

Properties	Symbol	Unit	Standard	Value
Information				
Material code	-	-	Internal Standard	A3A
Colour	-	-	-	Beige
Density	ρ	kg/dm ³	ISO 1183	1,30
Mechanical				
Compressive modulus	E_c	MPa	DIN EN ISO 604	4270
Elastic limit	σ_{el}	MPa	Internal Standard	120
Compressive stress at yield	σ_y	MPa	DIN EN ISO 604	n.v.
Compressive strength	σ_M	MPa	DIN EN ISO 604	n.v.
Compressive stress at 3,5% strain	$\sigma_{3,5\%}$	MPa	DIN EN ISO 604	32
Compressive strength (0,01 h)	σ_M	MPa	Internal Standard	120
Compressive strength (100 h)	σ_M	MPa	Internal Standard	107
Compressive strength (10000 h)	σ_M	MPa	Internal Standard	58
Compressive stress at break	σ_B	MPa	DIN EN ISO 604	K.Br.
Elastic compression limit	ϵ_{el}	%	Internal Standard	8,8
Nominal compressive yield strain	ϵ_{cy}	%	DIN EN ISO 604	3,2
Nominal compressive strain at compressive strength	ϵ_{cM}	%	DIN EN ISO 604	6,9
Nominal compressive strain at break	ϵ_{cB}	%	DIN EN ISO 604	K.Br.
Modulus in tension (tensile modulus)	E_t	MPa	DIN EN ISO 527	3600
Elastic limit	σ_{el}	MPa	Internal Standard	81
Tensile stress at yield	σ_y	MPa	DIN EN ISO 527	110
Tensile strength	σ_M	MPa	DIN EN ISO 527	110
Tensile stress at break	σ_B	MPa	DIN EN ISO 527	84
Elastic yield point	ϵ_{el}	%	Internal Standard	4,2
Yield strain	ϵ_y	%	DIN EN ISO 527	7
Elongation at maximum force	ϵ_M	%	DIN EN ISO 527	7
Tensile elongation at break	ϵ_B	%	DIN EN ISO 527	12,6
Modulus in flexure	E_f	MPa	DIN EN ISO 178	4000
Outer fibre stress at 3,5% outer fibre strain	$\sigma_{f3,5}$	MPa	DIN EN ISO 178	126
Flexural strength	σ_{fM}	MPa	DIN EN ISO 178	168
Flexural stress at break	σ_{fB}	MPa	DIN EN ISO 178	k.Br.
Elongation at flexural yield stress	ϵ_M	%	DIN EN ISO 178	6,3
Flexural elongation at break	ϵ_B	%	DIN EN ISO 178	k.Br.
Creep modulus at 1% deformation after 1000 h	E	N/mm ²	DIN 53444	4300
Stress at 1% deformation after 1000 h	$\sigma_{1\%}$	N/mm ²	DIN 53444	43
Creep resistance	-	-	Relative value	⑥
Ball indentation hardness H358/30 (H132/30) [H49/30]	HB	N/mm ²	DIN 2039	174
Shore A hardness	-	Shore	DIN 53505	93
Shore D hardness	-	Shore	DIN 53505	81
Impact strength Charpy not notched	-	kJ/m ²	EN ISO 179/1eU	k.Br.
