

Package.PE 500Corr0.00.00.00Attraction of the segment of t	Properties	Test methods	Units	Values	
akargenome110° g1 rad0.00Breaky0.000.00Start 2006 humedrafon haale of50 0.20.00- side scalable humedrafon haale of 21°C50 0.000.00- Start 2006 humedrafon haale of 21°C0.000.00- Start 2007 humedrafon haale of 21°C0.000.00- Start 2007 humedrafon	Productname	-	-	PE 500	
wargen in de gran de g	Color	-	-	nature, black, green	
Water 2006 Test 2006 File after 2006 File File After 2006		-	10 ⁶ g / mol	0,50	
shore show and show of	Density	ISO 1183-1	g / cm³	0,960	
Jack (1)BookNuJack (1)BookNuJack (1)BookNuLatiturizion invalor (1)LNuNuLatiturizion invalor (1)LNuNuLatiturizion invalor (1)Sol (1)NuNuLatiturizion invalor (1)Sol (1)NuNuPresentation invalor (1)Sol (1)Nu<	Water apsorption				
arc (1)10.02%- at standards in vide of 27C / 50%. 20%0.0- at standards in vide of 27C / 50%. 20%0.0PURSIMA REPORTANTS (2)-1.35Dynamic digst standards trampendure +160 1146%C1.35Dynamic digst standards trampendure +160 1146%C1.36Confficient of Internet 23 and 10%C-m/(m.%)1.50 × 10 ⁴ - average vide between 23 and 10%C-m/(m.%)1.50 × 10 ⁴ - average vide between 23 and 10%C-m/(m.%)1.50 × 10 ⁴ - average vide between 23 and 10%C-441.50 × 10 ⁴ - average vide between 23 and 10%C-441.50 × 10 ⁴ - average vide between 23 and 10%C-441.50 × 10 ⁴ - average vide between 23 and 10%C-4243- average vide between 23 and 10%C-441.50 × 10 ⁴ - average vide between 23 and 10%C-4243- average vide between 23 and 10%C-441.50 × 10 ⁴ - average vide between 23 and 10%C-4243- average vide between 23 and 10%C-431.50 × 10 ⁴ - average vide between 23 and 10%C-424.00- average vide between 24 and 10%C-4.001.50 × 10 ⁴ </td <td></td> <td>ISO 62</td> <td>mg</td> <td></td> <td></td>		ISO 62	mg		
startands in water of 21°C-%0.01HERMAL PARCHART (SGC, 10°Cmin)SGO 11357.1/3°C135Operating disstartant (SGC, 10°Cmin)SGO 11357.1/3°C4.040Operating disstartant to water analysisSGO 11357.1/3°C4.040Operating disstartant to water analysisSGO 11357.1/3°C4.040Operating disstartant to water analysisSGO 100SGO 100Impair disstartant to water analysisSGO 100SGO 100Impair disstartant to water analysisImpair disstartant to water analysis </td <td></td> <td>ISO 62</td> <td>%</td> <td></td> <td></td>		ISO 62	%		
THEEMALL PROPERTIES (2) With inspirature (DSC, 12/Chin) ISO 11357 // 'C 1.35 Meaning plass transition semperature ++ ISO 3146 'C 4.20 Opmanic plass transition semperature ++ ISO 3146 'C 4.20 Confliction to semperature ++ ISO 3146 'C 4.20 Confliction to theme and uncervice parabolic semperature ISO 3146 'C 4.20 Confliction to theme and uncervice parabolic semperature ISO 3146 'C 4.20 - average value between 23 and 150°C - m/ (m. K) ISO 24.20* 44 - average value between 23 and 150°C - 'C 4.20 4.20 - average value between 23 and 150°C - 'C - 4.20 - average value between 23 and 150°C - 'C - 4.20 - average value between 23 and 150°C - 'C - - 4.20 - average value between 23 and 150°C - 'C - - - - - - - - - - - <td>• at saturation in air of 23°C / 50% RH</td> <td>-</td> <td>%</td> <td></td> <td></td>	• at saturation in air of 23°C / 50% RH	-	%		
