NYLONS (SUSTAMID)

DIN – nomenclature	Filler % wt.	Service temperature long term	Density (DIN 53 479, method D, E_c) ρ g/cm³	Tensile strength at yield (DIN 53 455) σ_S MPa	Tensile strength at break (DIN 53 455) σ_B MPa	Elongation at break (DIN 53 452) ε_B %	Modulus of elasticity (tensile test DIN 53 457) E_t MPa	Modulus of elasticity (flexural test DIN 53 457) E_b MPa	Ball indentation hardness (Obs.DIN 53 456) H_k MPa	Impact resistance (DIN 53 453 no.br. no breaking) a_n kJ/m²	Creep rupture strength after 1000 h with static load σ_{B1000} MPa	Time yield limit for 1% elongation after 1000 h σ_{S1000} MPa	Co-efficient of friction p = 0.005 N/mm², v = 0.6 m/s on steel, hardened & ground μ –	Wear (conditions as previous) V m/km	Melting point (DIN 53 736) T_m °C		Glass transition temperature (DIN 53 736) T_g °C	Heat distortion temperature after ISO-R 75, method A HDT/A °C	Heat distortion temperature after ISO-R 75, method B HDT/B °C	Maximum service temperature short term °C	Thermal conductivity (23ºC) λ W/(K · m)	Specific heat (23ºC) c J/(g · K)	Co-efficient of linear thermal expansion (23ºC) α 10⁻⁴ · 1/K	Dielectric constant (10⁶ Hz) (DIN 53 483, IEC-250) ε_r –	Dielectric loss factor (10⁶ Hz) (DIN 53 483, IEC-250) tan δ –	Volume resistance (DIN 53 482, VDE 0303 part 3) ρ_D Ω · cm	Surface resistance (DIN 53 480) R_o	Dielectric strength (DIN 53 481, IEC 243, VDE 0303, part 2) E_d kV/mm	Resistance to tracking (DIN 53 480, VDE 0303, part 1) class	Moisture absorption to equilibrium at 23ºC 50 RH (DIN 53 715) w(H₂O) %	Water absorption at saturation (DIN 53 495) W_s %	Resistance to hot water, washing soda	Flammability acc. to UL standard 94	Resistance to weathering
PA 46 – (Stanyl®) Type 46		130	1,18	65* 80		30 280*	1200* 3500		170-200	no br.			0,2-0,45		295			160		220	0,3	2,1	7,5	9,4-1,1	0,21-0,35	10^{13}		>20	KC>425	3,7	14	(+)	V2	–
PA 66 – (Zytel®) Type 66		120	1,14	70* 90		40 150*	2000* 3300	2830	100-170	no br.	55	8	0,35-0,42	0,9	255		5* 50	100	>200	170	0,23	1,7	7	3,6-5	0,026-0,2	10^{12}-10^{15}	10^{13}	28-30	KA 3c KA 3b	2,8	8,5	–	V2	–
PA 66 GF 30	black, 30% glass fibre	110	1,35		140* 200	3,5 5*	7500* 9700		200-270	13-17		40	0,45-0,5		255		5* 50	250	250	200	0,27	1,5	2-3							1,5	5,5	–	HB	+
PA 66 CF 20	black, 20% carbon fibre	110	1,23		150* 220	3 6*	11000* 16000		200-240	35-55			0,16-0,2	0,7	255		5* 50	245	250	200	0,43	1,8	2,5							2	6,5	–	HB	+
PA 66 SF 20	black, 20% aramide fibre	100	1,19		83* 110	5,2 7,5*		3100* 4800		50 70*			0,39		255		5* 50	225	254	170			6-10	3,8-9,4		10^{6}-10^{12}	$2x10^{12}$-$3x10^{15}$	12-16	350	2	6-7	–	HB	+
PA 6 G – (Sustamid®) Monomer Cast		115	1,15	60* 85		5 50*	3300* 4000		170						220		5* 40			180			8	3,7		$5x10^{14}$		50	KA 3c KA 3b	2,5	7	–	HB	–
PA 6 GOL – (Sustamid®)	oil lubricated	100	1,15	70		20 40*	2500		125						220		5* 40			180			9								6	–	HB	–
PA 6 MO – (Sustamid®)	black, MOS_2	100	1,14	85		40	3300		85-170	no br.		5	0,32-0,37	0,16	220		5* 40	100	195	165	0,23	1,7	7							2,5-3	8-9	–	HB	+
PA 6 E Type 6 Extruded		100	1,14	60* 85		70 200*	1800* 3200		70-160	no br.	45	4,5	0,38-0,45	0,23	220		5* 40	75	190	160	0,23	1,7	7	3,7-7	0,031-0,3	10^{12}-10^{15}	10^{13}	20-50	KA 3c KA 3b	3	9,5	–	HB	–
PA 6 GF 30	black, 30% glass fibre	100	1,35		110* 180	3 5*	6000* 8500		150-220	55-80		21-35	0,46-0,52		220		5* 40	210	220	180	0,28	1,5	2,5	4-6	0,02-0,2	10^{12}-10^{15}		40	KA 3a KB ² 400	2,1	6,6	–	HB	+
PA 11 – (Rilsan®A) Type 11		80	1,04	42* 47		230 280*	1800		90	no br.	23	3,5	0,32-0,38	0,8	183		49	55	150	150	0,23	2,1	10	3,6	0,04	$2x10^{15}$	10^{14}	40	KA 3c	0,9	1,9	+	V2	–
PA 11 GF 30	30% glass fibre	80	1,26		95* 100	4 6*		3200		18,3					183					150			0,3			$7x10^{13}$	10^{14}	45	KB 600 KC 600	0,45	1,3	+	HB	–
PA 12 – (Rilsan®B) Type 12		80	1,02	35	46-52	240	1800		95	no br.	23	3,5	0,32-0,38	0,8	175		49	50	140	140	0,23	2,1	10	3,6	0,04	$2x10^{15}$	10^{14}	33	KA 3b KC 600	0,7	1,6	+	V2	–
PA 12 GF 30	30% glass fibre	80	1,23		65	5	3500			50		28			180			120	165	150			3-7	0,04	0,04	$8,5x10^{14}$		90	KB 400 KC 600	0,6	1	+	HB	–

