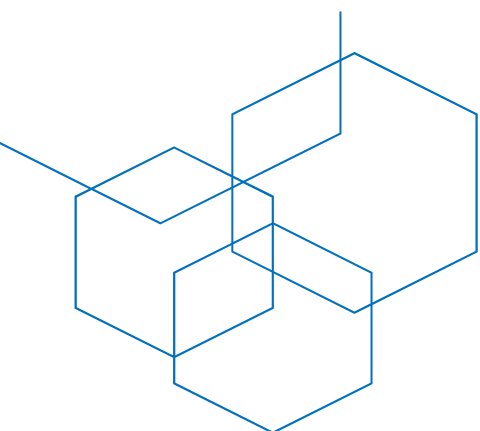


**Polycarbonate World  
&  
Engineering Polymers**



**VISHVA ALLIANCE Pvt Ltd**



**深圳三升化工有限公司**  
Shenzhen Samtion Chemical Co., Ltd

# Catalogue 2024

- We are Professional Distributor of Sabic、Covestro、Chimei、Toray、 Hainan Huasheng、 ZPC、 Lihuayi Weiyuan、 Luxi、 Daphoon、 Wanhua and various Chinese plastic Brands
- Main Product Series : Polycarbonate (PC) 、 Polyphenylene Oxide (PPO) 、 Thermoplastic Polyester (PBT) 、 Polyetherimide (PEI) 、 Polycarbonate/Polyester (PC/PET) 、 PC / ABS alloy
- Various inspection reports and certificates available including: original factory certificate, MSDS, ROHS, SGS, reach, FDA, EU, UL, COC / COA
- Over 15 years product experience in thousands of different project cases, We provide a full set of solutions and services from material sales, quality appraisal, mold design, molding and processing to customize you most competitive products in the Markets.

# ALL KINDS OF SABIC PRODUCTS

## “LEXAN” Polycarbonate (PC)

"LEXAN" is made of bisphenol A, which is a polymer material of polycarbonate. It has excellent high transparency and heat resistance temperature, as well as the highest impact strength of thermal plasticity resin, and good formability

"LEXAN" is the best material of choice for replacing metal supplies for automobile components, business machines, home appliances, electronic parts, food appliances, medical equipment and communication equipment.

Code	Viscosity	Property	Flame resistance UL94	IZOD IMPACT kg-cm/cm	HDT	Gravity
HF11X0	Super Low	High Flow, injection (M122)	HB/V-2	75	130°C	1.20
121/221	Low	Super thin for extrusion mold	HB/V-2	78	132°C	1.20
141/241	Mid	Regular heat for injection	HB/V-2	82	132°C	1.20
101/201	High	Regular heat for both extrusion and injection	HB/V-2	65-87	132°C	1.20
1X1R/2X1R	All	121/141/101 Modified	HB/V-2	65-87	132°C	1.20
1X3/2X3	All	UV-stabilized, good weatherability 103R/143R/123R/243R/203R/223R	HB/V-2	65-87	132°C	1.20
1X4/2X4	All	Food grade, FDA approved	HB/V-2	65	132°C	1.21
940/920/950	Flame Resistance	Nonflammability, For injection mold (OPAQUE)	V-0 (1.47)	65	132°C	1.21
940A/920A/950A	Flame Resistance	Nonflammability, For injection mold (OPAQUE) transparent	V-0 (3.05)		142°C	1.21
500/503/505(R)	Flame Resistance with GF	Substitute for metal (10%GF reinforce)	V-0 (1.47)	10-15	146°C	1.27

# “LEXAN” Polycarbonate (PC)

Code	Viscosity	Property	Flame resistance UL94	IZOD IMPACT kg-cm/cm	HDT	Gravity
3414R(ECR)	Flame Resistance GF reinforce	40%GF reinforce	V-1	10- 15	146°C	1.52
3413R(ECR)	Flame Resistance GF reinforced	30%GF reinforced	V-1	10- 15	146°C	1.43
3412R(ECR)	Flame Resistance GF reinforced	20%GF reinforced	V-1	87	132°C	1.35
LS	LS1/LS2/LS3	Super transparent, good weatherability for (LENSE) , SAE approved	----	-----	----	-----
FL900/FL903		Low foaming molding	V- 0/5VA	-----	127°C	0.90
PPC4701	high heat resistance	For high heat resistance	HB	54	163°C	1.20
PPC4501	high heat resistance	For high heat resistance , flame resistance	V2	54	152°C	1.20
4701R	High viscosity	High heat resistant 150°C	HB	60	----	1.20
4501R	High viscosity	High heat resistant 143°C, up to FDA	HB	60	----	1.20
OQ series		For optical lens	HB	11	132°C	1.20
EXL1414	Mid viscosity	-40°Cductility	HB	88	124°C	1.18
EXL9330	Mid viscosity	- 60°Cductility	V0(1.47)	81	120°C	1.18
HP2R	Mid viscosity	ETO Sterilized, stabilized, medical grade	HB	60	130°C	1.20
HPS7	Low viscosity	Gamma disinfection, medical grade	HB	60	138°C	1.20
BFL2000	High viscosity	NON GF, environmental	V0(1.5)	---	----	1.29
BFL2010	Mid viscosity	10%GF, environmental	V0(1.5)	---	-----	1.30
BFL2015	Low viscosity	15%GF, environmental	V0(1.5)	---	-----	1,23
SLX1432	Mid viscosity	Transparent ,Weatherability	-----	51.5	133°C	1.22
SLX2432	Mid viscosity	Transparent ,Weatherability	-----	51.5	133°C	1.22

## “ULTEM” Polyetherimide (PEI)

"ULTEM" is a non-crystalline thermoplastic plastic ether-thiomide material, which combines the excellent heat resistance and mechanical strength of Limde and the good formability of Ether, and is very suitable for industrial products requiring high safety and high precision. "ULTEM" will provide a super engineering plastic material with both functions and excellent processing economy for electronic parts, electrical products, printed circuit boards, medical equipment, communication equipment and other applications of high-tech products.

Code	Property	Flame Resistance UL94	HDT 18.6kg/cm <sup>3</sup>	IZOD IMPACT kg.cm/cm		Mold Shrinkage cm/cm x 10 <sup>-3</sup>	Gravity
				Notched	Non-Nothed		
1000/1010	Generalized	V-0/5VA	200°C	5	130	5- 7	1.27
2100	Generalized+10%GF	V-0	207°C	6	49	5- 6	1.34
2200	Generalized+20%GF	V-0	209°C	9	49	3- 5	1.42
2300	Generalized+30%GF	V-0	210°C	10	44	2- 4	1.51
2400	Generalized+40%GF	V-0/5VA	231°C	11	44	1- 3	1.61
CR55001	Improved drug resistance	V-0	209°C	5	53	5- 7	1.28
4000	Improved abrasion resistance	V-0	211°C	7	16	2- 3	1.70
4001	Improved abrasion resistance	V-0/5VA	195°C	7	55	5- 7	1.33

## “XYLEX” Polycarbonate/Polyester (PC/PET)

"XYLEX" resin series is a new resin launched by Sabic. This new resin combines transparency, special effects and chemical stability, resulting in increased design innovation and flexibility, while incorporating other features such as high mobility, weather resistance and malleability, making "XYLEX" a unique new product. "XYLEX" is an excellent material for applications that meet the requirements of transparency, special effect appearance and chemical stability. Such as mobile phone casings, consumer electronic equipment, sports and safety fire mirrors and frames, outdoor entertainment facilities and automotive interior parts. The "XYLEX" resin provides high chemical stability and reduces the likelihood of cracking and cracking. In addition, the high melt fluidity of the material makes thin-wall design possible through advanced processing techniques. As the material forming CYCLE is shortened instantly, the cost of parts is reduced and the IMD capability is improved. High chemical stability and excellent transparency, can obtain unique aesthetic effect.

