - 250	225 - 250	225 - 260	225
HDT, Method Af	°C	200	200	205	205	210	
HDT, Method Bf	°C	220	220	225	225	230	160
Coefficient of linear thermal expansion, parallel	10-4/K	0.3	0.3	0.2	0.2	0.1	0.9
Coefficient of linear thermal expansion, across	10-4/K	0.9	0.9	0.8	0.8	0.6	0.9
FIRE BEHAVIOR							
Burning behavior UL 94	Classification	HB (0.75)			HB (0.75)		HB (0.75)
Glow Wire Flammability Index (GWFI)	°C	750 (2.0)			750 (2.0)		
Glow Wire Ignition Temperature (GWIT)	°C						
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)							
Relative permittivity; 1 MHz	–		3.8			4.2	
Dissipation factor; 1 MHz	10^{-4}	170			140		
Volume resistivity	Ohm·m	> 1E13			> 1E13		
Surface resistivity	Ohm	> 1E15			> 1E15		
Comparative tracking index (CTI)	Rating	250	250	250	250		600
SHRINKAGE (Plaque 60 x 60 x 2 mm)							
Processing conditions for shrinkage plaques	°C/°C/bar	270/90/600	270/90/600	270/90/600	270/90/600	280/90/600	
Molding shrinkage, parallel	%	0.3	0.3	0.2	0.2	0.3	
Molding shrinkage, across	%	0.9	0.9	0.8	0.8	0.8	
Post-shrinkage, parallel; 120 °C; 4 h	%	0.1	0.1	0.1	0.1	0.1	
Post-shrinkage, across; 120 °C; 4 h	%	0.2	0.2	0.1	0.1	0.1	

NON FLAME-RETARDANT PBT AND PBT BLENDS

		FILLER									
		PBT					PC + PET	PET	PET + PBT		
	GRADE	KU 2-7317	B 5220 XF	B 7425	B 7375	DP 7102	C 5210	T 7245	ECO T 7142	T 7141	DP T 7140 LDS
	COLOR	000000	000000	000000	000000	000000	000000	000000	901510	000000	000000
BRIEF OUTLINE	**UNITS**										
General purpose grade											
Improved flowability			■		■			■	■	■	
Improved toughness		■	■								
Improved hydrolysis stability											
Reduced warpage		■	■	■	■		■	■			
Good surface quality					■		■	■			
High light-reflecting properties		■		■							
Food contact											
Proportion of recyclate											
GENERAL PROPERTIES (23 °C)[1]											
Glass fiber/glass bead/filler content	%	17 (MD)	20 (GB)	20 (GB)	25 (MD)	32 (MD)	15 (MD)	45 (GF+MD)	40 (GF+MD)	40 (GF+MD)	44 (GF+MD)
Density	kg/m³	1450	1420	1440	1570	1570	1300	1825	1680	1700	1740
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	18	34	35 (260/5)	37 (250/2.16)	12	30 (270/5)	35 (270/5)		25 (280/2.16)	21 (280/2.16)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)											
Tensile modulus	MPa	2500	3100	3300	3500	5800	3500	12000	12000	12000	12700
Yield stress	MPa										
Yield strain	%										