MECHANICAL PROPERTIES | THERMAL PROPERTIES | ELECTRICAL PROPERTIES | MISCELLANEOUS DATA

Remark: For polyamides the values strongly depend on the moisture content.
*= wet, after storage in standard atmosphere 23ºC 50 RH (DIN 50 014) to equilibrium.

dependant on concentration, time and temperature
+ = resistant
– = not resistant

LOWEST WORKING TEMPERATURES

-30C	PVC	Poly Vinyl Chloride	
-40C	ABS	Acrylonitrile Butadiene Styrene	
	PMMA	Poly Methyl Methacrylate	(Perspex®/ Plexiglas®)
	POM	Poly Oxy Methylene	(Delrin®/ Celcon® / Hostaform®)
	PA 6	Polyamide Nylon 6	
	PA 46	Polyamide Nylon 46	(Stanyl®)
	PA 66T	Polyamide Nylon 66 Transparent	
-50C	PA 66	Polyamide Nylon 66	(Zytel®)
	PA 11/12	Polyamide Nylon 11/12(Rilsan®)	
	PETP	Poly Ethylene Terephthlate	(Arnite®)
	PBTP	Poly Butylene Terephthlate	(Crastin®)
	PPO/PPE	Poly Phenylene Oxide/Ether	(Noryl®)
	PU	Polyurethane	(Adiprene®)
-65C	PEK	Poly Ether Ketone	(Ultrapek®)
	PEEK	Poly Ether Ether Ketone	(Victrex®)
-100C	FEP	Fluoro Ethylene Hexa Propylene	
	PFA	Per Fluoro Alkoxy	
	PTFE	Poly Tetra Fluoro Ethylene	(Teflon®)
	PSU	Poly Sulphone	(Ultrason S®/ Udel®)
	PES	Poly Ether Sulphone	(Ultrason E®/ Radel®)
	PEI	Poly Ether Imide	(Ultem®)
-130C	PBI	Poly Benz Imidazole	(Celazole®)
-150C	PVDF	Poly Vinylidene Fluoride	(Kynar®)
ECTFE	Ethylene Chloro Trifluoro Ethylene		(Halar®)