Code	X7110	X7200	X7300	X8210	X8300
Gravity	1.20	1.20	1.20	1.20	1.20
Light Transmission Rate%	75	88	88	83	88
Length way Mold shrinkage%	0.5—0.8	0.5—0.7	0.4—0.8	0.5—0.8	0.5—0.8
Horizontal Mold shrinkage%	0.4—0.6	0.5—0.7	0.5—0.7	0.4—0.6	0.4—0.6
HDT 66psi	90°C	97°C	90°C	79°C	79°C
HDT 264psi	85°C	91°C	85°C	75°C	75°C
IZOD IMPACT kg.cm/cm	82	98	87	82	144
Flow rate g/10min	10.5	15	21	14	20
Property	High elasticity, Improved impact resistance	ImprvedUV resistance	High Flow, Good optical property, Improved UV resistance	Improved Impact resistance	High Flow, Imprved UV resistance

## “CYCOLOY” PC / ABS

CYCOLOY is a thermoplastic plastic made of Polycarbonate and polyacrylonitrile (ABS). It combines the formability of ABS with the mechanical properties of PC, impact strength, temperature resistance, and UV resistance. It can be widely used in automobile internal components, transaction machines, communication equipment, household appliances and lighting equipment

Code	Property	Gravity	HDT 18.6kg/cm <sup>3</sup>	Flame resistance UL94	IZOD IMPACT kg.cm/cm	Mold Shrinkage %
C1110HF	High flow ,good impact strength	1.14	110°C	HB	61	0.4—0.6
C1200HF	High temp resistance, Impact resistance	1.15	120°C	HB	55	0.4—0.6
C6200	Flame resistance, Hight flow	1.18	88°C	V-0	54	0.4—0.6
C2800	Flame resistance, Impact resistance	1.18	80°C	V-0	44	0.4—0.6
C2950	Flame resistance, Heat resistance	1.18	95°C	V-0	55	0.4—0.6
C2950HF	High flow , Flame resistance	1.17	93°C	V-0	46	0.4—0.6
C6600	Super flow ,, Flame resistance,Hydrolysis resistance	1.19	88°C	V-0	54	0.4—0.6
CH6410	Flame resistance, High temp resistance	1.19	128°C	V-0	73	0.4—0.5
CX7240	Non-chlorinated Non-brominated, Flame resistance	1.19	92°C	V-0(0.75mm)	----	0.4—0.6
LG9000	Low glossy, High temp resistance	1.13	124°C	HB	41	0.5—0.7

## “VALOX” Thermoplastic Polyester (PBT)

"VALOX" thermoplastic polyester resin, main dimethylterphthalate (DMT) and 1 -- 4 -- J= alcohol (Eutanedio) concentration polymerization. Combined with PET (Polycyclohexanedi methyleneterphthalate), it provides a wider choice in the market, In the electronics industry and the automobile industry, it gradually replaces nylon, POM, bakelite, and is widely used in electronic joints, ignition system components, chemical Pump, bearing gear and so on.

Code	Property	Flame resistance UL94	HDT		IZOD IMPACT kg.cm/cm	Gravity	Mold shrinkage cm/cm x 10 <sup>-3</sup>	
			18.6 kg/c m <sup>3</sup>	4.6 kg/c m <sup>3</sup>			Length way	Horizional
310/325	Generality	HB	60°C	154°C	6	1.31	17— 23	17— 23
364	Low temp impace, Flame resistance	V—0	67°C	93°C	74	1.30	10— 13	10— 13
310-SEO	Flame resistance unreinforced	V— 0/5VA	100°C	163°C	5	1.40	10— 17	10— 17
420	30%GF	HB	208°C	215°C	10	1.52	1— 3	7— 9
420-SEO	30%GF Flame resistance	V— 0/5VA	205°C	215°C	10	1.62	1— 3	7— 9
DR-51	15%GF	V—0	205°C	210°C	7	1.41	3— 5	8— 10
DR-48	15%GF Flame resistance	V—0	200°C	210°C	6	1.50	3— 5	8— 10
457	7.5%GF Flame resistance	V—0	160°C	204°C	6	1.45	5— 7	8— 12
553	30%GF Low shrinkage	HB	199°C	200°C	10	1.60	1— 2	3— 6
830	30%GF High glossy	V—0	193°C	220°C	8	1.55	1— 3	7— 9
357(U)	High ductility, Flame resistance	V—0	99°C	138°C	12	1.54	9	9— 14



## “NORYL” Polyphenylene Oxide (PPO)

"NORYL" for the queen Mary innovation development by oxidation of xylene resin, plastic company in PPO for basic, one of aromatic polyether, the excellent material, through 17 kinds of feature combination, more conducive to injection molding, blow molding, extrusion, vacuum forming, to meet the industry needs lightweight, high security and more durable product requirements. Because of its excellent fire resistance, heat resistance, mechanical strength, electrical characteristics and dimensional stability, coupled with low water absorption and easy processing, it is widely used in water treatment equipment, computers, transaction machines, electronic parts, household appliances, communication equipment, water transportation parts and automobiles and other industries.

Code	Flame resistance UL94	HDT 18.6kg/cm <sup>2</sup>	IZOD IMPACT kg-cm/cm	Mold Shrinkage 10 <sup>3</sup> mm/mm	Graviy	Usage
731	HB	128°C	18	5-7	1.06	Water treatment equipment, auto parts
SEIX	V-1	125°C	20	5-7	1.10	Electronic parts
SEI100X	V-1	100°C	26	5-7	1.10	Electronic parts
N225X	V-0/5VA	115°C	20	5-7	1.09	Electronic parts
N190X	V-0/5VA	90°C	25	5-7	1.08	Electronic parts, Machines
SEIGFN2	V-1	138°C	10	2-4	1.25	Electronic parts, 20%GF
SEIGFN3	V-1	140°C	10	2-3	1.33	Electronic parts, 30%GF
GFN2	HB	140°C	10	2-4	1.21	Heat resistant parts,20%GF
GFN3	HB	142°C	10	2-3	1.27	Heat resistant parts,30%GF
N300X	V-0	150°C	38	5-7	1.06	Electronic parts
PX1005X	V-0	78°C	24	5-7	1.08	Electronic parts
HS2000X	V-0/5VA	115°C	11	5-7	1.24	High Impact
PX9406P	V-0	125°C	23	5-7	1.09	FBTCASE for permissibility
FN215X	V-0/5VA	82°C		6-8	1.00	For Foam molding
GTX910	HB	190°C	20	10-12	1.10	Automotive structural exterior parts
GTX810	HB	210°C	8	6-8	1.16	Automotive Parts, 10%GF
GTX820	HB	232°C	8	4-6	1.24	Automotive Parts, 20%GF
GTX830	HB	241°C	10	2-3	1.31	Automotive Parts 30%GF
WCD801A	V0(4mm)	-----	Extrusion, Hardness 80	-----	1.1	Wire insulation materials , enclosure grade
WCD861A	V0(4mm)	-----	Extrusion, Hardness 86	-----	1.1	Wire insulation materials Cable Shield 9

## “XENOY” PC/ PBT ALLOY

"XENOY" is an engineering plastic alloy produced by Sabic. With excellent chemical resistance and outstanding impact resistance, it is suitable for automobile bumper and other electronic/electrical parts, outdoor equipment, sports equipment and other parts.

Code	HDT		IZOD IMPACT kg.cm/cm	Mold Shrinkage cm/cm x 10 <sup>-3</sup>	Gravity	Usage
	66psi	264psi				
1102	110°C	91°C	82	8- 10	1.20	Automotive Bumper
5220 (U)	106°C	99°C	72	8- 10	1.21	UV stabilized
1731	120°C	105°C	59	----	----	Chemical resistance
CL100	107°C	99°C	46	----	----	Chemical resistance
5720 (U)	118°C	99°C	----	----	----	Low temp Impact

# ALL KINDS OF CONVESTRO PRODUCTS

# “MAKROLON” POLYCARBONATE (PC)

## “Makrolon” Polycarbonate (PC)

Makrolon® is the brand name for our polycarbonate. Compared with other thermoplastics, this amorphous material has a unique set of properties. Its special features are its high transparency, heat resistance, toughness and dimensional stability, a high creep modulus and good electrical insulation properties. Glass fiber reinforced Makrolon® has particularly high stiffness and is therefore very dimensionally stable

Code	Property	Viscosity	Color	Grade
<b>Makrolon® 2205</b>	MVR (300 ° C/1.2 kg) 34 cm <sup>3</sup> /10 min; general purpose; low viscosity; easy release; injection molding-melt temperature 280- 320 ° C;	Low viscosity	available in transparent, translucent and opaque colors	General purpose grades
<b>Makrolon® 2207</b>	MVR (300 ° C/1.2 kg) 35 cm <sup>3</sup> /10 min; general purpose; low viscosity; UV stabilized; easy release; injection molding-melt temperature 280- 320 ° C;	Low viscosity	available in transparent, translucent and opaque colors	
<b>Makrolon® 2405</b>	MVR (300 ° C/1.2 kg) 19 cm <sup>3</sup> /10 min; general purpose; low viscosity; easy release; injection molding-melt temperature 280- 320 ° C;	Low viscosity	available in transparent, translucent and opaque colors	
<b>Makrolon® 2407</b>	MVR (300 ° C/1.2 kg) 19 cm <sup>3</sup> /10 min; general purpose; low viscosity; UV stabilized; easy release; injection molding-melt temperature 280- 320 ° C	Low viscosity	;available in transparent, translucent and opaque colors	

