



Technical Data Sheet

GEHR ABS®

I. Physical Properties ¹⁾	Test method	Unit	Value
1. Specific gravity (ρ)	ISO 1183	g/cm ³	1,04
2. Water absorption	ISO 62	%	0,4
3. Humidity absorption			0,1
4a. Maximum permissible service temp	UL746B	°C	70
4b. Lower permissible service temp			-50
II. Mechanical Properties	Test method	Unit	Value
1. Tensile strength at yield (σ_S)	ISO 527	MPa	37
2. Elongation at yield. (ϵ_S)		%	7
3. Tensile strength at break (σ_R)		MPa	33
4. Elongation at break (ϵ_R)		%	8
5. Impact strength (a_n)	ISO 179	kJ/m ²	333
6. Notch impact strength (a_k)			37
7. Ball indentation (H_k)/Rockwell hardness	ISO 2039	MPa	R 105
8. Shore-D	ISO 868		70
9. Flexural strength (σ_B 3,5 %)	ISO 178	MPa	67
10. Modulus of elasticity (E_t)	ISO 527		2210
III. Thermal Properties	Test method	Unit	Value
1. Vicat-softening point.	ISO 306	°C	VST/B/50 103
			VST/A/50 -
2. Heat deflection temperature.	ISO 75	°C	HDT/B 100
			HDT/A 88
3. Coef. of linear thermal expansion (α)	ISO 11359	K ⁻¹ * 10 ⁻⁴	0,8
4. Thermal conductivity at 20 °C (λ)	ISO 22007-4	W/(m*K)	-
5. Glass transition temperature. (T_g)	ISO 3146	°C	145
6. Melting temperature (T_m)			145
IV. Electrical Properties	Test method	Unit	Value
1. Volume resistivity (ρ_D) ⁸⁾	IEC 60093	Ω *cm	-
2. Surface resistivity (R_o) ⁸⁾		Ω	$\geq 10^{13}$
3. Dielectric constant at 1MHz (ϵ_f)	IEC 60250	-	-
4. Dielectric loss factor at 1 MHz ($\tan\delta$)		-	-
5. Dielectric strength	IEC 60243-1	kV/mm	-
6. Tracking resistance	IEC 60112	V	-
V. Additional Data	Test method	Unit	Value
1. Bondability	-	-	+
2. Physiological.indifference ⁵⁾ according	EEC	-	-
	FDA	-	+
3. Flammability	UL 94	-	HB
4. Limiting Oxygen Index (LOI)	ASTM D2863	%	20
4. UV stabilisation ⁶⁾	-	-	-

1) The physical data contained in this table are typical values and reflect the current state of our knowledge. The data are arithmetic average values which are tested by test specimens made out of rods (ϕ 40-60mm). These has to be understood as guidelines, and shall not be used for specification purposes for finished parts. Missing data are completed by data of the raw materials.

2) Pre-treatment necessary. 3) 65 (rods 160 - 200mm ϕ) 57 (rods 220 - 300mm ϕ) 4) 59 (rods 160 - 200mm ϕ), 51 (rods 220 - 30 mm ϕ)

5) Physiological indifferences are valid for nature coloured materials on the raw material side. There are also approvals for our semi-finished products available or in preparation. Please check this separately with us.

6) Valid for nature coloured materials. An additional UV protection can take over by special pigments e.g. carbon black.

7) Test results without UL registration 8) Data are only valid for natural colours 9) Data taken from raw material *Self-assessment without test certificate*
Own classification without official test report

n.b.= no break + = yes o = limited - = no/no data available

All reasonable care has been taken in the compilation of the information contained within this literature. All recommendations on the use of our products are made without guarantee as conditions of use are beyond the control of Alperton Engineering Ltd. It is the customer's responsibility to ensure that the product is fit for its intended purpose and that the actual conditions of use are suitable.