Nominal strain at break	%										
Stress at break	MPa	40	45	50	55	50	45	115	125	125	110
Strain at break	%	15.0	6.0	6.0	3.0	2.0	15	1.6	1.6	1.6	1.3
Flexural strain at flexural strength	%	5.8	5.0	5.0	5.0	3.0	5.0	2.0	1.8	2.0	1.7
Flexural stress at 3.5 % strain	MPa	70	85	85	90		75				
Charpy impact strength 23 °C	kJ/m²	140	45	35	65	35	N	30			30
Charpy impact strength -30 °C	kJ/m²	90	25	25	50	35	N				25
Charpy notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10				< 10	< 10
Charpy notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10				< 10	< 10
Izod impact strength 23 °C	kJ/m²	125	32	30	60	30	N	30	35	35	25
Izod impact strength -30 °C	kJ/m²	60	20	20	45	25	N				25
Izod notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10	12		< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10				< 10	< 10
THERMAL PROPERTIES											
Melting temperature	°C	225	225	225	225	225	250	260	260	260	255
HDT, Method Af	°C	60	80	70	75	115	105	180	205	205	210
HDT, Method Bf	°C	140	170	170	165	195	125	230	250	250	250
Coefficient of linear thermal expansion, parallel	10-4/K	1.1	1.0	1.0	1.0	0.7				0.2	0.2
Coefficient of linear thermal expansion, across	10-4/K	1.1	1.0	1.0	1.0	0.9				0.5	0.5
FIRE BEHAVIOR											
Burning behavior UL 94	Classification	HB (0.75)		HB (0.75)	HB (0.75)	HB (1.5)					
Glow Wire Flammability Index (GWFI)	°C			650 (2.0)	650 (2.0)				750 (0.75 - 3.0)	750 (0.8 - 3.0)	
Glow Wire Ignition Temperature (GWIT)	°C								775 (0.75 - 3.0)	775 (0.8 - 3.0)	
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)											
Relative permittivity; 1 MHz	–			3.6	4.2	3.5					4.1
Dissipation factor; 1 MHz	10^{-4}			170	170	149					138
Volume resistivity	Ohm·m			> 1E13	> 1E13						2E18
Surface resistivity	Ohm			> 1E15	> 1E13						5.4E16
Comparative tracking index (CTI)	Rating	600		250	475						275
SHRINKAGE (Plaque 60 x 60 x 2 mm)											
Processing conditions for shrinkage plaques	°C/°C/bar	260/80/600	260/80/600	260/80/600	260/80/600	260/80/600	270/80/600	270/120/600	280/110/600	280/110/600	280/110/600
Molding shrinkage, parallel	%	1.9	2.2	2.1	1.8	1.4	0.6	0.4	0.2	0.2	0.2
Molding shrinkage, across	%	1.9	2.3	2.1	1.7	1.4	0.6	1.0	0.8	0.7	0.7
Post-shrinkage, parallel; 120 °C; 4 h	%	0.3	0.2	0.2	0.3	0.1	0.3	0.1	0.1	0.1	0.1
Post-shrinkage, across; 120 °C; 4 h	%	0.3	0.2	0.2	0.3	0.1	0.3	0.1	0.1	0.1	0.2