Impact strength Charpy notched	-	kJ/m ²	EN ISO 179/1eA	8,0
Loss tangent (1Hz)	$\tan\delta$	1	Internal Standard	0,052
Fatigue strength at 20°C, 106 stress cycles, 1 Hz	-	MPa	Internal Standard	60
Thermal				
Continuous operating temperature (long term)	RTi	°C	UL 746B	250
Short term operating temperature (3 h)	-	°C	Internal Standard	260
Maximum RTi temperature for bushings when pressed	-	°C	Internal Standard	100
Melting temperature	T_m	°C	DSC	340
Glass transition temperature	T_g	°C	DSC	146
Coefficient of thermal expansion up to 100°C	α	10 ⁻⁵ /K	ISO E830	5,1
Coefficient of thermal expansion up to 150°C	α	10 ⁻⁵ /K	ISO E831	5,9
Heat distortion temperature HDT/A 1,8 M Pa	HDT (A)	°C	DIN EN ISO 75	160
Thermal conductivity	λ	W/(m*K)	DIN 52612	0,25
Specific heat capacity	C_p	KJ/(Kg*K)	DSC	1,35
Fire behaviour (3,2 mm) UL94	-	-	UL 94 HB	V-0
Limiting oxygen index (LOI)	%	LOI	DIN EN ISO 4589	35

Properties	Symbol	Unit	Standard	Value
Electrical				
Volume resistivity	R_D	$\Omega \cdot \text{cm}$	IEC 60093	5E16
Surface resistance	R_O	Ω	IEC 60093	2,8E12
Penetration resistance	E	kV/mm	IEC 243	22,5
Tracking resistance	-	V	IEC 112	150
Dielectric constant (110Hz)	-	1	IEC 250	3,2
Dissipation factor (110Hz)	$\tan\delta$	1	IEC 112	0,003
pv Values				
Max. surface pressure v=1m/min	P_{zul}	N/mm ²	Internal test radial bushing	19,12
Max. surface pressure v=10m/min	P_{zul}	N/mm ²		2,88
Max. surface pressure v=100m/min	P_{zul}	N/mm ²		0,11
Max. surface pressure v=200m/min	P_{zul}	N/mm ²		0,05
Evolution of heat with v=1m/min	-	°C		84
Evolution of heat with v=10m/min	-	°C		158
Evolution of heat with v=100m/min	-	°C	153	
Evolution of heat with v=200m/min	-	°C	83	
Friction				
μ static 20°C dry operation	μ_{stat}	1	Internal Standard inclined plane	0,09
μ dynamic 20°C dry operation	μ_{dyn}	1		0,07
μ dynamic 100°C dry operation	μ_{dyn}	1		0,06
Wear				
Wear factor at 20°C	-	mm/100 km	Internal test periodic translative movement under load	0,15
Wear factor at 100°C	-	mm/100 km		0,89
Wear factor at 200°C	-	mm/100 km		0,53
Wear factor at 240°C	-	mm/100 km		0,66
Available as				
Tubes (hollow rods)	-	-	-	<input checked="" type="checkbox"/>
Sheets	-	-	-	<input checked="" type="checkbox"/>
Rods	-	-	-	<input checked="" type="checkbox"/>
Plastic granules	-	-	-	<input checked="" type="checkbox"/>
Injection moulded parts	-	-	-	<input checked="" type="checkbox"/>
Machined parts	-	-	-	<input checked="" type="checkbox"/>
Precision				
Dimensional stability with moisture absorption	-	-	Relative value	⑩
Water absorption 23°C / RMC 93%	-	%	DIN EN ISO 62	0,05
Water absorption until an equilibrium moisture content	-	%	DIN EN ISO 62	0,5
Dimensional stability with temperature variation	-	-	Relative value	⑥
High precision bushings (negative clearance)	-	-	-	<input checked="" type="checkbox"/>
Alignment adjustment	-	-	Relative value	④
Environmental influences				
Suitable for use in water	-	-	-	<input checked="" type="checkbox"/>
Resistance against hot water	-	°C	-	200
Resistance against dust, dirt, abrasive substances	-	-	Relative value	⑦
UV rays resistance	-	-		⑨
Suitable for outdoor use	-	-		⑥
Resistance to chemicals	-	-	-	⑨
FDA compliant	-	-	-	<input checked="" type="checkbox"/>
Suitable for vacuum	-	-	-	<input checked="" type="checkbox"/>
Rate of desorption	a_{th}	mbar*l/(s*cm ²)	-	-
ROHS / WEEE	-	-	-	<input checked="" type="checkbox"/>
Free from silicone	-	-	-	<input checked="" type="checkbox"/>
Free from PTFE	-	-	-	<input checked="" type="checkbox"/>
Sterilization				
Resistance against disinfectant	-	-	-	<input checked="" type="checkbox"/>
Moist heat sterilization	-	-	Relative value	⑩
Gamma-rays radiation sterilization	-	-		⑩
Chemical sterilization	-	-		⑩
UV-sterilization	-	-		⑦