WORKING TEMPERATURES GUIDE

-160C	PP	PolyPropylene	
-170C	PPS	Poly Phenylene Sulphide	(Ryton®/ Fortron®)
-190C	PCTFE	Poly Chloro Tri Fluoro Ethylene	(Kel-F®)
	ETFE	Ethylene Tetra Fluoro Ethylene	(Tefzel®)
	PAI	Polyamide Imide	(Torlon®)
-240C	PI	Poly Imide	(Aurum®/ Vespel®)
-269C	UHMWPE	Ultra High Molecular Weight Polyethylene	(Tivar®)

700C	PBI	Poly Benz Imidazole	(Celazole®)
400C	PI	Poly Imide	(Aurum®/ Vespel®)
	PAI	Polyamide Imide	(Torlon®)
	PEK	Poly Ether Ketone	(Ultrapek®)
	PEEK GF	Poly Ether Ether Ketone Glass Filled	
300C	PEEK	Poly Ether Ether Ketone	(Victrex®)
200C	PPS	Poly Phenylene Sulphide	(Ryton®/ Fortron®)
	PEI	Poly Ether Imide	(Ultem®)
150C	PES	Poly Ether Sulphone	(Ultrason E®/ Radel®)
	PSU	Poly Sulphone	(Ultrason S®/ Udel®)
	ECTFE	Ethylene Chloro Trifluoro Ethylene Copolymer	(Halar®)
	PTFE	Poly Tetra Fluoro Ethylene	(Teflon®)
	PFA	Per Fluoro Alkoxy	
	ETFE	Ethylene Tetra Fluoro Ethylene	(Tefzel®)
	PCTFE	Poly Chloro Tri Fluoro Ethylene	(Kel-F®)
	FEP	Fluoro Ethylene Hexa Propylene	

HIGHEST WORKING TEMPERATURES

140C	PVDF	Poly Vinylidene Fluoride	(Kynar®)
	PA 66T	Polyamide Nylon 66 Transparent	
	PA 46	Polyamide Nylon 46	(Stanyl®)
	PA 66K	Polyamide Nylon Kevlar® Filled	
	PA 66	Polyamide Nylon 66	(Zytel®)
130C	PBTP	Poly Butylene Terephthlate	(Crastin®)
	PC	Polycarbonate	(Lexan®)
120C	PETP	Poly Ethylene Terephthlate	(Arnite®)
	PA 11/12	Polyamide Nylon 11/12(Rilsan®)	
	PA 6	Polyamide Nylon 6	
110C	PPO/PPE	Poly Phenylene Oxide/Ether	(Noryl®)
	POM	Poly Oxy Methylene	(Delrin®/ Celcon / Hostaform®)
	PP	PolyPropylene	
100C	PMMA	Poly Methyl Methacrylate	(Perspex®/ Plexiglas®)
	UHMWPE	Ultra High Molecular	(Tivar®)
90C	HDPE	High Density Polyethylene	
	ABS	Acrylonitrile Butadiene Styrene	
	PU	Polyurethane	(Adiprene®)
	CPVC	Chlorinated Polyvinyl Chloride	(Corzan®)
60C	PVC	Polyvinyl Chloride	(Simona - Grey CAW®)