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Code	Property	Viscosity	Color	Grade
<b>Makrolon® 2605</b>	MVR (300° C/1.2 kg) 12 cm <sup>3</sup> /10 min; general purpose; medium viscosity; easy release; injection molding-melt temperature 280-320° C;	Medium viscosity	available in transparent, translucent and opaque colors	General purpose grades
<b>Makrolon® 2607</b>	MVR (300° C/1.2 kg) 12 cm <sup>3</sup> /10 min; general purpose; medium viscosity; UV stabilized; easy release; injection molding-melt temperature 280-320° C	Medium viscosity	;available in transparent, translucent and opaque colors	
<b>Makrolon® 2805</b>	MVR (300° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; general purpose; medium viscosity; easy release; injection molding-melt temperature 280-320° C;	Medium viscosity	available in transparent, translucent and opaque colors	
<b>Makrolon® 2807</b>	MVR (300° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; general purpose; medium viscosity; UV stabilized; easy release; injection molding-melt temperature 280-320° C;	Medium viscosity	available in transparent, translucent and opaque colors	

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Code	Property	Viscosity	Color	Grade
<b>Makrolon® 3105</b>	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; general purpose; high viscosity; easy release; injection molding-melt temperature 280- 320 ° C;	High viscosity	available in transparent, translucent and opaque colors	General purpose grades
<b>Makrolon® 3107</b>	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; general purpose; high viscosity; UV stabilized; easy release; injection molding melt temperature 280- 320 ° C;	High viscosity	available in transparent, translucent and opaque colors	

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Code	Property	Viscosity	Color	Grade
<b>Makrolon® 1260</b>	MVR (300° C/1.2 kg) 34 cm <sup>3</sup> /10 min; impact modified; low viscosity; easy release; injection molding-melt temperature 280-320° C	Low viscosity	available in light colors only	Impact modified grades
<b>Makrolon® 1248</b>	MVR (300° C/1.2 kg) 7.0 cm <sup>3</sup> /10 min; food contact quality; medium viscosity; impact modified; injection molding melt temperature 280-320° C;	Medium viscosity	available in light colors only	
<b>Makrolon® 1837</b>	MVR (300° C/1.2 kg) 11 cm <sup>3</sup> /10 min; impact modified; medium viscosity; easy release; injection molding-melt temperature 280-320° C;	Medium viscosity	available in opaque colors only	



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Code	Property	Viscosity	Color	Grade
Makrolon® 2467	MVR (300 °C/1.2 kg) 19 cm <sup>3</sup> /10 min; flame retardant; UL 94V-2/1.5 mm and 3.0 mm; low viscosity; UV stabilized; easy release; injection molding melt temperature 280-320 °C;	Low viscosity	available in transparent, translucent and opaque colors	Flame retardant grades
Makrolon® 6165X	MVR (300 °C/1.2 kg) 28 cm <sup>3</sup> /10 min; flame retardant; UL94V-0/1.2 mm; low viscosity; easy release; injection molding melt temperature 280-320 °C;	Low viscosity	available in opaque colors only; LCD TV frame	
Makrolon® 6265X	MVR (300 °C/1.2 kg) 19 cm <sup>3</sup> /10 min; flame retardant; UL-94V-0/1.5 mm; low viscosity; easy release; injection molding melt temperature 280-320 °C;	Low viscosity	available in opaque colors only	
Makrolon® 6267X	MVR (300 °C/1.2 kg) 19 cm <sup>3</sup> /10 min; flame retardant; UL 94V-0/1.5 mm; low viscosity; UV stabilized; easy release; injection molding melt temperature 280-320 °C;	Low viscosity	available in opaque colors only	
Makrolon® FR6002	MVR (300 °C/1.2 kg) 17 cm <sup>3</sup> /10 min; flame retardant; low viscosity; easy release; injection molding melt temperature 280 °C	Low viscosity		

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Code	Property	Viscosity	Color	Grade
Makrolon® 2665	MVR (300 ° C/1.2 kg) 12 cm³/10 min; flame retardancy; UL 94V-2/1.5 mm and 3.0 mm; medium viscosity; easy release; injection molding– melt temperature 280–320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	Flame retardant grades
Makrolon® 2865	MVR (300 ° C/1.2 kg) 10 cm³/10 min; flame retardant; UL 94V-2/1.5 mm and 3.0 mm; medium viscosity; easy release; injection molding– melt temperature 280–320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	
Makrolon® 6485	MVR (300 ° C/1.2 kg) 9.0 cm³/10 min; flame retardant; UL 94V-0/1.5 mm and 5VA/3.0 mm; medium viscosity; easy release; injection molding– melt temperature 280–320 ° C;	Medium viscosity	available in opaque colors only	
Makrolon® 6487	MVR (300 ° C/1.2 kg) 9.0 cm³/10 min; flame retardant; UL 94V-0/1.5 mm and 5VA/3.0 mm; medium viscosity; UV stabilized; easy release; injection molding – melt temperature 280–320 ° C;	Medium viscosity	available in opaque colors only	
Makrolon® 6555	MVR (300 ° C/1.2 kg) 10 cm³/10 min; flame retardant; UL 94V-0/3.0 mm; medium viscosity; easy release; injection molding–melt temperature 280–320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	
Makrolon® 6557	MVR (300 ° C/1.2 kg) 10 cm³/10 min; flame retardant; UL 94V-0/3.0 mm; medium viscosity; UV stabilized; easy release; injection molding– melt temperature 280–320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	

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Code	Property	Viscosity	Color	Grade
Makrolon® 6717	MVR (300°C/1.2 kg) 3.0 cm³/10 min; flame retardant; UL 94V-0/2.0 mm; high viscosity; branched; UV stabilized; easy release; injection molding - melt temperature 280-320°C; extrusion;	High viscosity, branched	available in transparent, translucent and opaque colors	Flame retardant grades

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Code	Property	Viscosity	Color	Grade
Makrolon® 1954	MVR (300° C/1.2 kg) 18 cm³/10 min; low viscosity; UV stabilized; improved friction characteristics; injection molding-melt temperature 280-320° C;	--	available in opaque colors only; housing- and operating parts; sliding elements	PC/PTFE grad

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Code	Property	Glass fiber	Color	Grade
Makrolon® 8025	MVR (300° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; 20 % glass fiber reinforced; milled fiber; high viscosity; easy release; injection molding-melt temperature 310- 330 ° C; extrusion;	20 % glass fiber reinforced	available in opaque colors only; precision parts	Glass fiber (milled fiber) reinforced grades
Makrolon® 8035	MVR (300° C/1.2 kg) 4.0 cm <sup>3</sup> /10 min; 30 % glass fiber reinforced; milled fiber; high viscosity; easy release; injection molding-melt temperature 310- 330 ° C; extrusion;	30 % glass fiber reinforced	available in opaque colors only; precision parts	

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Code	Property	Glass fiber	Color	Grade
Makrolon® 9415	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; 10 % glass fiber reinforced; flame retardant; UL 94V-0/1.5 mm and 5VA/3.0 mm; high viscosity; easy release; injection molding – melt temperature 310–330 ° C;	10 % Glass fiber	available in opaque colors only	Glass fiber (normal fiber) reinforced grades
Makrolon® 9417	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; 10 % glass fiber reinforced; flame retardant; UL 94V-0/1.5 mm and 5VA/ 3.0 mm; high viscosity; UV stabilized; easy release; injection molding– melt temperature 310–330 ° C;	10 % Glass fiber	available in opaque colors only	
Makrolon® GF9002	MVR (300 ° C/1.2 kg) 15 cm <sup>3</sup> /10 min; 10 % glass fiber reinforced; flame retardant; UL 94V-0/1.2 mm; low viscosity; easy release; injection molding– melt temperature 310–330 ° C;	10 % Glass fiber	available in opaque colors only; electrical/electronic; housing parts with low wall thickness	