Mething presenting (DSC, ID (Cham)80 1135' 1/3'C13Dynamic glass transition temperature +IS 03 146'C''A 20Dynamic glass transition temperature +IS 03 146'C''A 20Dynamic glass transition temperature +IS 03 146'C''A 20Certificate of Illeren E 23 and 100°C-'m /(m : N)'S 20 10°- average value between 23 and 100°C-'m /(m : N)'S 20 10°- average value between 23 and 100°C-'m /(m : N)'S 20 10°- average value between 23 and 100°C-'C''A 40Vece Evendouglist meriter of and 100°C-'C''A 40Vece Evendouglist meriter of and 100°C'C''A 40Vece Evendouglist meriter of and 2000 101 (1)-'C''A 40Vece Evendouglist meriter of and 2000 101 (1)-'C''A 40Vece Evendouglist of 30 (1)'S''A 40'A 40Vece Evendouglist of 30 (1)'S''A 40'A 40Vece Evendouglist of 30 (1)'S' 227.12''N 1/m'''S' 21.12'Vece Evendouglist of 30 (1)'S' 227.12''N 1/m'''S' 30.12'Vece Evendouglist of 30 (1)'S' 327.12''N 1/m'''S' 30.12'Vece Evendouglist of 30 (1)'S' 327.12''N 1/m''	 at saturation in water of 23°C 	-	%	0,01	
Dynamic glass transition temperature + 80 3146 °C -120 Dynamic glass transition temperature + 80 3146 °C - Termine conductivity (marks & 41 22 °C · W (K m) 0.400 Certification (fines therms a capanism) - m (m · K) - - average value between 23 and 150°C · m (m · K) - - average value between 23 and 150°C · m (m · K) - - average value between 23 and 150°C · m (m · K) - - average value between 23 and 150°C · m (m · K) - - average value between 23 and 150°C · m (m · K) - - methods 21 and 250°C · m (m · K) - - methods 21 and 250°C · - 60 - methods 21 and 250°C · · - 60 - for and periade 11 · · - - 60 - for and periade 21 and 10°C · · 10°C 10°C - for and periade 21 and 10°C · 10°C 10°	THERMAL PROPERTIES (2)				
Dynamic glass transition temperature ++ISO 3146"CHarmal conductivity Lambda As 23°C-M/ K (m)0.400- average value between 23 and 00°C-m / (m · K)- average value between 23 and 00°C-m / (m · K)- average value between 23 and 00°C-m / (m · K)- average value between 23 and 00°C-M / (m · K)- werage value between 23 and 00°C-C44- werage value between 23 and 00°C-C4- werage value between 23 and 00°C-C20- werage value between 23 and 00°C20- werage value between 23 and 00°C<	Melting temperature (DSC, 10°C/min)	ISO 11357-1/-3	°C	135	
Thermal candid:twily Lambda & al 23°C · W/K·m) 0.480 Commerciant of linear thermal sysamical severage value between 33 and 50°C · m /(m. K) 150 x 10° • average value between 33 and 50°C · m /(m. K) 150 x 10° • average value between 33 and 50°C · m /(m. K) 150 x 10° • average value between 33 and 50°C · M //K·m) 150 x 10° • average value between 33 and 50°C · M //K·m) 44 • average value between 33 and 50°C · M //K·m) 44 • average value between 33 and 50°C · · 44 • average value between 33 and 50°C · · 44 • All MAR S05 75.1-2 · · 44 • Continuesty: res 500 / 2000 0.1 · · · // R0 • Continuesty: res 500 / 2000 0.1 · · / R0 20 • All MAR · · 0 S5 57.1/2 % <20	Dynamic glass transition temperature +	ISO 3146	°C	-120	
Coefficient Human Espansion • average value between 23 and 100°C • m / (m · K) • average value between 23 and 100°C • m / (m · K) • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 4d • method A. 1.8 MP ISO 75-1-2 °C 120 • continuous (m K Storo) 720.000 (4) • °C 120 • continuous (m K Storo) 720.000 (4) • °C 120 • continuous (m K Storo) 720.000 (4) • °C 120 • continuous (m K Storo) 720.000 (4) • 70 120 • continuous (m K Storo) 720.000 (4) • 70 120 • continuous (m K Storo) 720.000 (4) • 70 120 • femetal 200 (5) • 50	Dynamic glass transition temperature ++	ISO 3146	°C		