[1] See page 1 of the table for test conditions and standards * deviant figures in parentheses ** for color information and other wall thicknesses see UL Yellow Card + also as POS151

N = no failure

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REFERENCE DATA

Pocan®

FLAME-RETARDANT PBT AND PBT BLENDS

		NON-REINFORCED				
		PBT				
	GRADE	DP 2004	KU 2-7503/1	B 2505	S 7926	S 7020
	COLOR	000000	000000	000000	000000	000000
BRIEF OUTLINE	**UNITS**					
General purpose grade				■		
Thin-wall applications			■			
Improved toughness					■	■
Improved hydrolysis stability						
Reduced warpage						
Halogen-free		■				
Glow wire applications						
Proportion of recyclate						
GENERAL PROPERTIES (23 °C)[1]						
Glass fiber/glass bead/filler content	%	–	–	–	–	–
Density	kg/m³	1320	1450	1470	1370	1380
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	55 (250/2.16)	15 (250/2.16)	18 (250/2.16)	40 (270/5)	50 (270/5)
MECHANICAL PROPERTIES (23 °C/50 % R.H.)						
Tensile modulus	MPa	2300	2900	3000	2400	2300
Yield stress	MPa	55	60	50	40	45
Yield strain	%	8.0	6.0	3.0	3.0	4.5
Nominal strain at break	%	10	8.0	8.0	> 10	> 15
Stress at break	MPa					
Strain at break	%					
Flexural strain at flexural strength	%	6.5	6.0	5.0	5.0	5.3
Flexural stress at 3.5 % strain	MPa	60	90	80	65	70
Charpy impact strength 23 °C	kJ/m²	75	130	100	N	N
Charpy impact strength -30 °C	kJ/m²		100	90	N	105
Charpy notched impact strength 23 °C	kJ/m²		< 10	< 10	12	< 10
Charpy notched impact strength -30 °C	kJ/m²		< 10	< 10	< 10	< 10
Izod impact strength 23 °C	kJ/m²	65	120	80	N	N
Izod impact strength -30 °C	kJ/m²		90	65	110	65
Izod notched impact strength 23 °C	kJ/m²	< 10	< 10	< 10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²		< 10	< 10	< 10	< 10
THERMAL PROPERTIES						
Melting temperature	°C	224	225	225	225	225
HDT, Method Af	°C	75	75	70	60	65
HDT, Method Bf	°C	160	145	170	130	125
Coefficient of linear thermal expansion, parallel	10^{-4}/K	1.2	0.9	1.0	1.1	1.1
Coefficient of linear thermal expansion, across	10^{-4}/K	1.2	1.0	1.0	1.2	1.1
FIRE BEHAVIOR						
Burning behavior UL 94						
5VB / 5VA from mm	Classification				- / 3.0	
V-0, V-1, V-2 from mm	Classification	V-2 (0.75)	V-0 (0.4)	V-0 (0.75)	V-0 (1.5), V-2 (0.4)	V-0 (1.5), V-2 (0.75)
Glow Wire Flammability Index (GWFI)	°C	960 (0.4 - 1.5)	960 (1.6)	960 (2.0)	960 (0.75)	960 (0.75)
Glow Wire Ignition Temperature (GWIT)	°C	800 (0.75 - 3.0)	700 (1.6 - 3.0)		700 (3.0), 725 (1.5); 775 (0.75)	
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)						
Relative permittivity; 1 MHz	–		3.2	3.2	3.1	3.6
Dissipation factor; 1 MHz	10^{-4}		160	150	150	240
Volume resistivity	Ohm·m	> 1E13	> 1E13	> 1E11	> 1E13	> 1E15
Surface resistivity	Ohm	> 1E15	> 1E15	> 1E13	> 1E15	> 1E15
Comparative tracking index (CTI)	Rating	600	250	600	600	600
CTI	PLC class	0				
SHRINKAGE (Plaque 60 x 60 x 2 mm)						
Processing conditions for shrinkage plaques	°C/°C/bar	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600
Molding shrinkage, parallel	%	2.3	1.8	2.2	2.1	1.8
Molding shrinkage, across	%	2.3	1.7	2.2	2.0	1.8
Post-shrinkage, parallel; 120 °C; 4 h	%	0.2	0.3	0.2	0.3	0.4
Post-shrinkage, across; 120 °C; 4 h	%	0.1	0.3	0.2	0.3	0.4