## “Makrolon” Polycarbonate (PC)

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Code	Property	Glass fiber	Color	Grade
Makrolon® GF8002	MVR (300 ° C/1.2 kg) 10 cm <sup>3</sup> /10 min; 15 % glass fiber reinforced; medium viscosity; easy release; injection molding-melt temperature 310-330 ° C;	15 % Glass fiber reinforced	available in opaque colors only	Glass fiber (normal fiber) reinforced grades
Makrolon® 1095	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; 15 % glass fiber reinforced; UL 94V-0/3.0 mm; high viscosity; easy release; injection molding – melt temperature 310-330 ° C; extrusion;	15 % Glass fiber reinforced	available in opaque colors only; housings for power tools	
Makrolon® GF8001	MVR (300 ° C/1.2 kg) 16 cm <sup>3</sup> /10 min; 20 % glass fiber reinforced; low viscosity; easy release; injection molding-melt temperature 310-330 ° C;	20 % Glass fiber reinforced	available in opaque colors only; housing parts	
Makrolon® 9125	MVR (300 ° C/1.2 kg) 8.0 cm <sup>3</sup> /10 min; 20 % glass fiber reinforced; flame retardant; UL 94V-0/1.5 mm; medium viscosity; easy release; injection molding– melt temperature 310-330 ° C;	20 % Glass fiber reinforced	available in opaque colors only	
Makrolon® 9425	MVR (300 ° C/1.2 kg) 5.0 cm <sup>3</sup> /10 min; 20 % glass fiber reinforced; flame retardant; UL 94V-0/1.5 mm and 5VA/3.0 mm; high viscosity; easy release; injection molding– melt temperature 310-330 ° C; extrusion;	20 % Glass fiber reinforced	available in opaque colors only	
Makrolon® 8345	MVR (300 ° C/1.2 kg) 3.0 cm <sup>3</sup> /10 min; 35 % glass fiber reinforced; high viscosity; easy release; injection molding-melt temperature 310-330 ° C; extrusion;	35 % Glass fiber reinforced	available in opaque colors only	

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Code	Property	Application	Color	Grade
Makrolon® OD2015	MVR (250 °C/2.16 kg) 17 cm <sup>3</sup> /10 min; optical storage media; suitable for all formats; high purity; injection molding-melt temperature 300-350 °C;	Optical storage media	available in color code 000000 only	Grades for special application
Makrolon® LED2045	MVR (250 °C/2.16 kg) 17 cm <sup>3</sup> /10 min; light guides; PC with highest transmission; low viscosity; easy release; injection molding-melt temperature 260-300 °C;	LED optics and light guides	available in color code 000000 only	
Makrolon® LED2245	MVR (300 °C/1.2 kg) 34 cm <sup>3</sup> /10 min; light guides; optics and lenses; PC with highest transmission; low viscosity; easy release; injection molding melt temperature 280-320 °C	LED optics and light guides		
Makrolon® LED2247	MVR (300 °C/1.2 kg) 35 cm <sup>3</sup> /10 min; low viscosity; UV stabilized; easy release; LED Lighting, optics and lenses; injection molding melt temperature 280-320 °C	LED optics and light guides		
Makrolon® LED2643	MVR (300 °C/1.2 kg) 13 cm <sup>3</sup> /10 min; LED Lighting, optics and lenses; PC with highest transmission; medium viscosity; UV stabilized; injection molding melt temperature 280-320 °C;	LED optics and light guides	available in color code 551053 only	



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Code	Property	Application	Color	Grade
Makrolon® RW2405	MVR (300° C/1.2 kg) 19 cm³/10 min; low viscosity; easy release; up to 96 % total reflectance; injection molding	Diffuse reflectors		Grades for special application
Makrolon® RW2407	MVR (300° C/1.2 kg) 19 cm³/10 min; low viscosity; easy release; UV stabilized; up to 96 % total reflectance; injection molding	Diffuse reflectors		
Makrolon® RW6265 X	MVR (300° C/1.2 kg) 19 cm³/10 min; low viscosity; easy release; flame retardant; UL 94V-0/1.5 mm; up to 96 % total reflectance; injection molding	Diffuse reflectors		
Makrolon® RW6267 X	MVR (300° C/1.2 kg) 19 cm³/10 min; low viscosity; easy release; UV stabilized; flame retardant; UL 94V-0/1.5 mm; up to 96 % total reflectance; injection molding	Diffuse reflectors		

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Code	Property	Application	Color	Grade
Makrolon® TC8010	Polycarbonate (PC), injection molding, thermally conductive, 10 W/mK (ISO 22007-2), for metal replacement in LED lamps, thermal heat management	Heat sinks		Grades for special application
Makrolon® TC8030	Polycarbonate (PC), injection molding, high thermal conductivity, 22 W/mK (ISO 22007-2), for metal replacement in LED lamps; components for heat dissipation	Heat sinks		

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Code	Property	Application	Color	Grade
Makrolon® LQ2647	MVR (300 ° C/1.2 kg) 12 cm <sup>3</sup> /10 min; optical lens; medium viscosity; UV stabilized; easy release; injection molding -melt temperature 280-320 ° C; available in clear tints only; safety glasses	Optical lenses		Grades for special application
Makrolon® LQ3187	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; optical lens; high viscosity; UV stabilized; UV 400 cut off; easy release; injection molding -melt temperature 280-320 ° C; safety glasses; sun glasses	Optical lenses		
Makrolon® AL2447	MVR (300 ° C/1.2 kg) 19 cm <sup>3</sup> /10 min; automotive lighting; low viscosity; UV stabilized; easy release; injection molding -melt temperature 280-320 ° C; available in clear transparent colors and in various signal colors; headlamp lenses for automotive forward lighting	Automotive lighting		
Makrolon® AL2647	MVR (300 ° C/1.2 kg) 12 cm <sup>3</sup> /10 min; automotive lighting; medium viscosity; UV stabilized; easy release; injection molding -melt temperature 280-320 ° C; available in clear transparent colors and in various signal colors; headlamp lenses for automotive forward lighting	Automotive lighting		
Makrolon® AG2677	MVR (300 ° C/1.2 kg) 12 cm <sup>3</sup> /10 min; medium viscosity; UV stabilized; easy release; injection molding – melt temperature 280-320 ° C; available in transparent colors only; automotive glazing; roof modules	Automotive glazing		

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Code	Property	Application	Color	Grade
Makrolon® WB1239	MVR (300° C/1.2 kg) 2.0 cm <sup>3</sup> /10 min; blow molding; high viscosity; branched; food contact quality; extrusion blow molding; injection stretch blow molding; available in transparent colors only; water bottles	Blow molding		Grades for special application
Makrolon® 2807	MVR (300° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; general purpose; medium viscosity; UV stabilized; easy release; injection molding—melt temperature 280 – 320° C; available in transparent, translucent and opaque colors	Furniture application		
Makrolon® 3107	MVR (300° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; general purpose; high viscosity; UV stabilized; easy release; injection molding—melt temperature 280- 320° C; available in transparent, translucent and opaque colors	Furniture application		

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Code	Property	Application	Color	Grade
Makrolon® ET2613	MVR (300 ° C/1.2 kg) 12 cm <sup>3</sup> /10 min; extrusion; medium viscosity; UV stabilized;	solid sheet	available in color code 550060 only;	Extrusion
Makrolon® ET3113	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; extrusion; high viscosity; UV stabilized;	solid sheet; corrugated sheet	available in transparent colors only;	
Makrolon® ET3117	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; extrusion; high viscosity; UV stabilized; easy release;	; multi wall sheets/profiles; corrugated sheet	available in color code 550115 only	
Makrolon® ET3137	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; extrusion; high viscosity; branched; UV stabilized; easy release;	multi wall sheets/profiles; panels		
Makrolon® ET3227	MVR (300 ° C/1.2 kg) 3.0 cm <sup>3</sup> /10 min; extrusion; high viscosity; branched; UV stabilized; easy release;	multi wall sheets/profiles		

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Code	Property	Application	Color	Grade
Makrolon® ET UV110	PC/UV absorber concentrate; high viscosity; easy release; special grade for the coextrusion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 550054 only;	Extrusion
Makrolon® ET UV120	PC/UV absorber concentrate; high viscosity; easy release; special grade for the coextrusion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 451105 only;	
Makrolon® ET UV130	PC/UV absorber concentrate; high viscosity; easy release; special grade for the coextrusion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 550054 only;	
Makrolon® ET UV510	PC/UV absorber concentrate; high viscosity; easy release; very low plate-out; special grade for the coextrusion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 550054 only;	
Makrolon® ET UV530	PC/UV absorber concentrate; high viscosity; easy re - lease; very low plate-out; special grade for the coextru - sion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 550054 only;	
Makrolon® ET UV540	PC/UV absorber concentrate; high viscosity; easy release; very low plate-out; special grade for the coex - trusion of Makrolon® ET base resins;	solid sheet; multi wall sheets/profiles	available in color code 551307 only;	

