

# TEREZ<sup>®</sup> G-BLEND<sup>™</sup> 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

Position 2	Visc MVR (230°C/ 2,16 kg)	cm3/ 10 min
TEREZ PC/ABS 4064	MVR 0 - 1	0,5
TEREZ PC/ABS 4164	MVR 1 - 3	2
TEREZ PC/ABS 4264	MVR 3 - 7	5
TEREZ PC/ABS 4364	MVR 7 - 13	10
TEREZ PC/ABS 4464	MVR 10 - 20	15
TEREZ PC/ABS 4564	MVR 15 - 25	20
TEREZ PC/ABS 4664	MVR 25 - 35	30
TEREZ PC/ABS 4764	MVR 35 - 45	40
TEREZ PC/ABS 4864	MVR 45 - 65	55
TEREZ PC/ABS 4964	MVR > 65	> 65

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

VW	Position 1	Raw material sources
GK1C	1000	Chemical Recycling
GK1B	2000	Bio based
GK1A	3000	Prime Compound
GK3	4000	Post Industrial Rezyclate
GK4	5000	Post Consumer Rezyclate
GK3+4	6000	PIR + PCR

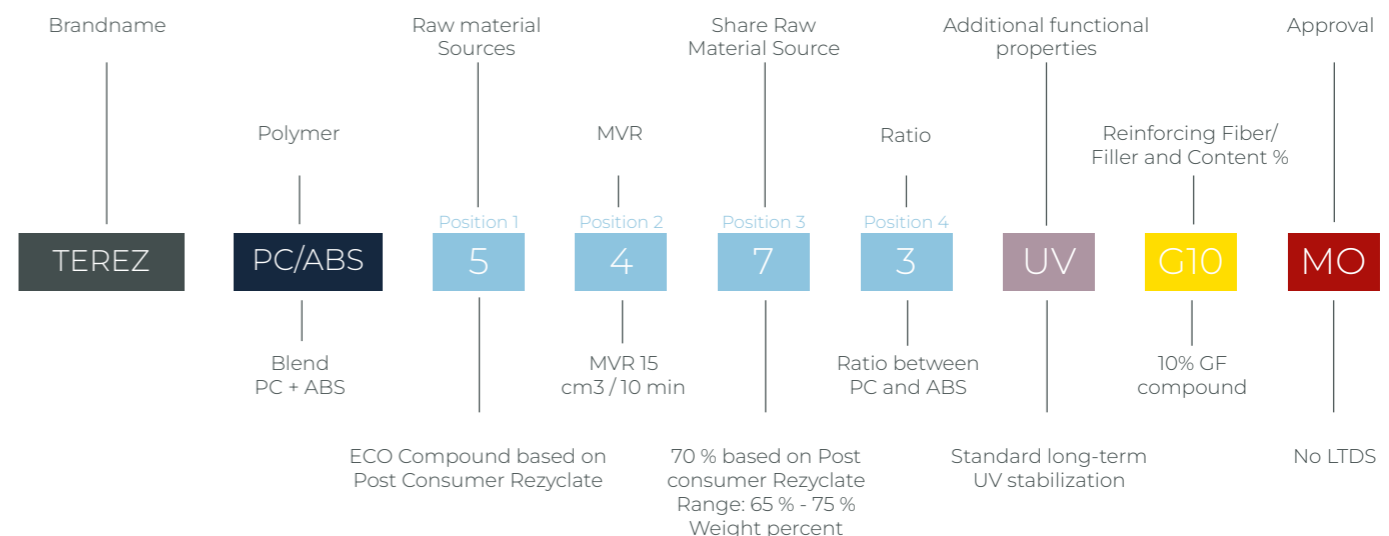
Position 3	Range	%
TEREZ PC/ABS 4514	5-15	10
TEREZ PC/ABS 4524	15-25	20
TEREZ PC/ABS 4534	25-35	30
TEREZ PC/ABS 4544	35-45	40
TEREZ PC/ABS 4554	45-55	50
TEREZ PC/ABS 4564	55-65	60
TEREZ PC/ABS 4574	65-75	70
TEREZ PC/ABS 4584	75-85	80
TEREZ PC/ABS 4594	85-95	90
TEREZ PC/ABS 4504	95-100	100