STANDARD ENGINEERING PLASTICS

DIN – nomenclature	Filler % wt.	Service temperature long term	Density (DIN 53 479, method D F_D) ρ g/cm³	Tensile strength at yield (DIN 53 455) σ_S MPa	Tensile strength at break (DIN 53 455) σ_B MPa	Elongation at break (DIN 53 452) ε_B %	Modulus of elasticity after tensile test (DIN 53 457) E_t MPa	Modulus of elasticity after flexural test (DIN 53 457) E_B MPa	Ball indentation hardness (DIN/DIN 53 456) H_k MPa	Impact resistance (DIN/ISO 179) a_n kJ/m²	Creep rupture strength after 1000 h with static load S_{B1000} MPa	S_{B1000} MPa	Time yield limit for 1% elongation after 1000 h S_{S1000} MPa	Co-efficient of friction μ = 0,063 N/mm² = 0,6 m/s on steel, hardened & ground μ –	Wear (conditions as previous) V m m/km	Melting point (DIN 53 736) T_m °C		Glass transition temperature (DIN 53 736) T_g °C	Heat distortion temperature acc. ISO 75, method A HDT/A °C	Heat distortion temperature acc. ISO 75, method B HDT/B °C	Maximum service temperature short term °C	Thermal conductivity (23°C) λ W/(K · m)	Specific heat (23°C) c J/(g · K)	Co-efficient of linear thermal expansion (23°C) α 10^{-5} · 1/K	Dielectric constant (10² Hz) (DIN 53 483, IEC-250) ε_r –	Dielectric loss factor (10^{6} Hz) (DIN 53 483, IEC-250) tan δ –	Volume resistance (DIN 53 482, VDE 0303 part 3) ρ_D · cm	Surface resistance (DIN 53 482) R_O	Dielectric strength (DIN 53 481, IEC 243, VDE 0303, part 2) E_d kV/mm	Resistance to tracking (DIN 53 480, VDE 0303, part 1) class	Moisture absorption to equilibrium at 23°C 50 RH (DIN 53 715) w(H₂O) %	Water absorption at saturation (DIN 53 495) W_S %	Resistance to hot water, washing soda	Flammability acc. to UL standard 94	Resistance to weathering
PC – (Lexan®) Polycarbonate		120	1,20	65		60-100	2200		100	no br.	48	18	0,52-0,58	22	–			145	135	140	140	0,19	1,2	6	3	0,006	10^{17}	10^{15}	27	KA 1	0,2	0,36	–	V2	–
PC GF 30	30% glass fibre	120	1,34		90	3	6000		150	8-10	>50				–			145	142	147	140	0,26	1,13	4	3,2	0,007	$>10^{15}$	10^{14}	35	KB 160	0,13	0,29	–	V1	–
PVC		60	1,42		55	20	3000			4											80	0,16		8	3,2	0,003	10^{16}	10^{13}	39			0,2	+	V0	+
PETP – (Arnite®/Sustadur®)		110	1,37	81		70	2800		145	no br.	36	13	0,25	0,35	255				95	170	180	0,24	1,1	7-8	3,2	0,021	10^{14}	10^{14}	60	KC 350	0,2	0,5	–	HB	–
PETP – TF(Sustadur®)	PTFE	115	1.44	75		10	2400		120	no br.			0.20	0.17					80	150	160	0.28		3.4				10^{18}	10^{16}	20		0,3		-	HB	-
POM – (Celcon®/ Sustarin®) Acetal Copolymer		100	1,41	65		40	3100		155	no br.	40	13	0,32	8,9	165				110	160	140	0,31	1,5	10	3,5	0,003	10^{15}	10^{13}	>50	KA 3c	0,3	0,5	+	HB	–