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Code	Property	Application	Color	Grade
Makrolon® SF800	MVR (300° C/1.2 kg) 5.0 cm <sup>3</sup> /10 min; structural foam; 5 % glass fiber reinforced; flame retardant; high viscosity; easy release; in combination with an appropriate blowing agent for the production of structural foam moldings	Structural foam		Grades for special application
Makrolon® SF800 Z MAS148	MVR (300° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; structural foam; 5 % glass fiber reinforced; milled fiber; flame retardant; medium viscosity; easy release; injection molding; available in natural (opaque) and opaque colors; in combination with an appropriate blowing agent for the production of structural foam moldings	Structural foam		

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Code	Property	Viscosity	Color	Grade
Makrolon® 2256	MVR (300 ° C/1.2 kg) 34 cm <sup>3</sup> /10 min; food contact quality; low viscosity; easy release; injection molding melt temperature 280 – 320 ° C;	Low viscosity	available in transparent, translucent and opaque colors	Food contact grades
Makrolon® 2456	MVR (300 ° C/1.2 kg) 19 cm <sup>3</sup> /10 min; food contact quality; low viscosity; easy release; injection molding melt temperature 280 – 320 ° C;	Low viscosity	available in transparent, translucent and opaque colors	
Makrolon® 2656	MVR (300 ° C/1.2 kg) 12 cm <sup>3</sup> /10 min; food contact quality; medium viscosity; easy release; injection molding melt temperature 280 – 320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	
Makrolon® 2856	MVR (300 ° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; food contact quality; medium viscosity; easy release; injection molding-melt temperature 280–320 ° C;	Medium viscosity	available in transparent, translucent and opaque colors	
Makrolon® 1248	MVR (300 ° C/1.2 kg) 7.0 cm <sup>3</sup> /10 min; food contact quality; medium viscosity; impact modified; injection molding-melt temperature 280–320 ° C;	Medium viscosity	available in light colors only	
Makrolon® 3156	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; food contact quality; high viscosity; easy release; injection molding melt temperature 280 – 320 ° C; extrusion	High viscosity	available in transparent, translucent and opaque colors	
Makrolon® WB1239	MVR (300 ° C/1.2 kg) 2.0 cm <sup>3</sup> /10 min; blow molding; high viscosity; branched; food contact quality; extrusion blow molding; injection stretch blow molding;	High viscosity, branched	available in transparent colors only; water bottle	



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Code	Property	Viscosity	Color	Grade
Makrolon® 2258	MVR (300° C/1.2 kg) 34 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121° C; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding– melt temperature 280– 320° C;	low viscosity;	available in transparent and opaque colors	Medical devices*
Makrolon® 2458	MVR (300° C/1.2 kg) 19 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121° C; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding– melt temperature 280– 320° C;	low viscosity;	available in transparent and opaque colors	
Makrolon® 2558	MVR (300° C/1.2 kg) 14 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121° C; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding– melt temperature 280– 320° C;	medium viscosity;	available in transparent and opaque colors	
Makrolon® 2658	MVR (300° C/1.2 kg) 12 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121° C; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding– melt temperature 280– 320° C;	medium viscosity;	available in transparent and opaque colors	
Makrolon® 2858	MVR (300° C/1.2 kg) 9.0 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121° C; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding– melt temperature 280– 320° C;	medium viscosity;	available in transparent and opaque colors	

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Code	Property	Viscosity	Color	Grade
Makrolon® 3108	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; medical devices; suitable for ETO and steam sterilization at 121 ° C; biocompatible according to many ISO 10993-1 test requirements; injection molding-melt temperature 280- 320 ° C;	high viscosity;	available in transparent and opaque colors	Medical devices*
Makrolon® Rx2430	MVR (300 ° C/1.2 kg) 19 cm <sup>3</sup> /10 min; medical devices; suitable for sterilization with high-energy radiation; biocompatible according to many ISO 10993-1 test requirements; injection molding-melt temperature 280- 320 ° C;	low viscosity;	transparent parts for medical devices	
Makrolon® Rx2435	MVR (300 ° C/1.2 kg) 23 cm <sup>3</sup> /10 min; medical devices; suitable for sterilization with high-energy radiation; biocompatible according to many ISO 10993-1 test requirements; easy release; injection molding- melt temperature 280- 320 ° C	low viscosity;	transparent parts for medical devices	
Makrolon® Rx2530	MVR (300 ° C/1.2 kg) 15 cm <sup>3</sup> /10 min; medical devices; suitable for sterilization with high-energy radiation; biocompatible according to many ISO 10993-1 test requirements; injection molding-melt temperature 280- 320 ° C	medium viscosity;	transparent parts for medical devices	
Makrolon® Rx1805	MVR (300 ° C/1.2 kg) 6.0 cm <sup>3</sup> /10 min; medical devices; high lipid resistance; suitable for sterilization with highenergy radiation; biocompatible according to many ISO 10993-1 test requirements; injection molding- melt temperature 280-320 ° C;	high viscosity;	transparent parts for medical devices	

# **"APEC" POLYCARBONATE (PC)**

## “Apec” Polycarbonate (PC)

Apec® is the brand name for an advanced copolycarbonate based on Makrolon® polycarbonate. With its unique combination of high heat resistance, toughness, transparency, light stability and flowability, it is unlike any other engineering thermoplastic. Worthy of note is the high heat resistance, which, depending on the grade, can be as high as 203 ° C. This makes Apec® particularly suitable for moldings subject to such a high level of thermal stress that standard polycarbonate can no longer be used.

Code	Property	Viscosity	Application	Grade
Apec® 1695	MVR (330 ° C/2.16 kg) 45 cm <sup>3</sup> /10 min; easy release; softening temperature (VST/B 120) = 158 ° C; injection molding-melt temperature 320-340 ° C;		covers for brake lights and indicator lights; headlamp reflectors/ bezels	Easy flow grades
Apec® 1697	MVR (330 ° C/2.16 kg) 45 cm <sup>3</sup> /10 min; easy release; UV stabilized; softening temperature (VST/B 120) = 157 ° C; injection molding – melt temperature 320-340 ° C	low viscosity;		
Apec® 1795	MVR (330 ° C/2.16 kg) 30 cm <sup>3</sup> /10 min; easy release; softening temperature (VST/B 120) = 173 ° C; injection molding – melt temperature 320-340 ° C;	low viscosity;	covers for brake lights and indicator lights; headlamp reflectors/bezels	
Apec® 1797	MVR (330 ° C/2.16 kg) 30 cm <sup>3</sup> /10 min; easy release; UV stabilized; softening temperature (VST/B 120) = 172 ° C; injection molding – melt temperature 320-340 ° C	low viscosity;		
Apec® 1895	MVR (330 ° C/2.16 kg) 18 cm <sup>3</sup> /10 min; easy release; softening temperature (VST/B 120) = 183 ° C; injection molding-melt temperature 330-340 ° C;		covers for brake lights and indicator lights; recessed light fixtures/ reflectors; raised brake lights; headlamp reflectors/ bezels	

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Code	Property	Viscosity	Application	Grade
Apec® 1897	MVR (330 ° C/2.16 kg) 18 cm <sup>3</sup> /10 min; easy release; UV stabilized; softening temperature (VST/B 120) = 182 ° C; injection molding – melt temperature 330–340 ° C		lamp covers; headlamp lenses	Easy flow grades
Apec® 2095	MVR (330 ° C/2.16 kg) 8 cm <sup>3</sup> /10 min; easy release; softening temperature (VST/B 120) = 203 ° C; injection molding-melt temperature 330–340 ° C;	high viscosity;	covers for brake lights and indicator lights; recessed light fixtures/reflectors; blade-type fuses; headlamp reflectors/ bezels	
Apec® 2097	MVR (330 ° C/2.16 kg) 8 cm <sup>3</sup> /10 min; easy release; UV stabilized; softening temperature (VST/B 120) = 202 ° C; injection molding – melt temperature 330–340 ° C;	high viscosity;	lamp covers; headlamp lenses	