• average value between 23 and 00°C • m / (m · K) • average value between 23 and 10°C • m / (m · K) • average value between 23 and 10°C • m / (m · K) • average value between 23 and 10°C • m / (m · K) • method & 1, Ja MP 150 75 1/2 M 4 • method & 1, Ja MP 150 75 1/2 M 4 • Method & 1, Ja MP 150 75 1/2 M 4 • Method & 1, Ja MP 150 75 1/2 M 4 • Method & Service temperature IN • 100 • • Method & Service temperature SI • 100 • • Method & Si JO ON (A) • 0 100 • • Method & Si JO ON (A) • 0 0 100 • According to UK & I J B form Si JO Si JO ON (A) 200 100 • According to UK & I J B form Si JO Si JO ON (A) Si JO Si JO ON (A) 200 200 • According to UK & I J B form Si JO Si JO ON (A) Si JO Si JO ON (A) 200 200	Thermal conductivity Lambda λ at 23°C	-	W / (K · m)	0,400	
• versage value between 23 and 190°·m / (m · K)150 × 10°• versage value between 23 and 190°·m / (m · K)Versate value between 23 and 190°·m / (m · K)Temperature of defection under source target value between 24 and 190° Karl150 751/2°C44Versate foreichlungstemperature 7578500.50°C100Datianal allow266 service target partice0.50°C100Fainal allow266 service target partice0.50°C100Fainal allow266 service target partice150 558-11/2%420Considered for 5000 / 2000 h (4)0.500.50160160Fainal allow266 service target partice150 558-11/2%420100Fainal allow266 service target partice150 558-11/2%420160Considered for 5000 / 2000 h (4)0.500.50160160Fainal allow266 service target partice160 558-11/2%420160Considered for 5000 / 2000 h (4)150 557.1/2%100100Considered for 5000 h (5)150 557.1/2%50 / -100Considered for target partice for 5000 h (5)150 557.1/2%100100Considered for 500	Coefficient of linear thermal expansion				
+ varcage value between 23 and 150°C - m /m · K0 Temperature of deflection under load -<	 average value between 23 and 60°C 	-	m / (m · K)		
Temperature of deflection under load	- average value between 23 and 100°C $$	-	m / (m · K)	150 x 10 ⁻⁶	
• method A: 1.8 MPa 150 305 * C 44 Vicat: Evenkhungstemperatur: VST/R50 100 306 * C 8.00 Maximal allowise theories temperature (NS 300 () · C 1.20 · continuously: for 5.000 / 2000 h (4) · C 1.00 Fillmanal service temperature (S) · C 1.00 Fillmanal service temperature (S) · C 1.00 Fillmanal service temperature (S) · C 1.00 Second into U S (JS () · C 1.00 Fillmanal service temperature (S) · C 1.00 Second into U S (JS () · C 1.00 Fillmanal service temperature (S) · C 1.00 Second into U S (JS () · MS HB / HB · exconding O U S (JS () · MS 8.0 Second into U S (JS () · MS 8.0 Horsk (S) · SO S27.1/2 M / mm² · tensile strain at threak / elongation at threak / elon	- average value between 23 and 150°C	-	m / (m · K)		
Victa Erwischungstemperatur - VST/850150.366 $^{\circ}$ C80Maximal allowable service temperature (s)for short performs (s)for short performs (s)EmmabilityBinna bervice temperature (s)	Temperature of deflection under load				
Advance all of the periods (3) °C 120 • for short periods (3) °C 7.6 7.60 Minimal service temperature (5) °C 7.60 Hindmal service temperature (5) °C 7.60 • oxogen-indice °C 7.60 Fermality (6) °C 7.60 • oxogen-indice 1/10 × 100 7.60 Specific hest capacity °C 1/10 × 100 Testion test (6) 1/10 × 100 1.84 • tensile stress at yield / tensile stress at priced / tensile stress at priced / tensile stress at yield / tensile stress at priced / tensile stress at yield / tensile stress at priced / tensile stress at pric	• method A: 1,8 MPa	ISO 75-1/-2	°C	44	
・ for short periods (3) ・ *C 120 ・ continuously for 5,000 20,000 h (4) ・ *C ./80 Minnal aveck de merphature (5) ・ *C ./80 Filemability (6) *C ./80 ./80 * according to Uk 9(3 / fmm) ・ .000	Vicat-Erweichungstemperatur - VST/B50	ISO 306	°C	80	
• continuously, for 50.00 / 20.000 h (4) · °C · / 80 Minimal service temperature (5) · °C 100 Flammability (6) · °C 100 Flammability (6) · °C 100 • 0xogen index (50 4589-1/2) % <20	Maximal allowable service temperature in	air			