POM GF 30 – (Sustarin®) Acetal Copolymer	30% glass fibre	100	1,60		125	3	9300			30		40	0,5		167				153		140		1,21	3	4,8	0,005	10^{15}		>50	KB >600 KC >600	0,2	0,6	+	HB	–
POM ELS – (Sustarin®) Acetal Copolymer	Conductive	100	1,41	35		30	1900		100						165				89		140			13			10^{3}	5x10^{3}			0,25	0,5	+	HB	–
POM TF – (Celcon®/ Sustarin®) Acetal Copolymer	PTFE	100	1,52	49		15	2400			30			0,25		167				98		140		1,47	11	3,6	0,005	$>10^{15}$		51	KC>600	0,15	0,6	+	HB	–
POM – (Delrin® / Sustarin®) Acetal Homopolymer		100	1,42	70		40	3300	2620	170	no br.	40	13	0,34	4,6	175			-38	124	170	150	0,31	1,5	10	3,7	0,005	10^{15}		>51	KA 3c	0,3	0,5	–	HB	–
POM GF 20 – (Sustarin®) Acetal Homopolymer	20% glass fibre	100	1,56				5000					28	0,35		175			-38	158	174	150			3,6-8,1	3,9	0,005	5x10^{12}		19		0,2	1	–	HB	–
POM AF – (Delrin®/Sustarin®) Acetal Homopolymer	PTFE	100	1,54	48		15	2400	2410		30			0,14		175			-38	118	168	150			8,1	3,1	0,009	3x10^{14}		15		0,18	0,72	–	HB	–
POM CL – (Sustarin®) Acetal Homopolymer	Lubricated	100	1,42	66		40	3100	2760					0,1		175			-38			150	0,37	1,47	10	3,5	0,006	5x10^{12}		15		0,24	1	–	HB	–
PP Polypropylene		100	0,91	35		650	1300		80	no br.	22	4	0,3	11	165			-18	65	105	130	0,22	1,7	11	2,25	0,0002	$>10^{17}$	$>10^{13}$	100	KA 3c		0,03	+	HB	–
PP GF 30	30% glass fibre	100	1,14		71	5	5500			22			0,5	8,4	165			-18	120	155	130	0,27	1,47	3	2,64		>10	$>10^{13}$		KA 3c KB >600 KC >600	0,1	0,17	+	HB	–
PE - UHMW – (Tivar®)		90	0,95	20	40	>350		800	40	no br.			0,10	0.7	135-138				42	80	100	0,41	1,84	18	2,3		$>10^{14}$	10^{11}	45	KA 3c KB >600 KC >600	0,05	0,02	–	HB	–
PE - HMW		100	0,95		40	>300		900	45	no br.			0,20	2.1	130-135				42	80	100	0,41	1,9	18	2,3		10^{16}	10^{14}	44	KC>600	0,05	0,02	–	HB	–
PE - HD High Density Polyethylene		90	0,95	25		>50		1400	43	no br.			0,29	3.5	130				45	85	90	0,38	1,9	18	2,3	0,0002	$>10^{15}$	10^{13}	>50	KA 3c	0,05	0,02	+	HB	–
PMMA – (Perspex® / Plexiglas®)		90	1,18	60		3-10	3000		180	18					–			105	60	100	100	0,19	1,47	8	3,4	0,004	10^{16}		>45	KB>600 KC>600	1	2	–	HB	–
ABS		85	1,06	45		20	2400		90	no br.	28	17	0,5	8,4	–				82-104	96-108	110	0,17	1,2	6	3,3	0,015	$>10^{15}$		>22	KA 3b	0,3	0,7	–	HB	–
PPE – (Noryl ®) Polyphenylene Ether		85	1,06	65		40	2500		140	no br.		21	0,4	90	–			164	130	138	110	0,22	1,2	3	2,6	0,001	10^{17}		50	KA 1	0,1	0,2	+	V1	–
PPE GF 30	30% glass fibre	85	1,29		120	2-3	9000			8-10		47			–			164	135	143			1,34		3,1	0,0021	$>10^{15}$		50	KB 250	0,03	0,18	–	V1	–