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Code	Property	Viscosity	Application	Grade
Apec® 1603	MVR (330 ° C/2.16 kg) 25 cm <sup>3</sup> /10 min; UV stabilized; softening temperature (VST/B 120) = 159 ° C; injection molding melt temperature 320-340 ° C	high viscosity;		Grades with elevated viscosity
Apec® 1703	MVR (330 ° C/2.16 kg) 17 cm <sup>3</sup> /10 min; UV stabilized; softening temperature (VST/B 120) = 171 ° C; injection molding melt temperature 320-340 ° C;		covers for brake lights and indicator lights; covers for domestic/industrial lamps; car interior light covers; headlamp lenses	
Apec® 1803	MVR (330 ° C/2.16kg) 10 cm <sup>3</sup> /10 min; UV stabilized; softening temperature (VST/B 120) = 184 ° C; injection molding melt temperature 330-340 ° C;	high viscosity;	covers for brake lights and indicator lights; car interior light covers; domestic lamp covers; headlamp lenses; covers for ships' lights; connector pieces for halogen systems	
Apec® 1745	MVR (330 ° C/2.16 kg) 17 cm <sup>3</sup> /10 min; easy release; suitable for superheated steam sterilization up to 143 ° C as well as for pharmaceutical applications according to United States Pharmacopoeia (USP) XXII Class VI; softening temperature (VST/B 120) = 170 ° C; injection molding melt temperature 320-340 ° C;		films for medical packaging; contact lens holders; medical vessels; safety valve for respiration aids; syringe tops	Medical grade*

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Code	Property	Viscosity	Application	Grade
Apec® FR 1892	MVR (330 ° C/2.16 kg) 18 cm <sup>3</sup> /10 min; easy release; softening temperature (VST/B 120) = 183 ° C; easy-flowing; injection molding – melt temperature 330–340 ° C;		visors for firemen’s helmets	Flame retardant grades
Apec® DP1-9354	MVR (330 ° C/2.16 kg) 12 cm <sup>3</sup> /10 min; flame retardant; only opaque colors available; V-0/1.5 mm (UL 94); V-0/3.0 mm (UL 94); 5VA/3.0 mm (UL 94); softening temperature (VST/B 120) = 185 ° C; injection molding– melt temperature 330–340 ° C	high viscosity;		
Apec® RW1697	MVR (330 ° C/2.16 kg) 45 cm <sup>3</sup> /10 min; low viscosity; easy release; UV stabilized; high reflectance; injection molding–melt temperature 320–340 ° C; extrusion; automotive lighting			Grades for diffuse reflectors
Apec® RW1795	MVR (330 ° C/2.16 kg) 28 cm <sup>3</sup> /10 min; low viscosity; easy release; high reflectance; injection molding –melt temperature 320 340 ° C; extrusion; automotive lighting			
Apec® RW1895	MVR (330 ° C/2.16 kg) 18 cm <sup>3</sup> /10 min; low viscosity; easy release; high reflectance; injection molding –melt temperature 320 340 ° C; extrusion; automotive lighting			

# **“BAYBLEND” THERMOPLASTIC POLYMER BLENDS (PC&ABS)**



## “Bayblend” PC/ABS

Bayblend® is the trade name used by Covestro AG for its product line of amorphous, thermoplastic polymer blends based on polycarbonate (PC) and acrylonitrile butadiene styrene copolymer (ABS) as well as the rubber-modified polycarbonate (PC) and styrene-acrylonitrile copolymer (SAN) blends. Their property profiles can be customized by varying the composition of the blends. The particular strengths of Bayblend® are its balanced combination of heat resistance, toughness and stiffness and its excellent processing characteristics.

Code	Property	Grade
Bayblend® T45 PG	(ABS+PC)-blend; Vicat/B 120 temperature = 112 ° C; for electroplating applications	Non-reinforced general purpose grades
Bayblend® T50 XF	(PC+ABS)-blend; Vicat/B 120 temperature = 112 ° C; excellent flow; good low temperature impact strength	
Bayblend® T65 AT	(PC+ABS)-blend; Vicat/B 120 temperature = 121 ° C; improved antistatic behavior	
Bayblend® T65 HG	(PC+ABS)-blend; Vicat/B 120 temperature = 120 ° C; easy flowing; high gloss; brilliant colors	
Bayblend® T65 PG	(PC+ABS)-blend; Vicat/B 120 temperature = 120 ° C; easy flowing; good heat resistance; for electroplating applications	
Bayblend® T65 XF	(PC+ABS)-blend; Vicat/B 120 temperature = 120 ° C; improved flow compared with T65 Bayblend® T80 XG (PC+ABS)-blend; Vicat/B 120 temperature = 130 ° C; excellent flow; optimized surface quality for metallization (steam treatment)	
Bayblend® T65 HI	(PC+ABS)-blend; Vicat/B 120 temperature = 120 ° C; grade with improved low-temperature impact strength and chemical resistance for automotive parts; also suitable for extrusion/extrusion blow molding and electroplating applications	

## “Bayblend” PC/ABS

Bayblend® is the trade name used by Covestro AG for its product line of amorphous, thermoplastic polymer blends based on polycarbonate (PC) and acrylonitrile butadiene styrene copolymer (ABS) as well as the rubber-modified polycarbonate (PC) and styrene-acrylonitrile copolymer (SAN) blends. Their property profiles can be customized by varying the composition of the blends. The particular strengths of Bayblend® are its balanced combination of heat resistance, toughness and stiffness and its excellent processing characteristics.

Code	Property	Grade
Bayblend® T85 HG	(PC+ABS)-blend; Vicat/B 120 temperature = 130 ° C; easy flowing; high gloss; brilliant colors	Non-reinforced general purpose grades
Bayblend® T85 SG	(PC+ABS)-blend; Vicat/B 120 temperature = 130 ° C; very good flow; suitable for DirectCoating/DirectSkinning	
Bayblend® T85 XF	(PC+ABS)-blend; Vicat/B 120 temperature = 130 ° C; improved flow compared with T85	
Bayblend® T90 HT	(PC+ABS)-blend; high heat resistance; Vicat/B 120 temperature = 135 ° C; easy flowing; ball indentation temperature >= 125 ° C; suitable as supporting material for energized parts	
Bayblend® T90 XF	(PC+ABS)-blend; Vicat/B 120 temperature = 132 ° C; good balance of melt flow, impact strength and stress cracking resistance	
Bayblend® T90 XG	(PC+ABS)-blend; Vicat/B 120 temperature = 135 ° C; easy flowing; optimized surface quality for metallization (steam treatment)	

## “Bayblend” PC/ABS

Apec® is the brand name for an advanced copolycarbonate based on Makrolon® polycarbonate. With its unique combination of high heat resistance, toughness, transparency, light stability and flowability, it is unlike any other engineering thermoplastic. Worthy of note is the high heat resistance, which, depending on the grade, can be as high as 203 ° C. This makes Apec® particularly suitable for moldings subject to such a high level of thermal stress that standard polycarbonate can no longer be used.

Code	Property	Grade
Bayblend® T88 GF-10	Rubber modified (PC+SAN)-blend; 10 % glass fiber reinforced; Vicat/B 120 temperature = 134 ° C; optimized heat ageing- and UV-stability; very good flow; tensile modulus = 4,800 MPa; good heat resistance	Glass fiber reinforced general purpose grades
Bayblend® T88 GF-20	Rubber modified (PC+SAN)-blend; 20 % glass fiber filled; Vicat/B 120 temperature = 130 ° C; optimized heat ageing- and UV-stability; very good flow; tensile modulus = 7,200 MPa; good heat resistance	
Bayblend® T88 GF-30	Rubber modified (PC+SAN)-blend; 31 % glass fiber filled; Vicat/B 120 temperature = 134 ° C; optimized heat ageing- and UV-stability; very good flow; tensile modulus = 10,000 MPa; good heat resistance	
Bayblend® T95	MF (PC+ABS)-blend; 9 % mineral filled; Vicat/B 120 temperature = 142 ° C; very good heat resistance; reduced coefficient of thermal expansion; tensile modulus = 3,350 MPa	Mineral filled general purpose grades
Bayblend® T90	MF-20 Rubber modified (PC+SAN)-blend; 20 % mineral filled; Vicat/B 120 temperature = 130 ° C; very good flow; reduced coefficient of thermal expansion; tensile modulus = 4,900 MPa; good heat resistance	

## “Bayblend” PC/ABS

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Code	Property	Grade
Bayblend® W85 HI	(PC+ASA)-blend; Vicat/B 120 temperature = 132 ° C; easy flowing; improved weather resistance; excellent low temperature ductility; good heat resistance	General purpose grades with improved weatherability
Bayblend® W85 XF	(PC+ASA)-blend; Vicat/B 120 temperature = 134 ° C; improved weather resistance; excellent low temperature ductility; good heat resistance	
Bayblend® M850 XF	(PC+ABS)-blend; easy flowing; Vicat/B 120 temperature = 131 ° C; meet certain requirements of ISO Standard 10993-1; for further information please contact <a href="mailto:plastics@covestro.com">plastics@covestro.com</a>	General purpose grades for medical application*

