TEREZ® G-BLEND™ PC / ABS

PC / ABS A Versatile High-Performance Material for Demanding Applications

Since its development, the blend of Polycarbonate (PC) and Acrylonitrile Butadiene Styrene (ABS) has become a popular material in various industries due to its unique combination of properties. PC/ABS blends offer high impact strength, excellent thermal stability, and good dimensional stability. These materials also provide a balance of toughness and rigidity, making them suitable for a wide range of applications.

PC/ABS is often reinforced with glass fibers or other fillers to further enhance its mechanical properties, including increased stiffness and strength. This reinforcement also allows PC/ABS to withstand higher continuous use temperatures. Depending on the specific formulation, PC/ABS can be used in environments ranging from -40°C to +120°C, with short-term exposure to temperatures up to 130°C.

One of the notable characteristics of PC/ABS is its resistance to impact and heat, which helps maintain its mechanical properties in demanding environments. This makes PC/ABS an ideal choice for applications where durability and thermal resistance are crucial.

Due to its versatile properties, PC/ABS has replaced many traditional materials in various sectors. It is widely used in automotive parts, electrical components, and consumer electronics. Typical applications include automotive interior and exterior parts, housings for electronic devices, and various structural components.

PC/ABS's combination of impact resistance, thermal stability, and ease of processing makes it a valuable material in modern manufacturing and engineering.

Nomenclature

Polymer Nomenclature	
PC / ABS	PC + ABS
PA6 / PPH	PA6 + PPH
PA6 / ABS	PA6 + ABS

VW	Position 1	Raw material sources
GK1C	**1**000	Chemical Recycling
GK1B	**2**000	Bio based
GK1A	**3**000	Prime Compound
GK3	**4**000	Post Industrial Rezyclate
GK4	**5**000	Post Consumer Rezyclate
GK3+4	**6**000	PIR + PCR

Position 2	Visc MVR (230°C/ 2,16 kg)	cm3/ 10 min
TEREZ PC/ABS 4**0**64	MVR 0 - 1	0,5
TEREZ PC/ABS 4**1**64	MVR 1 - 3	2
TEREZ PC/ABS 4**2**64	MVR 3 - 7	5
TEREZ PC/ABS 4**3**64	MVR 7 - 13	10
TEREZ PC/ABS 4**4**64	MVR 10 - 20	15
TEREZ PC/ABS 4**5**64	MVR 15 - 25	20
TEREZ PC/ABS 4**6**64	MVR 25 - 35	30
TEREZ PC/ABS 4**7**64	MVR 35 - 45	40
TEREZ PC/ABS 4**8**64	MVR 45 - 65	55
TEREZ PC/ABS 4**9**64	MVR > 65	> 65

Position 3	Range	%
TEREZ PC/ABS 45**1**4	5-15	10
TEREZ PC/ABS 45**2**4	15-25	20
TEREZ PC/ABS 45**3**4	25-35	30
TEREZ PC/ABS 45**4**4	35-45	40
TEREZ PC/ABS 45**5**4	45-55	50
TEREZ PC/ABS 45**6**4	55-65	60
TEREZ PC/ABS 45**7**4	65-75	70
TEREZ PC/ABS 45**8**4	75-85	80
TEREZ PC/ABS 45**9**4	85-95	90
TEREZ PC/ABS 45**0**4	95-100	100

Position 4	Ratio
TEREZ PC/ABS 456**0**	95:05
TEREZ PC/ABS 456**1**	90:10
TEREZ PC/ABS 456**2**	85:15
TEREZ PC/ABS 456**3**	80:20
TEREZ PC/ABS 456**4**	75:25
TEREZ PC/ABS 456**5**	70:30
TEREZ PC/ABS 456**6**	65:35
TEREZ PC/ABS 456**7**	60:40
TEREZ PC/ABS 456**8**	55:45
TEREZ PC/ABS 456**9**	50:50

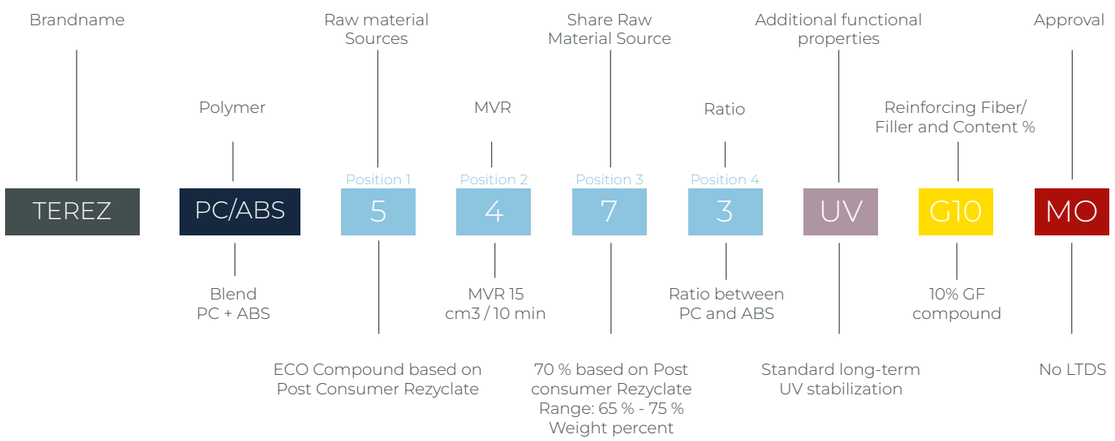
Additional functional properties	
UV	Various long-term UV Resistance systems for different requirements
CA	Constant antistatic effect
LM	Laser markable
MSR	Mar and scratch resistance
I	Impact modification

FR - System	UL 94	ISO 1043
FR5	HF HR	V-0	FR (51)

Flame retardant classification is thickness dependent	
FR20	UL 94 V-0 until 0,4 – 0,6 mm
FR21	UL 94 V-0 until 0,8 mm
FR22	UL 94 V-0 until 1,6 mm
FR23	UL 94 V-0 until 3,2 mm

Reinforcing Fiber / Filler	
G	Glass Fiber
B	Glass Beads
M	Mineral Filled

Approval	
MO	No LTDS
L	Food contact
F1	Weather resistance / UL Certification



Polymer Bases

PC/ABS is a thermoplastic blend combining polycarbonate (PC) and acrylonitrile butadiene styrene (ABS). This blend leverages the strengths of both polymers, resulting in a material with enhanced properties.