Position 4	Ratio
TEREZ PC/ABS 4560	95:05
TEREZ PC/ABS 4561	90:10
TEREZ PC/ABS 4562	85:15
TEREZ PC/ABS 4563	80:20
TEREZ PC/ABS 4564	75:25
TEREZ PC/ABS 4565	70:30
TEREZ PC/ABS 4566	65:35
TEREZ PC/ABS 4567	60:40
TEREZ PC/ABS 4568	55:45
TEREZ PC/ABS 4569	50:50

FR - System	UL 94	ISO 1043
FR5	HF HR	V-0
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	
<b>Unfilled</b>	G-Blend 65 G-Blend 65 HF G-Blend 85 G-Blend 85 HF G-Blend 45 G TEREZ PC/ABS 4504 TEREZ PC/ABS 5504 TEREZ PC/ABS 5566 TEREZ PC/ABS 5584 TEREZ PC/ABS 5584 I1 TEREZ ABS/PC 3408 G TEREZ PC/ABS 3601 FR51	Based on 60 % PIR Based on 60 % PIR Based on 80 % PIR Based on 80 % PIR Based on 40 % PIR Based on 100 % PIR / 85 HF Based on 100 % PCR/ 85 HF Based on 60 % PCR / 65 HF Based on 80 % PCR / 85 HF Based on 80 % PCR / IM / 85 HF Galvano Grade / Prime Prime / UL 94 V-0	TEREZ PC 430 TEREZ PC 440 TEREZ PC 450 TEREZ PC 550 TEREZ PC 340 TEREZ PC 340 UV1 TEREZ PC 340 FR93 TEREZ PC 340 UV1 FR93 TEREZ PC 440 FR93 TEREZ PC 440 UV1 FR93	Based on 100 % PIR Based on 100 % PIR Based on 100 % PIR Based on 100 % PCR Prime Prime / UV Prime / UL 94 V-0 Prime / UL 94 V-0 / UV Based on 100 % PIR / UL 94 V-0 Based on 100 % PIR / UL 94 V-0 / UV	TEREZ ABS 340 TEREZ ABS 350 TEREZ ABS 350 A TEREZ ABS 360 A TEREZ ABS 360 UV1 TEREZ ABS 360 UV2 TEREZ ABS 467 TEREZ ABS 567	Prime Prime Prime / Antistatic Prime / Antistatic Prime / UV Prime / UV Based on 70 % PIR Based on 70 % PCR
<b>5% Filled</b>			TEREZ PC 439 G5 TEREZ PC 439 G5 UV1	GF / Based on 90 % PIR GF / Based on 90 % PIR / UV		
<b>10% Filled</b>	TEREZ PC/ABS 3502 MX10 TEREZ PC/ABS 3403 G10 TEREZ PC/ABS 4473 G10	Mineral Filled / Prime GF / Prime GF / Based on 70 % PIR	TEREZ PC 330 G10 LM FR92 TEREZ PC 449 G10 TEREZ PC 439 G10 FR92 TEREZ PC 439 G10 UV1 FR92	GF / Prime / UL 94 V-0 / Laser Markable GF / Based on 90 % PIR GF / Based on 90 % PIR / UL 94 V-0 GF / Based on 90 % PIR / UL 94 V-0 / UV		
<b>15% Filled</b>			TEREZ PC 436 I1 G15	GF / Based on 60 % PIR / IM		
<b>20% Filled</b>	TEREZ PC/ABS 3403 G20 TEREZ PC/ABS 4463 G20	GF / Prime GF / Based on 60 % PIR	TEREZ PC 438 G20 TEREZ PC 438 G20 FR92	GF / Based on 80 % PIR GF / Based on 80 % PIR / UL 94 V-0		
<b>30% Filled</b>	TEREZ PC/ABS 3403 G30 TEREZ PC/ABS 4453 G30	GF / Prime GF / Based on 50 % PIR	TEREZ PC 437 G30 TEREZ PC 437 G30 FR92 TEREZ PC 437 G30 UV1 FR92	GF / Based on 70 % PIR GF / Based on 70 % PIR / UL 94 V-0 GF / Based on 70 % PIR / UL 94 V-0 / UV	TEREZ ABS 340 B30 TEREZ ABS 310 G30	Glass Beads / Prime GF / Prime
<b>30% Filled</b>					TEREZ SAN 330 G35 TEREZ SAN 330 G35 UV1	GF / Prime GF / Prime / UV

\*ECO Grades in green