FLAME-RETARDANT PBT AND PBT BLENDS

		NON-REINFORCED		REINFORCED < 30% GF					
		PBT + PC		PBT					
	GRADE	KU 2-7604	DP CF 2200	BF 4409	BF 4215	B 4215	BFN 4211	BF 4212	BF 4225
	COLOR	000000	000000	000000	000000	000000	000000	000000	000000
BRIEF OUTLINE	**UNITS**								
General purpose grade						■	■	■	
Thin-wall applications				■	■				■
Improved toughness		■	■						
Improved hydrolysis stability									
Reduced warpage		■	■						
Halogen-free							■		
Glow wire applications									
Proportion of recyclate									
GENERAL PROPERTIES (23 °C)[1]									
Glass fiber/glass bead/filler content	%	–	–	7	12	12	13	15	20
Density	kg/m³	1300	1310	1490	1530	1530	1425	1533	1595
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	20 (260/5)	15 (260/5)	14	21	22	15	14	19
MECHANICAL PROPERTIES (23 °C/50 % R.H.)									
Tensile modulus	MPa	2000	2400	4700	6000	5800	6200	7000	8300
Yield stress	MPa	45	45						
Yield strain	%	3.5	2.9						
Nominal strain at break	%	> 20	> 15						
Stress at break	MPa			80	100	100	75	110	120
Strain at break	%			4.4	2.5	2.5	2.7	2.6	2.5
Flexural strain at flexural strength	%	5.0	5.0	4.9	3.2	3.2	2.7	3.5	3.1
Flexural stress at 3.5 % strain	MPa	65	70	120					
Charpy impact strength 23 °C	kJ/m²	N	N	45	25	25	30	40	45
Charpy impact strength -30 °C	kJ/m²	N	170	45	25	25	25		40
Charpy notched impact strength 23 °C	kJ/m²	60	10	< 10	< 10	< 10	< 10	< 10	< 10
Charpy notched impact strength -30 °C	kJ/m²	15	< 10	< 10	< 10	< 10		< 10	< 10
Izod impact strength 23 °C	kJ/m²	N	N	40	20	20	25	30	40
Izod impact strength -30 °C	kJ/m²	N	150	40	20	20	23		35
Izod notched impact strength 23 °C	kJ/m²	50	10	< 10	< 10	< 10	< 10	< 10	
Izod notched impact strength -30 °C	kJ/m²	15	< 10	< 10	< 10	< 10		< 10	< 10
THERMAL PROPERTIES									
Melting temperature	°C	225	225	225	225	225	220	222	225
HDT, Method Af	°C	75	75	150	185	185	190	190	200
HDT, Method Bf	°C	100	95	205	210	210	220	215	220
Coefficient of linear thermal expansion, parallel	10^{-4}/K	1.0	0.8	0.6	0.4	0.4	0.4	0.4	0.3
Coefficient of linear thermal expansion, across	10^{-4}/K	1.1	1.0	1.1	1.0	1.0	0.9	1.1	1.0
FIRE BEHAVIOR									
Burning behavior UL 94									
5VB / 5VA from mm	Classification	- / 2.3	- / 1.5			- / 3.5	- / 1.5		
V-0, V-1, V-2 from mm	Classification	V-0 (0.75)	V-0 (0.75)	V-0 (0.4)	V-0 (0.4)	V-0 (0.75)	V-0 (0.4)	V-0 (0.75)	V-0 (0.4)
Glow Wire Flammability Index (GWFI)	°C	960 (0.8 - 3.0)	960 (0.75 - 3.0)	960 (0.4)	960 (0.75 - 3.0)	960 (2.0)	960 (0.4 - 3.0)	960 (0.75 - 3.0)	960 (0.75 - 3.0)
Glow Wire Ignition Temperature (GWIT)	°C	775 (0.8 - 3.0)	800 (0.75 - 3.0)	725 (0.75 - 3.0)	700 (0.75 - 3.0)		775 (0.4 - 3.0)	725 (3.0), 750 (1.5); 850 (0.75)	725 (0.75 - 3.0)
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)									
Relative permittivity; 1 MHz	–		2.9	3.5	3.4	3.4			3.6
Dissipation factor; 1 MHz	10^{-4}		140	190	190	190			
Volume resistivity	Ohm·m			> 1E12	> 1E11	> 1E11	6.60E13	> 1E14	
Surface resistivity	Ohm			> 1E16	> 1E15	> 1E15		> 1E17	
Comparative tracking index (CTI)	Rating	600	300	225	200	200		200	
CTI	PLC class				2		0	3	2
SHRINKAGE (Plaque 60 x 60 x 2 mm)									
Processing conditions for shrinkage plaques	°C/°C/bar	250/80/600	250/60/600	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600
Molding shrinkage, parallel	%	0.8	0.9	1.3	0.8	0.8	0.6	0.7	0.5
Molding shrinkage, across	%	0.8	0.9	1.2	1.1	1.1	1.1	1.1	1.2
Post-shrinkage, parallel; 120 °C; 4 h	%	0.8	0.5	0.2	0.1	0.1	0.1	0.1	0.1
Post-shrinkage, across; 120 °C; 4 h	%	0.8	0.5	0.1	0.1	0.1	0.1	0.1	0.1

[1] See page 1 of the table for test conditions and standards * deviant figures in parentheses ** for color information and other wall thicknesses see UL Yellow Card + also as POS151
N = no failure