## “Bayblend” PC/ABS

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Code	Property	Grade
Bayblend® FR3000	(PC+ABS)-blend; flame retardant; easy flowing; Vicat/B 120 temperature = 97 ° C; UL recognition 94 V-0 at 1.5 mm; glow wire test: 960 ° C at 2.0 mm; no juicing; good light stability	Non-reinforced flame retardant grades
Bayblend® FR3000 HI	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 97 ° C; compared to FR3000 improved chemical resistance and stress cracking behavior; UL recognition 94 V-0 at 1.5 mm	
Bayblend® FR3005 HF	(PC+ABS)-blend; flame retardant; very easy-flowing; Vicat/B 120 temperature = 96 ° C; UL recognition 94 V-0 at 1.5 mm	
Bayblend® FR3008 HR	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 103 ° C; improved chemical and very good hydrolysis resistance; HDT/A >= 85 ° C; UL recognition 94 V-0 at 1.5 mm; glow wire test: 960 ° C at 2.0 mm; good light stability	
Bayblend® FR3010	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 110 ° C; increased heat resistance; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960 ° C at 2.0 mm; improved chemical resistance and stress cracking behavior; successor to FR2010	
Bayblend® FR3010 HF	(PC+ABS)-blend; flame retardant; easy flowing; Vicat/B 120 temperature = 108 ° C; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960 ° C at 2.0 mm; optimized processability; good light stability	
Bayblend® FR3010 IF	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 108 ° C; increased heat resistance; UL recognition 94 5VB (1.5 mm); glow wire temperature (GWFI): 960 ° C at 2.0 mm	
Bayblend® FR3011	(PC+ABS)-blend; flame retardant; easy flowing; Vicat/B 120 temperature = 118 ° C; good heat resistance; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960 ° C at 2.0 mm; good light stability	

## “Bayblend” PC/ABS

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Code	Property	Grade
Bayblend® FR3015 BBS910	(PC+ABS)-blend; flame retardant; UV stabilized for improved light stability; Vicat/B 120 = 118 ° C; UL recognition 94 V-0 at 1.5 mm	Non-reinforced flame retardant grades
Bayblend® FR3030	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 115 ° C; extrusion grade; good extrusion and vacuum-forming behavior; UL recognition 94 V-0 at 1.5 mm; halogen-free according to DIN VDE 0472,815; glow wire temperature (GWI): 960 ° C at 1.0 mm	
Bayblend® FR3040	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 108 ° C; HDT/A >= 85 ° C; for thin-wall applications; very good burning behavior in small wallthicknesses (UL recognition 94 V-0 at 0.75 mm and above and V-1 at 0.6 mm)	
Bayblend® FR1514	(PC+ABS)-blend; flame retardant; high heat resistance; Vicat/B 120 temperature = 136 ° C; ball indentation temperature >= 125 ° C; UL recognition 94 V-0 at 1.5 mm; suitable as supporting material for energized parts	
Bayblend® FR1514 BBS073	(PC+ABS)-blend; flame retardant; Vicat/B 120 temperature = 136 ° C; improved chemical resistance and stress cracking behavior compared to KU2-1514; ball indentation temperature >= 125 ° C; UL recognition 94 V-0 at 1.5 mm; suitable as supporting material for energized parts	

## “Bayblend” PC/ABS

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Code	Property	Grade
Bayblend® FR3020	(PC+ABS)-blend; 5 % mineral filled; flame retardant; Vicat/B 120 temperature = 103 ° C; HDT/A >= 85 ° C; for thin-wall applications; very good UL recognition in small wall thicknesses (V-0 at 0.75 mm); low smoke density	Mineral-filled flame retardant grades
Bayblend® FR3021 (	PC+ABS)-blend; 15 % mineral filled; flame retardant; Vicat/B 120 temperature = 98 ° C; high stiffness; tensile modulus = 4,800 MPa; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960 ° C at 2.0 mm	
Bayblend® ET3032 FR	Rubber modified PC blend; 10 % mineral filled; flame retardant; Vicat/B 120 temperature = 108 ° C; extrusion grade; good extrusion and vacuum-forming behavior; UL 94 V-0 (0.75 mm) (Covestro internal test); glow wire temperature (GWFI): 960 ° C at 2.0 mm	
Bayblend® FR410 MT	Rubber modified PC blend; 10 % mineral filled; flame retardant; Vicat/B 120 temperature = 108 ° C; very good UL recognition in small wall thicknesses (V-0 at 0.75 mm); for railway interiors; due to the special formulation of this grade, the final parts may require coating;	
Bayblend® FR411 MT	Rubber modified PC blend; flame retardant; mineral filled; Vicat/B 120 temperature = 99 ° C; extrusion grade; for European railway interiors requiring EN45545;	
Bayblend® FR421 MT	Rubber modified PC blend; mineral filled; flame retardant; Vicat/B 120 temperature = 134 ° C; extrusion grade for aircraft interiors;	

**“MAKROBLEND”  
POLYCARBONATE BLENDS  
(PC&PET OR PBT)**



## “Makroblend” PC/PBT, PC/PET

Makroblend® is the brand name of our polycarbonate blends based on polyethylene terephthalate or polybutylene terephthalate (PET or PBT). The benefits of Makroblend® include its high strength, even at low temperatures, its good resistance to chemicals and its reduced tendency to stress cracking. In addition, it is easily painted and absorbs only a minimal amount of moisture.

Code	Property	Grade
Makroblend® AR205	(PC+PET)-blend, easy flow, impact modified; application: automotive body panels	Unreinforced grades (PC+PET)-blends
Makroblend® DP7645	(PC+PET)-blend, impact modified, injection molding grade	
Makroblend® UT250	(PC+PET)-blend, impact modified, easy release, injection molding.	
Makroblend® UT250	offers high heat resistance, good chemical resistance and flowability. Additionally, molded parts from UT250 having exceptional dimensional stability	
Makroblend® UT305	(PC+PET)-blend, easy release, injection molding.	
Makroblend® UT305	offers high heat resistance, good chemical resistance and flowability. Molded parts from UT305 provide a good surface appearance and exceptional dimensional stability, even in high moisture environments	

## “Makroblend” PC/PBT, PC/PET

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Code	Property	Grade
Makroblend® KU2-7609	(PC+PBT)-blend, impact modified, injection molding grade, 20 % mineral filled Makroblend® UT4045G (PC+PBT)-blend, 20 % glass fiber reinforced, easy release, injection molding.	Reinforced grades (PC+PBT)-blends
Makroblend® UT4045G	offers a high stiffness, excellent chemical resistance, good flowability and exceptional dimensional stability	
Makroblend® UT235M	(PC+PET)-blend, mineral filled, easy flow, low coefficient of linear thermal expansion, easy release, injection molding. Molded parts from UT235M having exceptional dimensional stability	Reinforced grades (PC+PET)-blends

## “Makroblend” PC/PBT, PC/PET

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Code	Property	Grade
Makroblend® KU2-7609	(PC+PBT)-blend, impact modified, injection molding grade, 20 % mineral filled Makroblend® UT4045G (PC+PBT)-blend, 20 % glass fiber reinforced, easy release, injection molding.	Reinforced grades (PC+PBT)-blends
Makroblend® UT4045G	offers a high stiffness, excellent chemical resistance, good flowability and exceptional dimensional stability	
Makroblend® M525	(PC+PBT)-blend, impact modified, easy release, injection molding grade. Makroblend® M525 offers an exceptional low-temperature impact strength, good flowability and excellent chemical resistance. Manufactured according to GMP, tested only according to ISO 10993-5 and ISO 10993-10 for contact with uncompromised skin only	Medical grade*
Makroblend® UT235M	(PC+PET)-blend, mineral filled, easy flow, low coefficient of linear thermal expansion, easy release, injection molding. Molded parts from UT235M having exceptional dimensional stability	Reinforced grades (PC+PET)-blends

# **ALL KINDS OF POLYCARBONATE BRANDS**

## “Hainan Huasheng” Polycarbonate (PC)

Hainan Huasheng’s polycarbonate raw material is a high-performance thermoplastic that combines excellent mechanical properties with optical clarity and heat resistance. It is known for its impact resistance, dimensional stability, and electrical insulation properties. Hainan Huasheng’s polycarbonate is widely used in various industries, including automotive, electronics, construction, and consumer goods. The material offers design flexibility, easy processing, and a wide range of applications. Ensuring high-quality standards, Hainan Huasheng’s polycarbonate raw material is manufactured with a focus on innovation, technology advancement, and sustainability. It provides customers with reliable and durable solutions for their manufacturing needs.