Minimal service temperature (s) - *C - 100 Fermality (s) - - *C - 100 • Oxygen index ISO 4599-1/2 % <20 • according to U 94 (3 / 6 mm thickness) - / / R ////////////////////////////////////	 for short periods (3) 	-	°C	120	
Plannability (6) • 0.orgen-index ISO 459-11-2 % <20	• continously: for 5.000 / 20.000 h (4)	-	°C	- / 80	
\cdot Oxygen IndexISO 4589-1/2%<20 \cdot Oxygen IndexISO 4589-1/2MB / HBSpecific heat capacity \cdot J/(g · K)1.84 Testion East (3)Colspan="2"Testion East (3) \cdot tendie stress at vield / tensile stress at vield / tensil	Minimal service temperature (5)	-	°C	-100	
a cooling to U, 94 (3 / 6 mm) \cdot HB / HB Specific heat capacity \cdot $1/(g \cdot K)$ 1.84 MECHANICAL PROPERTIES AT 23°C (7) V / mm^2 $28 / e^2$ Tensile stress at yleid / tensile stress at origits at tensile stress at vieled / tensile str	Flammability (6)				
thickess I I I I I I Specific heat capacity J /(g · K) J.84 MECHANLCAL PROPERTIES AT 23°C (7) Tersion teat (8) • tensile stress at yield / Itensile stress at tensile stress at tensile stress at tensile stress at vield / Itensile stress at tensile stress at bield / Itensile stress at tensile stress at t		ISO 4589-1/-2	%	<20	
MECHANICAL PROPERTIES AT 23°C (7) Tonsine test (8) • tensile stress at yield / tensile stress at break (9) + ISO 527-1/2 N / mm ² 28 / - • tensile stress at yield / tensile stress at break (9) + ISO 527-1/2 N / mm ² • tensile stress at yield / tensile stress at break (9) + ISO 527-1/2 N / mm ² • tensile strain at yield (9) + ISO 527-1/2 N / mm ² • tensile strain at break / elongation at break (9) + ISO 527-1/2 N / mm ² • tensile strain at break / elongation at break (9) + ISO 527-1/2 N / mm ² • tensile strain at break / elongation at break (9) + ISO 527-1/2 N / mm ² • tensile modulus of elasticity (10) + ISO 527-1/2 N / mm ² • tensile modulus of elasticity (10) + ISO 527-1/2 N / mm ² • tensile modulus of elasticity (10) + ISO 527-1/2 N / mm ² • tensile strain at break / elongation at strain (12) + ISO 660 * N / mm ² • tensile modulus of elasticity (10) + ISO 527-1/2 N / mm ² • tensile mod		-	<u> </u>	HB / HB	
Tension test (8) • iensile stress at yield / tensile stress at break (9) + ISO 527.1/2 N / mm² 28 / - • tensile stress at yield / tensile stress at break (9) ++ ISO 527.1/2 N / mm² • tensile streigh (9) + ISO 527.1/2 N / mm² • tensile streigh (9) + ISO 527.1/2 N / mm² • tensile streigh at yield (9) + ISO 527.1/2 % 10 • tensile strain at break / elongation at break (9) + ISO 527.1/2 % >50 / - • tensile strain at break / elongation at break (9) ++ ISO 527.1/2 % 30 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • tensile modulus of elasticity (10) + ISO 527.1/2 N / mm² 10 • teno	Specific heat capacity	-	J / (g · K)	1,84	
\cdot tensile stress at yield / tensile stress at break (9) +150 527.1/2N / mm²28 / - \cdot tensile stress at yield / tensile stress at toreak (9) ++150 527.1/2N / mm² \cdot tensile stress at yield (9) +150 527.1/2N / mm² \cdot tensile strain at yield (9) +150 527.1/2%10 \cdot tensile strain at yield (9) +150 527.1/2% \cdot \cdot tensile strain at yield (9) +150 527.1/2% \cdot \cdot tensile strain at break / elongation at break (9) ++150 527.1/2% \cdot \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 527.1/2N / mm²1350 \cdot tensile modulus of elasticity (10) +150 169.1N / mm²100 \cdot tensile	MECHANICAL PROPERTIES AT 23°C (7)				