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REFERENCE DATA

Pocan®

FLAME-RETARDANT PBT AND PBT BLENDS

		REINFORCED < 30% GF					REINFORCED 30% GF
		PBT				PBT + ASA	PBT
	GRADE	BF 4222	B 4225	BFN 4231	BF 4222 Z	AF 4120	B 4235
	COLOR	000000	000000	000000	000000	000000	000000
BRIEF OUTLINE	**UNITS**						
General purpose grade		■	■	■			■
Thin-wall applications							
Improved toughness					■		
Improved hydrolysis stability							
Reduced warpage						■	
Halogen-free				■			
Glow wire applications							
Proportion of recyclate							
GENERAL PROPERTIES (23 °C)[1]							
Glass fiber/glass bead/filler content	%	20	20	25	25	20	30
Density	kg/m³	1568	1570	1520	1580	1541	1660
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	cm³/10 min	12	18	40 (260/5)	28 (260/5)	40 (260/5)	14
MECHANICAL PROPERTIES (23 °C/50 % R.H.)							
Tensile modulus	MPa	7500	7500	10500	8700	7400	11000
Yield stress	MPa						
Yield strain	%						
Nominal strain at break	%						
Stress at break	MPa	115	125	100	115	105	140
Strain at break	%		2.8	2.2	3.3	2.4	2.2
Flexural strain at flexural strength	%	3.3	3.2	2.4	3.6	2.6	2.7
Flexural stress at 3.5 % strain	MPa				190		
Charpy impact strength 23 °C	kJ/m²	50	45	40	70	40	50
Charpy impact strength -30 °C	kJ/m²	45	40	35		35	50
Charpy notched impact strength 23 °C	kJ/m²	< 10	< 10		12	< 10	< 10
Charpy notched impact strength -30 °C	kJ/m²	< 10	< 10		< 10	< 10	< 10
Izod impact strength 23 °C	kJ/m²	45	40	36	55	35	45
Izod impact strength -30 °C	kJ/m²	40	35	33			45
Izod notched impact strength 23 °C	kJ/m²	< 10			10	< 10	< 10
Izod notched impact strength -30 °C	kJ/m²	< 10	< 10		< 10	< 10	< 10
THERMAL PROPERTIES							
Melting temperature	°C	222	225	220	225	225	225
HDT, Method Af	°C	195	200	210	190	170	205
HDT, Method Bf	°C	215	220	224	220	209	220
Coefficient of linear thermal expansion, parallel	10^{-4}/K	0.3	0.3	0.3	0.3	0.3	0.2
Coefficient of linear thermal expansion, across	10^{-4}/K	1.0	1.0	0.9	0.9	1.0	0.9
FIRE BEHAVIOR							
Burning behavior UL 94							
5VB / 5VA from mm	Classification		- / 3.5	- / 1.5			- / 1.5
V-0, V-1, V-2 from mm	Classification	V-0 (0.75)	V-0 (1.0)	V-0 (0.4)	V-0 (0.75)	V-0 (0.4)	V-0 (1.5), V-2 (0.75)
Glow Wire Flammability Index (GWFI)	°C	960 (0.75 - 3.0)	960 (0.75 - 3.0)	960 (0.4 - 3.0)	960 (0.75 - 3.0)	960 (0.4 - 3.0)	960 (0.75 - 3.0)
Glow Wire Ignition Temperature (GWIT)	°C	800 (0.75 - 3.0)	700 (0.75 - 3.0)	850 (3.0); 825 (1.5); 775 (0.75); 850 (0.4)	725 (1.5 - 3.0); 750 (0.75)	750 (3.0); 725 (1.5); 825 (0.75); 900 (0.4)	725 (0.75 - 3.0)
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)							
Relative permittivity; 1 MHz	–		3.6		3.7		3.9
Dissipation factor; 1 MHz	10^{-4}		180				160
Volume resistivity	Ohm·m	> 1E14	> 1E13	2.3E14	> 1E14	8E13	> 1E13
Surface resistivity	Ohm	> 1E17	> 1E15	2.0E16	> 1E16	2E16	> 1E15
Comparative tracking index (CTI)	Rating	225	200	575	225	275	175
CTI	PLC class	2		0	3	2	
SHRINKAGE (Plaque 60 x 60 x 2 mm)							
Processing conditions for shrinkage plaques	°C/°C/bar	260/80/600	250/80/600	260/80/600	260/80/600	250/80/600	250/80/600
Molding shrinkage, parallel	%	0.5	0.5	0.5	0.3	0.4	0.4
Molding shrinkage, across	%	1.1	1.2	1.2	1.0	0.7	1.1
Post-shrinkage, parallel; 120 °C; 4 h	%	0.2	0.1	0.1	0.1	0.1	0.1
Post-shrinkage, across; 120 °C; 4 h	%	0.2	0.1	0.1	0.2	0.1	0.1

[1] See page 1 of the table for test conditions and standards * deviant figures in parentheses ** for color information and other wall thicknesses see UL Yellow Card * also as POS151
N = no failure