Code	Property	Grade
HS102R	Characteristics: Medium viscosity, good release performance Purpose: General Appearance: clear/transparent	Injection molding Blow molding process and modification Extrusion
HS100G		
HS102S		
HS102U		

## “Chimei” Polycarbonate (PC)

Chimei's polycarbonate raw material is a high-performance thermoplastic known for its exceptional strength, impact resistance, and optical clarity. It offers excellent dimensional stability, heat resistance, and electrical insulation properties, making it suitable for a wide range of applications. Chimei's polycarbonate is widely used in industries such as automotive, electronics, construction, and consumer goods. The material provides design flexibility, ease of processing, and can be molded into complex shapes and intricate parts. Chimei's polycarbonate raw material is manufactured with a focus on quality and innovation, ensuring reliable and durable solutions for customers' manufacturing needs.

**CHIMEI**  
a step up

Code	Property	Application
PC-110	Generally used for injection molding	Car warning light shell, mouse, chocolate packaging box, high heels
PC-115	Generally used for injection molding	Stationery ball pen body toy transparent formed product
PC-122	Generally used for injection molding	Original Pen Body Stationery Toys Water Containers Thin Meat Products Complex Transparent Shaped Products
PC-110V	Generally, injection molding can achieve UL 94 2.5mm V-2 flame retardancy with PC-110, while PC-110V can achieve 3.0 mmV-2 flame retardancy	Electrical supplies
PC-6600	Halogen free flame retardant 1.0mm V0	Electrical appliances

## “Chimei” Polycarbonate (PC)

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**CHIMEI**  
a step up

Code	Property	Application
PC-6710	Transparent halogen-free flame retardant 2.5mmV0	Electrical appliances
PC-110U	Generally used for injection molding	Outdoor product lampshade signal light sign
PC-115U	Generally used for injection molding	Outdoor product lampshade signal light sign
PC-122U	Generally used for injection molding	Outdoor product lampshade signal light sign
PC-110L	Automotive headlights comply with AMECA (SAEJ576) and ECE-R112 certification	Car lights
PC-115P	Through biological compatibility testing and high stability of the background color	Medical grade products such as blood dialyzers, infusion valve connectors, respirator components, etc

## “ZPC” Polycarbonate (PC)

ZPC's polycarbonate materials exhibit high strength, rigidity, and exceptional impact resistance. They also demonstrate excellent heat resistance, weatherability, and resistance to chemical corrosion. ZPC's polycarbonate materials offer excellent optical transparency, providing a highly transparent appearance. They are widely used in optical applications such as optical lenses, display devices, and optical storage media. ZPC's polycarbonate materials find extensive applications in the field of engineering plastics. They are used to manufacture various components and products, including electronic devices, automotive parts, household appliances, and construction materials.



Test Item	Unit	Reference Technical Indicators (tentative)				
		G0713	G1010	G1011	G1013	G2010
Pyroparticles and heterochromatic particles	One	≤1	≤1	≤1	≤1	≤1
Melt mass flow rate	g/10min	6.0- 8.0	9.0~11.0	9.0~ 11.0	9.0~ 11.0	9.0~11.0
Tensile yield stress	Mpa	≥60	≥60	≥60	≥60	≥60
Elongation at break	%	≥105	≥105	≥105	≥105	≥105
Bending modulus	Mpa	≥2350	≥2350	≥2350	≥2350	≥2350
Notch impact strength of cantilever beam	KJ/m2	≥70	≥65	≥65	≥70	≥60
Thermal deformation temperature(1.8Mpa)	°C	≥124	≥124	≥124	≥124	≥124
Transmittance(1 mm)	%	≥89	≥89	≥89	≥89	≥89
Lab chromaticity B	/	-4.0~-2.0	0~2	-4.0~-2.0	-4.0~-2.0	0~2
Application		Extrusion	Compounding	Injection molding	AntiUV	Compounding



## “Ningbo Zhetie Dafeng” Polycarbonate (PC)

Ningbo Zhetie Dafeng Chemical Co., Ltd. (referred to as “Dafeng Chemical”) is located on Haishan Road, Ningbo Petrochemical Economic and Technological Development Zone. It was established on May 26, 2011. It is one of the key enterprises in the chemical industry under Zhejiang Communications Investment Group Co., Ltd. A wholly-owned subsidiary of Zhejiang Jiangshan Chemical Co., Ltd. Dafeng PC is widely used and is mainly used in optics, electronics and electrical, automobiles, construction, office equipment, packaging, sports equipment, medical care, aerospace and other fields. It can also be made into plastic alloys with other resins to meet the cost and cost constraints of specific application fields. performance requirements.



Polycarbonate Species	Melt Index 300°C/1.2KG	Molecular weight	The base of color	Similar Products	Main Purpose
PC02-10	9-11	27000-28000	Bright and white	Most general PC	Modified
PC02-20	19-21	23000-24000	Bright and white	Most general PC	Modification(high mobility)
PC02-10L	9-11	27000-28000	Bright and white	Covestro 2800 series	Special materials for LED modification
PC02-10R	9-11	27000-28000	Bright and blue	Covestro 2805/Sabic1000R/Lotte1100	Injection molding and extrusion
PC02-10UR	9-11	27000-28000	Bright and blue	Covestro 2807/Sabic143R/Lotte1100U	Injection molding and extrusion (anti-UV)

## “Ningbo Zhetie Dafeng” Polycarbonate (PC)

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	Use Industry						
PC02-10	PC-FR	PC/ABS	PC-GF	PC Light Diffusion	Lamp Buld	Switch Panel	Relevant modified products
PC02-20	PC-FR	PC/ABS	PC-GF	PC Light Diffusion	Lamp Buld	Switch Panel	Relevant modified products
PC02-10L	Modification for LED industry, suitable for bulbs, lamps, etc.						
PC02-10R	Transparent chair	goggles	PC bottle	Electric appliance	Electical&Electronic	Thin slice/film	sheet
PC02-10UR	The performance is consistent with PC02-10R, and has anti-UV performance. It is suitable for some injection products which need UV resistance.						Meter, Meter box



# “Wanhua” Polycarbonate (PC)

Wanhua Chemical Group Co.,Ltd. is among the global leading suppliers of chemical innovative products. Relying on the continuous innovation, commercialized facilities and efficient operation, the company provides customers with more competitive products and solutions. Wanhua Chemical has built up nine key production complexes in Yantai, Penglai, Ningbo, Sichuan, Fujian, Zhuhai and Ningxia in China, and Hungary, which are integrated with complete supporting facilities.



Properties	Standards	Test Conditions	Units	Product Grades								
				Low Viscosity		Pellet				High Viscosity		
				A1225	A1227	A1150	A1155	A1100	A1105	A1107	A1073	A1077
<b>Physical Properties</b>												
Melt flow rate	ASTM D1238	300°C; 1.2kg	g/10min	20	20	13	13	9	9	9	7	7
Density	ASTM D792	23°C	g/cm <sup>3</sup>	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Water absorption	ASTM D570	23°C	%	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Mold shrinkage	ASTM D955	2mm flow	%	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7
<b>Mechanical Properties</b>												
Tensile modulus	ASTM D638	1mm/min	MPa	2300	2300	2300	2300	2300	2300	2300	2300	2300
Tensile strength	ASTM D638	50mm/min	MPa	68	68	70	70	72	72	70	72	72
Strain at break	ASTM D638	50mm/min	%	120	120	120	120	120	120	120	120	120
Flexural modulus	ASTM D790	2mm/min	MPa	2300	2300	2300	2300	2300	2300	2300	2300	2300
Flexural strength	ASTM D790	2mm/min	MPa	97	98	96	97	96	97	98	96	98
1000 notched impact strength	ASTM D256	23°C	J/m	720	650	750	750	800	800	780	860	840
<b>Thermal Properties</b>												
Heat distortion temperature	ASTM D648	1.82MPa; 120°C/h	°C	127	127	128	128	130	130	128	130	129
Vicat softening temperature	ASTM D1525	50N; 120°C/h	°C	147	146	148	148	150	150	149	151	150
<b>Optical Properties</b>												
Haze	ASTM D1003	3mm	%	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Transmission	ASTM D1003	3mm	%	89	89	89	89	89	89	89	89	89
<b>Flame Retardant Properties</b>												
Flammability	UL94	3.0mm	Class	HB	HB	HB	HB	HB	HB	HB	HB	HB
<b>Other Properties</b>												
Features				Easy release injection molding	Easy release UV stabilized injection molding	Compounding	Easy release injection molding	Compounding	Easy release injection molding	Easy release UV stabilized Extrusion molding	UV stabilized Extrusion molding	Easy release UV stabilized Extrusion molding



Email:



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