break (9) + ISO 227-1/2 N / mm ² • tensile stress at yield / tensile stress at vield / tensile stress at yield / tensile yield / tensile yield / tensile / tensile stress at yield / tensile yield / tensile yield / tensile / tensile / tensile / tensile / tensile					
break (9) ++ 100 32/-1/2 N / mm² • tensile strength (9) + 150 527-1/2 % 10 • tensile strain at yield (9) + 150 527-1/2 % 50 /- • tensile strain at break / elongation at break / elongation at break (9) + 150 527-1/2 % >50 /- • tensile strain at break / elongation // mm² <td>break (9) +</td> <td>ISO 527-1/-2</td> <td>N / mm²</td> <td>28 / -</td> <td></td>	break (9) +	ISO 527-1/-2	N / mm²	28 / -	
• tensile strain at yield (9) + ISO 527-1/-2 % 10 • tensile strain at break / elongation at break (9) + ISO 527-1/-2 % >50 / - • tensile strain at break / elongation at break / elongation at break (9) + ISO 527-1/-2 % >50 / - • tensile strain at break / elongation at break / elongation at break (9) + ISO 527-1/-2 % - • tensile modulus of elasticity (10) + ISO 527-1/-2 N / mm² 1350 • tensile modulus of elasticity (10) ++ ISO 527-1/-2 N / mm² 9/ 15 / 23 Compression test (11) ISO 604 N / mm² 9/ 15 / 23 Creep test in tension (8) N / mm² - - • stress to produce 1% strain (17/1000) ISO 899-1 N / mm² - stress to produce 1% strain (17/1000) ISO 899-1 N / mm² - Charpy impact strength - Unnotched (12) ISO 179-1/1eU k] / m² no break Charpy impact strength - Notched ISO 179-1/1eX k] / m² - Lod impact strength - Notched + 180/2A k] / m² - - Lod impact strength - Notched ++ 180/2A k] / m² - - - <td></td> <td>ISO 527-1/-2</td> <td>N / mm²</td> <td></td> <td></td>		ISO 527-1/-2	N / mm²		
\cdot tensile strain at break / elongation at break (9) +ISO 527-1/-2%> 50 / - \cdot tensile strain at break / elongation at break (9) ++ISO 527-1/-2% \cdot tensile modulus of elasticity (10) +ISO 527-1/-2N / mm²1350 \cdot tensile modulus of elasticity (10) ++ISO 527-1/-2N / mm²0 \cdot tensile modulus of elasticity (10) ++ISO 527-1/-2N / mm²0Compression test (11) \cdot tensile modulus of elasticity (10) ++ISO 527-1/-2N / mm²Or tensile modulus of elasticity (10) ++ISO 527-1/-2N / mm²Compression test (11) \cdot tensile modulus of elasticity (10) ++ISO 604N / mm² \cdot tensine (8) \cdot tensine (8) \cdot tensis to produce 1% strain (σ 1/1000)ISO 899-1N / mm²tenses to produce 1% strain (σ 1/1000)ISO 899-1N / mm²tenses to produce 1% strain (σ 1/1000)ISO 899-1N / mm²Charpy impact strength - Unotched (12)ISO 179-1/1eUkJ / m²tenses to produce 1% strain (σ 1/1000ISO 1542-2kJ / m²Charpy impact strength (15° V-notched, bith-sided)ISO 11542-2kJ / m²Charpy impact strength - Notched ++180/2AkJ / m²Iso diaga-1N / mm²45Rockwell hardness (13)2039-1N / mm² <tr <td="">Iso 2039-2N</tr>	• tensile strength (9) +	ISO 527-1/-2	N / mm²		
break (9) + ISO 527-17-2 % > 507-1 • tensile strain at break / elongation at break (9) ++ ISO 527-17-2 % 1350 • tensile modulus of elasticity (10) + ISO 527-17-2 N / mm² 1350 • tensile modulus of elasticity (10) ++ ISO 527-17-2 N / mm² 1350 • tensile modulus of elasticity (10) ++ ISO 527-17-2 N / mm² 1000000000000000000000000000000000000	tensile strain at yield (9) +	ISO 527-1/-2	%	10	