+ = resistant – = not resistant dependant on concentration, time and temperature

The information corresponds with current knowledge, and indicates our products and possible applications. We cannont give you a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patients are to be taken into account.

Tests are carried out in a standard atmosphere of 23°C 50 RH according to DIN 50 014.

A definite quality guarantee is given in our general conditions of sale. These values represent the average of a number of individual measurements. Unless otherwise stated the test results apply to injection moulded samples.

HIGH PERFORMANCE ENGINEERING PLASTICS

ENGINEERED & INDUSTRIAL PLASTICS

			MECHANICAL PROPERTIES														THERMAL PROPERTIES								ELECTRICAL PROPERTIES						MISCELLANEOUS DATA				
DIN – nomenclature	Filler % wt.	Service temperature long term	Density (DIN 53 479, method D,E)	Tensile strength at yield (DIN 53 455)	Tensile strength at break (DIN 53 455)	Elongation at break (DIN 53 455)	Modulus of elasticity after tensile test (DIN 53 457)	Modulus of elasticity after flexural test (DIN 53 457)	Ball indentation hardness (30s, DIN 53 456)	Impact resistance no.br. no breaking (DIN 53 453)	Creep rupture strength after 100 h with static load	Time yield limit for 1% elongation after 1000 h	Co-efficient of friction p,v 0,005 N/mm²·1/2 0,6 m/s on steel, hardened & ground	Wear (conditions as previous)	Melting point (DIN 53 736)		Glass transition temperature (DIN 53 736)	Heat distortion temperature after ISO-R 75, method A (DIN 53 461)	Heat distortion temperature after ISO-R 75, method B (DIN 53 461)	Maximum service temperature short term	Thermal conductivity (23ºC)	Specific heat (23ºC)	Co-efficient of linear thermal expansion (23ºC)	Dielectric constant (10⁶ Hz) (DIN 53 483, IEC-250)	Dielectric loss factor (10⁶Hz) (DIN 53 483, IEC-250)	Volume resistance (DIN 53 482, VDE 0303 part 3)	Surface resistance (DIN 53 482)	Dielectric strength (DIN 53 481, IEC-243, VDE 0303, part 2)	Resistance to tracking (DIN 53 480, VDE 0303, part 1)	Moisture absorption to equilibrium (23ºC 50 RH (DIN 53 715)	Water absorption at saturation (DIN 53 495)	Resistance to hot water, wiesing soda	Flammability acc. to UL standard 94	Resistance to weathering
			ϒ g/cm³	S_s MPa	S_B MPa	e_B %	E_t MPa	E_B MPa	H_k MPa	a_n kJ/m²	S_{B1000} MPa	S_{1000} MPa	m –	V m m/km	T_m ºC		T_g ºC	HDT/A ºC	HDT/B ºC	ºC	λ W/(K · m)	c J/(g · K)	a 10^{-4} · 1/k	e_r –	tan d –	ρ Ω · cm	R_o	E_d kV/mm	class	w(H₂O) %	W_s %	–	–	–
PEK – (Ultrapek®) Poly Ether Ketone		260	1,32	118		>30	4000	3300	220	no br.					381		170	170	250	350	0,22	1,4	4,1	3,4/3,3	0,002	10^{16}	10^{15}	92		0,25	0,8	+	V0	–
PEEK GF 30 – (Sustapeek®) Poly Ether Ether Ketone Glass Filled	30% glass fibre	260	1,53		185	2,5	12000	9200	281	68					381		170	350	350	350	0,42	1,1	1,9	3,8		10^{15}	10^{14}			0,1	0,5	+	V0	–
PEEK CF 30 – (Sustapeek®) Poly Ether Ether Ketone Glass Filled	30% carbon fibre	260	1,44		240	1,6	23500	18800	324	51					381		170	350	350	350	0,9		1,2			2x10^{3}	2x10^{3}			0,08		+	V0	–
PEK – (Ultrapek®) Poly Ether Ketone	10% glass fibre 10% PTFE 10% graphite	260	1,45		160	2	12200	11500		48					381		170	285	350	350			2							0,08		+	V0	–
PEEK – (Victrex® /Sustapeek®) Poly Ether Ether Ketone		250	1,32	92		50	3600	4100		no br.			0,3-0,38		334		143	140	182	300	0,25	0,32	4,7	3,2-3,3	0,001-0,001	4,9x10^{14}		20		0,1	0,5	+	V0	–
PEEK GF 30 – (Sustapeek®) Poly Ether Ether Ketone Glass Filled	30% glass fibre	250	1,49		157	2,2	9700	10000		11,3	36		0,38-0,46		334		143	315		300			2,2		0,004			24,5			0,1	+	V0	–
PEEK GF 30 – (Sustapeek®) Poly Ether Ether Ketone Glass Filled	30% carbon fibre	250	1,44		208	1,3	13000	20200		7,8					334		143	315		300			1,5			1,4x10^{5}		7			0,1	+	V0	+