1. **Polycarbonate (PC)** Known for its high impact resistance, optical clarity, and heat resistance, PC contributes to the toughness and thermal stability of the blend.

2. **Acrylonitrile Butadiene Styrene (ABS)** ABS is valued for its good mechanical properties, ease of processing, and excellent surface finish. It adds flexibility and improved processability to the blend.

3. **Blend Characteristics** The combination of PC and ABS results in a material that is strong, durable, and resistant to heat and impact. It also offers good dimensional stability and can be easily molded, making it suitable for a wide range of applications, including automotive parts, electronics housings, and consumer goods.

PC / ABS Portfolio

	PC /ABS Prime and ECO Compounds		PC Prime and ECO Compounds		ABS and SAN Prime and ECO Compounds	
Unfilled	G-Blend 65	Based on 60 % PIR				
	G-Blend 65 HF	Based on 60 % PIR	TEREZ PC 430	Based on 100 % PIR		
	G-Blend 85	Based on 80 % PIR	TEREZ PC 440	Based on 100 % PIR	TEREZ ABS 340	Prime
	G-Blend 85 HF	Based on 80 % PIR	TEREZ PC 450	Based on 100 % PIR	TEREZ ABS 350	Prime
	G-Blend 45 G	Based on 40 % PIR	TEREZ PC 550	Based on 100 % PCR	TEREZ ABS 350 A	Prime / Antistatic
	TEREZ PC/ABS 4504	Based on 100 % PIR / 85 HF	TEREZ PC 340	Prime	TEREZ ABS 360 A	Prime / Antistatic
	TEREZ PC/ABS 5504	Based on 100 % PCR/ 85 HF	TEREZ PC 340 UV1	Prime / UV	TEREZ ABS 360 UV1	Prime / UV
	TEREZ PC/ABS 5566	Based on 60 % PCR / 65 HF	TEREZ PC 340 FR93	Prime / UL 94 V-0	TEREZ ABS 360 UV2	Prime / UV
	TEREZ PC/ABS 5584	Based on 80 % PCR / 85 HF	TEREZ PC 340 UV1 FR93	Prime / UL 94 V-0 / UV	TEREZ ABS 467	Based on 70 % PIR
	TEREZ PC/ABS 5584 I1	Based on 80 % PCR / IM / 85 HF	TEREZ PC 440 FR93	Based on 100 % PIR / UL 94 V-0	TEREZ ABS 567	Based on 70 % PCR
	TEREZ ABS/PC 3408 G	Galvano Grade / Prime	TEREZ PC 440 UV1 FR93	Based on 100 % PIR / UL 94 V-0 / UV		
	TEREZ PC/ABS 3601 FR51	Prime / UL 94 V-0				
5% Filled			TEREZ PC 439 G5	GF / Based on 90 % PIR		
			TEREZ PC 439 G5 UV1	GF / Based on 90 % PIR / UV		
10% Filled	TEREZ PC/ABS 3502 MX10	Mineral Filled / Prime	TEREZ PC 330 G10 LM FR92	GF / Prime / UL 94 V-0 / Laser Markable		
	TEREZ PC/ABS 3403 G10	GF / Prime	TEREZ PC 449 G10	GF / Based on 90 % PIR		
	TEREZ PC/ABS 4473 G10	GF / Based on 70 % PIR	TEREZ PC 439 G10 FR92	GF / Based on 90 % PIR / UL 94 V-0		
			TEREZ PC 439 G10 UV1 FR92	GF / Based on 90 % PIR / UL 94 V-0 / UV		
15% Filled			TEREZ PC 436 I1 G15	GF / Based on 60 % PIR / IM		
20% Filled	TEREZ PC/ABS 3403 G20	GF / Prime	TEREZ PC 438 G20	GF / Based on 80 % PIR		
	TEREZ PC/ABS 4463 G20	GF / Based on 60 % PIR	TEREZ PC 438 G20 FR92	GF/ Based on 80 % PIR / UL 94 V-0		
30% Filled	TEREZ PC/ABS 3403 G30	GF / Prime	TEREZ PC 437 G30	GF / Based on 70 % PIR	TEREZ ABS 340 B30	Glass Beads / Prime
	TEREZ PC/ABS 4453 G30	GF / Based on 50 % PIR	TEREZ PC 437 G30 FR92	GF / Based on 70 % PIR / UL 94 V-0	TEREZ ABS 310 G30	GF / Prime
			TEREZ PC 437 G30 UV1 FR92	GF / Based on 70 % PIR / UL 94 V-0 / UV		
30% Filled					TEREZ SAN 330 G35	GF / Prime
					TEREZ SAN 330 G35 UV1	GF / Prime / UV

*ECO Grades in green

TER Plastics POLYMER GROUP
Alte Wittener Str. 50 · 44803 Bochum · Germany
P +49 (0)234 54154-0
F +49 (0)234 54154-333
info@terplastics.com
www.terplastics.com

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