break (9) ++ 150 527-1/-2 % • tensile modulus of elasticity (10) ++ 150 527-1/-2 N / mm² 1350 • tensile modulus of elasticity (10) ++ 150 527-1/-2 N / mm² Compression test (11 N / mm² 9 / 15 / 23 Creep test in tension (8 N / mm² 9 / 15 / 23 Creep test in tension (8 N / mm² • stress to produce 1% strain (11000) 150 899-1 N / mm² for stress to produce 1% strain (11000) 150 899-1 N / mm² Charpy impact strength - Unnotched (12) 150 179-1/1eU k/ m² no break Charpy impact strength - Notched 150 179-1/1eU k/ m² 105 P Charpy impact strength - Notched (12) 150 179-1/1eA k/ m² 105 P Charpy impact strength - Notched + 180/2A k/ m² 105 P Lod impact strength - Notched + 180/2A k/ m² 105 P Lod impact strength - Notched ++ 180/2A k/ m² 105 P Ball intentation hardness (13) 2039-1 N / mm² 45 Rockwell		ISO 527-1/-2	%	> 50 / -	
• tensile modulus of elasticity (10) ++ ISO 527-1/-2 N / mm ² Compression test (11) • N / mm ² • compressive stress at 1/2/5 % nominal strain (12) + ISO 604 N / mm ² Creep test in tension (8) N / mm ² 9 / 15 / 23 • stress to produce 1% strain (σ 1/1000) ISO 899-1 N / mm ² • stress to produce 1% strain (σ 1/1000) ISO 899-1 N / mm ² Charpy impact strength - Unnotched (12) ISO 179-1/14U K] / m ² no break Charpy impact strength - Notched ISO 179-1/14U K] / m ² 105 P Charpy impact strength - Notched, biso 179-1/14Q K] / m ² 205 Lod impact strength (15° V-notched, biso 11542-2 K] / m ² >= 25 Lod impact strength - Notched + 1 180/2A K] / m ² Izod impact strength - Notched + + 180/2A K] / m ² Ball intentation hardness (13) 2039-1 N / mm ² Rockwell hardness (134) ISO 2039-2 N / mm ² Shore hardness D (3 / 15 s) ISO 868 N / mm ²		ISO 527-1/-2	%		
Compression test (11) • compressive stress at 1/2/5 % nominal strain (12) + ISO 604 N / mm² $9/15/23$ Creep test in tension (8) Creep test in tension (7) • stress to produce 1% strain (σ 1/1000) ISO 899-1 N / mm² • stress to produce 1% strain (σ 1/1000) ISO 899-1 N / mm² Charpy impact strenght - Unnotched (12) ISO 179-1/1eU kJ / m² no break Charpy impact strenght - Notched (12) ISO 179-1/1eU kJ / m² 105 P Charpy impact strenght - Notched, ISO 11542-2 kJ / m² >= 25 Izod impact strength - Notched + 180/2A kJ / m² 45 Izod impact strength - Notched ++ 180/2A kJ / m² 45 Rockwell hardness (134) ISO 2039-2 N / mm² 50 66 / 64	• tensile modulus of elasticity (10) +	ISO 527-1/-2	N / mm²	1350	
• compressive stress at 1/2/5 % nominal strain (12) +ISO 604N / mm²9 / 15 / 23Creep test in tension (8)• stress to produce 1% strainISO 899-1N / mm²• stress to produce 1% strain (or 1/1000)ISO 899-1N / mm²Charpy impact strenght - Unnotched (12)ISO 179-1/12UK / m²no breakCharpy impact strenght - NotchedISO 179-1/12AK / m²105 PCharpy impact strength 15° V-notched, both-sidedISO 11542-2K / m²>= 25Izod impact strength - Notched +180/2AK / m²45Bal intentation hardness (13)2039-1N / mm²45Rockwell hardness (134)ISO 2039-2N / mm²66 / 64	• tensile modulus of elasticity (10) ++	ISO 527-1/-2	N / mm²		
strain (12) + ISO 604 N / mm 9 / 15 / 25 Creep test in tension (8) Creep test in tension (9) ISO 899-1 N / mm ² stress to produce 1% strain (σ 1/1000) ISO 899-1 N / mm ² ISO 604 N / mm ² Charpy impact strength - Unnotched (12) ISO 179-1/1eU K / m ² no break Charpy impact strength - Notched ISO 179-1/1eA K / m ² 105 P Charpy impact strength (15° V-notched, biso 179-1/1eA K / m ² >= 25 Izod impact strength - Notched + 180/2A K / m ² Izod impact strength - Notched + 180/2A K / m ² Izod impact strength - Notched ++ 180/2A K / m ² Rockwell hardness (13) 2039-1 N / mm ² Shore hardness (134) ISO 2039-2 N / mm ²	Compression test (11)				