FLAME-RETARDANT PBT AND PBT BLENDS

	REINFORCED 30% GF						
	PBT					PBT + ASA	PBT + PET
GRADE	B 4235 Z	BF 4232	BF 4232 HR	BF 4235	B 4239	AF 4130	DP 4035
COLOR	000000	000000	901510	000000	000000	000000	000000
BRIEF OUTLINE							
General purpose grade		■					
Thin-wall applications				■	■		
Improved toughness	■		■		■		
Improved hydrolysis stability							
Reduced warpage						■	
Halogen-free							■
Glow wire applications							■
Proportion of recyclate							
GENERAL PROPERTIES (23 °C)[1]							
Glass fiber/glass bead/filler content	30	30	30	30	30	30	30
Density	1620	1640	1670	1660	1670	1590	1620
Melt volume-flow rate (MVR), 260 °C; 2.16 kg *	26 (260/5)	12	16	14	37 (260/5)	25 (260/5)	
MECHANICAL PROPERTIES (23 °C/50 % R.H.)							
Tensile modulus	10000	10000	9800	11000	11500	10500	9000
Yield stress							
Yield strain							
Nominal strain at break							
Stress at break	125	135	120	135	125	120	105
Strain at break	2.8	2,5	2.0	2.1	2.1	2.0	2.4
Flexural strain at flexural strength	3.2	2.9	2.3	2.6	2.6	2.5	2.8
Flexural stress at 3.5 % strain							
Charpy impact strength 23 °C	60	55	40	50	50	50	40
Charpy impact strength -30 °C	60	55		50	50	45	30
Charpy notched impact strength 23 °C	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Charpy notched impact strength -30 °C	< 10	< 10		< 10	< 10	< 10	< 10
Izod impact strength 23 °C	55	50	35	45	45	45	35
Izod impact strength -30 °C	55	50		45	45	45	30
Izod notched impact strength 23 °C	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Izod notched impact strength -30 °C	< 10	< 10		< 10	< 10	< 10	< 10
THERMAL PROPERTIES							
Melting temperature	225	222	225	225	225	222	
HDT, Method Af	200	205	195	205	200	185	195
HDT, Method Bf	220	220	215	220	220	214	220
Coefficient of linear thermal expansion, parallel	0.2	0.2	0.3	0.2	0.2	0.2	
Coefficient of linear thermal expansion, across	1.0	1.0	1.0	0.9	0.9	1.0	
FIRE BEHAVIOR							
Burning behavior UL 94							
5VB / 5VA from mm	- / 3.0			- / 1.5	- / 1.5	- / 1.5	
V-0, V-1, V-2 from mm	V-0 (1.5), V-2 (0.75)	V-0 (0.75)	V-0 (0.4)	V-0 (0.4)	V-0 (0.4)	V-0 (0.75)	V-2 (0.4)
Glow Wire Flammability Index (GWFI)	960 (2.0)	960 (0.4 - 3.0)	960 (0.4 - 3.0)	960 (0.75 - 3.0)	960 (0.75)	960 (0.75 - 3.0)	960 (0.75 - 3.0)
Glow Wire Ignition Temperature (GWIT)		930 (3.0); 900 (1.5); 775 (0.4 + 0.75)	725 (1.5 + 3.0); 850 (0.75); 900 (0.4)	725 (0.75 - 3.0)	725 (0.75 - 3.0)	800 (0.75 - 3.0)	775 (0.75 - 3.0)
ELECTRICAL PROPERTIES (23 °C/50 % R.H.)							
Relative permittivity; 1 MHz		4		3.9	3.8		
Dissipation factor; 1 MHz		165		160	520		
Volume resistivity		> 1E14		> 1E13	> 1E14	7E14	1E13
Surface resistivity		> 1E17		> 1E15	> 1E16	1E17	1E16
Comparative tracking index (CTI)	175	200	225	175	275	300	425
CTI		2	3	2		2	
SHRINKAGE (Plaque 60 x 60 x 2 mm)							
Processing conditions for shrinkage plaques	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600	250/80/600
Molding shrinkage, parallel	0.3	0.4	0.4	0.4	0.3	0.3	0.3
Molding shrinkage, across	0.9	1.0	1.1	1.1	0.9	0.8	1.0
Post-shrinkage, parallel; 120 °C; 4 h	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Post-shrinkage, across; 120 °C; 4 h	0.1	0.1	0.1	0.1	0.1	0.4	0.1

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