PEEK – (Victrex® /Sustapeek®) Poly Ether Ether Ketone	10% glass fibre 10% PTFE 10% graphite	250	1,48		118	3	10000	8100					0,11		334		143	277		250	0,24		2,2			10^{2}					0,1	+	V0	+
PAI – (Torlon®) Polyamide Imide		260	1,41	192		15	4900	5000							–		275		278	260	0,26		3,1	3,9	0,031	2x10^{16}	5x10^{16}	23,6		2,5	3,5	–	V0	–
PPS – (Ryton®/ Sustatron®) Poly Phenylene Sulphide		230	1,35		85	3			190						285		88	110														–	V0	–
PPS GF 40 – (Ryton®/ Sustatron®) Poly Phenylene Sulphide	40% glass fibre	230	1,64		160	1,6	14000	13000	>300	35					285		88	260		260	0,2	1,18	2	4	0,004	10^{15}		20	KC 175		1,01	–	V0	–
PES – (Ultrason E®/ Radel®) Poly Ether Sulphone		180	1,37	82		30-80	2400		150			20			–		225	195	208	220	0,18	1,12	5,6	3,5	0,005	10^{17}		40		0,8	2,1	+	V0	–
PES GF 30 Poly Ether Sulphone	30% glass fibre	190	1,6		140	3	8400			26					–		225	212	215	220			2,1	4	0,004	>10^{16}		20	KB 200 KC 175	0,5	1,5	+	V0	
PPSU – (Radel R®/Sustason®) Poly Phenylene Sulphone		170	1,29	70		60	2340	2600		no br.					–		220	216	214	190	0,35		5,5	3,45		>10^{16}		15		0,37	1,1	+	V0	–
PEI – (Ultem®) Poly Ether Imide		170	1,27	105		60	3100	3300	165	no br.					–		215	180	200	200	0,22		5,6	3,15	0,001	6,7x10^{17}		33		0,25	1,25	+	V0	–
PEI GF 30 Poly Ether Imide	30% glass fibre	170	1,51		160	3	9000	9000		10					–		215	210	215	180	0,23		2	3,7	0,007	3x10^{14}		30		0,18	0,9	+	V0	–
PPA GF 33 – (Amodel®)	33% glass fibre	160	1,43		221	2,5		11400							312					180			2,4-6	4,2	0,017	10^{16}		21,6				–	HB	–
PSU – (Ultrason S®/ Udel®) Poly Sulphone		160	1,24	72		50-100	2400-2700		140	no br.	42	22	0,4		–		187	169	181	180	0,25	1	5,6	3,1	0,005	5x10^{16}		42	KA 1 KB 175	0,2	0,8	+	V0	–
PSU GF 30 – Poly Sulphone	30% glass fibre	160	1,49		125	1,8	9900								–		187	183	186	180			2,2	3,7	0,006	10^{16}	10^{14}	60			0,5	+	V0	–
PTFE – (Teflon®) Poly Tetra Fluoro Ethylene		260	2,18	25		500	700		30	no br.	5	1,50	0,08-0,1	21	327		-20		121	260	0,25	1	12	2,1	0,0002	10^{18}		48	KA 3c KB>600			+	V0	+
PFA Per Fluoro Alkoxy		260	2,15	20		300	600		28	no br.			0,2-0,3		305				74	260	0,25	1,12	13	2,04	0,0002	10^{18}		55	KA 3c KB>600		0,03	+	V0	+
E/TFE – (Tefzel®) Ethylene Tetra Fluoro Ethylene		150	1,70	44		44-200	825		60	no br.			0,4		270		-100	71	105	180	0,24	0,9	13	2,6	0,001	>10^{16}					0,03	+	V0	+
E/TFE GF 25	25% glass fibre	150	1,86		82,5	8	8250								270		-100			200	0,21		1,7	3,4	0,005	10^{16}	10^{15}			0,02		+	V0	+
PVDF – (Kynar®) Poly Vinylidene Fluoride		150	1,78	55		20-400	2000	2000	105	no br.	34	3	0,3		178		-18	95	140	150	0,11	1,2	13	8	0,06	4x10^{14}	>10^{13}	17-150	KA 1	<0,04	<0,04	+	V0	+
PVDF CF 20 Poly Vinylidene Fluoride	20% glass fibre	150	1,78		93	1	6000	6000					0,23		178		-18			150			3,6				2x10^{12}			0,04		+	V0	+
PVDF – (Kynar®) AS Poly Vinylidene Fluoride	Anti Static	150	1,73	50	43	9	3800	4500					0,23		178		-18			150			3,6				2x10^{3}			0,04		+	V0	+
ECTFE – (Halar®) Ethylene Chloro Trifluoro Ethylene Copolymer		150	1,68		32	200	1700	1700	55						240					180	0,13		5	2,5	0,009	10^{16}	10^{15}	80			0,1	+	V0	+
PCTFE – (Kel-F®) Poly Chloro Tri Fluoro Ethylene		150	2,10	40		170	1300		70	no br.			0,35		216		52		126	180	0,24	0,9	5	2,5	0,02	10^{16}		55-81	KA 3c KB>600	0	0	+	V0	+

Tests are carried out in a standard atmosphere of 23ºC 50 RH according to DIN 50 014.

A definite quality guarantee is given in our general conditions of sale. These values represent the average of a number of individual measurements. Unless otherwise stated the test results apply to injection moulded samples.

The information corresponds with current knowledge, and indicates our products and possible applications. We cannot give you a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents are to be taken into account.

+ = resistant – = not resistant
dependant on concentration, time and temperature