• stress to produce 1% strain (or 1/1000) ISO 899-1 N / mm² Charpy impact strength - Unnotched (12) ISO 179-1/1eU KJ / m² no break Charpy impact strength - Notched ISO 179-1/1eA KJ / m² 105 P Charpy impact strength - Notched, ISO 179-1/1eA KJ / m² >= 25 Charpy impact strength - Notched + 180/2A KJ / m² Izod impact strength - Notched ++ 180/2A KJ / m² Izod impact strength - Notched ++ 180/2A KJ / m² Rockwell hardness (13) 2039-1 N / mm² Shore hardness D (3 / 15 s) ISO 868 N / mm²		ISO 604	N / mm²	9 / 15 / 23	
stress to produce 1% strain (or 1/1000)ISO 899-1N / mm²Charpy impact strength - Unnotched (12)ISO 179-1/1eUk / m²no breakCharpy impact strength - NotchedISO 179-1/1eAk / m²105 PCharpy impact strength (15° V-notched, both-sided)ISO 11542-2k / m²>= 25Izod impact strength - Notched +180/2Ak / m²Izod impact strength - Notched ++180/2Ak / m²Izod impact strength - Notched ++180/2Ak / m²Izod impact strength - Notched ++180/2Ak / m²Ball intentation hardness (13)2039-1N / mm²45Rockwell hardness (134)ISO 868N / mm²66 / 64	Creep test in tension (8)				
Charpy impact strenght - Unnotched (12)ISO 179-1/1eUk J m²no breakCharpy impact strenght - NotchedISO 179-1/1eAk J m²105 PCharpy impact strength (15° V-notched, both-sided)ISO 11542-2k J m²>= 25Izod impact strength - Notched +180/2Ak J m²Izod impact strength - Notched ++180/2Ak J m²Ball intentation hardness (13)2039-1N / mm²45Rockwell hardness (134)ISO 868N / mm²66 / 64	 stress to produce 1% strain 	ISO 899-1	N / mm²		
Charpy impact strength - NotchedISO 179-1/1eAkJ / m²105 PCharpy impact strength (15° V-notched, both-sided)ISO 11542-2kJ / m²>= 25Izod impact strength - Notched +180/2AkJ / m²Izod impact strength - Notched ++180/2AkJ / m²Izod impact strength - Notched ++180/2AkJ / m²Ball intentation hardness (13)2039-1N / mm²45Rockwell hardness (134)ISO 2039-2N / mm²56/ 64	stress to produce 1% strain (σ 1/1000)	ISO 899-1	N / mm²		
Charpy inpact strength (15° V-notched, job 11542-2) kJ / m² >= 25 Izod impact strength - Notched + 180/2A kJ / m² Izod impact strength - Notched ++ 180/2A kJ / m² Ball intentation hardness (13) 2039-1 N / mm² 45 Rockwell hardness (134) ISO 2039-2 N / mm² 50 Shore hardness D (3 / 15 s) ISO 868 N / mm² 66 / 64	Charpy impact strenght - Unnotched (12)	ISO 179-1/1eU	kJ / m²	no break	
both-sided)ISO IIS42-2K/ IIIP 2 SIzod impact strength - Notched +180/2AKJ / m²Izod impact strength - Notched ++180/2AKJ / m²Ball intentation hardness (13)2039-1N / mm²Shore hardness D (3 / 15 s)ISO 868N / mm²	Charpy impact strenght - Notched	ISO 179-1/1eA	kJ / m²	105 P	
Izod impact strength - Notched ++ 180/2A kJ / m² Ball intentation hardness (13) 2039-1 N / mm² 45 Rockwell hardness (134) ISO 2039-2 N / mm² 50 Shore hardness D (3 / 15 s) ISO 868 N / mm² 66 / 64		ISO 11542-2	kJ / m²	>= 25	
Ball intentation hardness (13) 2039-1 N / mm ² 45 Rockwell hardness (134) ISO 2039-2 N / mm ² 5000000000000000000000000000000000000	Izod impact strength - Notched +	180/2A	kJ / m²		
Rockwell hardness (134) ISO 2039-2 N / mm ² Shore hardness D (3 / 15 s) ISO 868 N / mm ² 66 / 64	Izod impact strength - Notched ++	180/2A	kJ / m²		
Shore hardness D (3 / 15 s) ISO 868 N / mm ² 66 / 64	Ball intentation hardness (13)	2039-1	N / mm ²	45	
	Rockwell hardness (134)	ISO 2039-2	N / mm²		
Coefficient of sliding friction m (14) - 0,25	Shore hardness D (3 / 15 s)	ISO 868	N / mm ²	66 / 64	
	Coefficient of sliding friction m (14)	-	-	0,25	



μ/km

μ/km

Kunsterneennikkunn



ELECTRICAL PROPERTIES AT 23°C Electric strength (15) IEC 60243-1 kV / mm 45 Electric strength (15) ++ IEC 60243-1 kV / mm > 10¹⁴ Volume resistivity + IEC 60093 $\Omega\cdot cm$ Volume resistivity ++ IEC 60093 $\Omega\cdot cm$ Surface resistivity + IEC 60093 Ω > 10¹³ IEC 60093 Ω Surface resistivity ++ Relative permittivity ϵ IEC 60250 • at 100 Hz + 2,40 IEC 60250 • at 100 Hz ++ _ • at 1 MHz + IEC 60250 2,4 • at 1 MHz ++ IEC 60250 -Dielectric dissipation factor tan Delta $\boldsymbol{\delta}$ • at 100 Hz + IEC 60250 0,0000 -• at 100 Hz ++ IEC 60250 • at 1 MHz + IEC 60250 0,0002 IEC 60250 • at 1 MHz ++ 600 Comparative tracking index (CTI) + IEC 60112 Comparative tracking index (CTI) ++ IEC 60112



Legend

- 1. Following the ISO 62 written procedures Ø 50 x 3 mm.
- 2. The values listed for properties are largely taken from the material sheets supplied by raw material suppliers and other publications.
- 3. The properties listed are all values for semi-crystalline materials, and not amorphous materials.
- 4. Valid for just a few hours of thermal stress for applications where there is little or no mechanical stress.
- 5. Quoted thermal stability over 5,000 / 20,000 hours. Beyond this period, the tensile strength decreases to around 50% of the initial value. As with all thermoplastics, the maximum permissible operating temperature is in many cases primarily dependent on the duration and magnitude of the mechanical stress which occurs during exposure to heat.
- 6. In view of the reduction in impact strength with decreasing temperature, the lower service temperature limit is in practice particularly determined by the magnitude of the impact stress applied to the material. The values listed here are based on adverse shock loads and should not be considered an absolute practical limit.
- 7. It should be noted that these values, which have been estimated from the material sheets provided by raw material suppliers, must under no circumstances be taken as a guide to behaviour or reaction when the material is subject to fire. There are no "UL Yellow Cards" for these semi-finished products.
- 8. The data given for dry material (+) are mostly average values of tests carried out on test specimens consisting of round bars Ø40 60 mm. Considering the very low water absorption of POM, PET and PC, the values for the mechanical and electrical properties of dry (+) and damp (++) specimens of these materials can be considered almost equal.
- 9. Test piece: Type 1 B
- 10. Test speed: 20 mm/min. (5 mm/min for PA6.6 + GF, POM-C + PTFE and PET TX)
- 11. Test speed: 1 mm/min.
- 12. Test specimen: cylinder (Ø 12 x 30mm)
- 13. Pendulum used: 15 J.
- 14. Measured on 10-mm thick test specimens
- 15. Electrode configuration: two cylinders Ø 25 / Ø 75 mm; in transformer oil according to IEC 296; measured on 1-mm thick natural specimens. It is important to know that the dielectric strength of black extruded material (PA6, PA6.6, POM and PET) can be up to 50% lower than that of natural-coloured material. A possible microporosity in the centre of POM semi-finished products also results in a significant reduction in dielectric strength. This table is intended to assist you in selecting materials. The values listed here are within the usual range of product properties. However, they are not guaranteed property values and should not be used as the sole basis for construction. It should be noted that PA6.6 + GF is a fibre-reinforced material which is therefore considered anisotropic (properties are different dependent upon whether the fibres are parallel or perpendicular to the extrusion direction)