Polymer - Chemical Resistance

	Acids - concentrated	Acids - dilute	Alcohols	Alkalis	Aromatic hydrocarbons	Greases and Oils	Halogenated Hydrocarbons	Halogens	Ketones
Acrylonitrile/Methylacrylate copolymer Barex® - impact modified copolymer	Good	Good	Good	Good	Good	Good	-	-	Fair
Cellulose Regenerated Cellulose	-	Good	-	Good	-	Good	-	-	-
Cellulose Acetate CA	Poor	Good-Poor	Fair-Poor	Poor	Good-Poor	Good	Good-Poor	Poor	Poor
Cellulose Acetate Butyrate CAB	-	Fair-Poor	Poor	Fair-Poor	Poor	Good-Poor	Poor	Poor	Poor
Cyclo-olefin copolymer Topas®	-	Good	Good	Good	-	Fair-Poor	-	-	-
Ethylene-Chlorotrifluoroethylene copolymer E-CTFE	Good	Good	Good	Good	Good	Good	Good-Fair	Good	Good
Ethylene-Tetrafluoroethylene Copolymer ETFE	Good	Good	Good	Good	Good	Good	Good	Good	Good
Fluorinated Ethylene Propylene Copolymer FEP	Good	Good	Good	Good	Good	Good	Good	Good	Good
Hexafluoropropylenevinyli-denefluoride copolymer FKM	Good-Fair	Good	Good-Fair	Good-Fair	Good-Fair	Good-Fair	Good-Fair	Good	Poor
Polyacrylamide/acrylate Hydrogel	-	Good-Fair	Good	Fair	Good	-	Good	-	Good
Polyacrylonitrile-butadiene-styrene ABS	Good-Poor	Good	Good-Poor	Good	Poor	Good	Poor	Poor	Poor
Polyamide - Nylon 6 PA 6	Poor	Poor	Good	Good-Fair	Good	Good	Good-Poor	Poor	Good
Polyamide - Nylon 6, 6 PA 6,6	Poor	Poor	Good	Good-Fair	Good	Good	Good-Poor	Poor	Good
Polyamide - Nylon 6, 6 - 30% Carbon Fibre Reinforced PA 6, 6 - 30% CFR	Poor	Poor	Good	Good-Fair	Good	Good	Good-Poor	Poor	Good-Poor
Polyamide - Nylon 6, 6 - 30% Glass Fibre Reinforced PA 6,6 30% GFR	Poor	Poor	Good	Good-Fair	Good	Good	Good-Poor	Poor	Good-Poor
Polyamide - Nylon 11 PA 11	Poor	Fair-Poor	Fair	Good-Fair	Good	Good	Good-Poor	Poor	Good-Fair

Polymer - Chemical Resistance

	Acids - concentrated	Acids - dilute	Alcohols	Alkalis	Aromatic hydrocarbons	Greases and Oils	Halogenated Hydrocarbons	Halogens	Ketones
Polyamide - Nylon 12 - 30% Glass Fibre Reinforced PA 12 - 30% GFR	Poor	Fair-Poor	Fair	Poor	-	-	-	-	-
Polyamide - Nylon 12 PA 12	Poor	Fair-Poor	Fair	Good-Fair	Good	Good	Good-Poor	Poor	Good-Fair
Polyamide/imide PAI	Fair-Poor	Fair	Good-Poor	Poor	Good	Good	Good-Poor	Good-Poor	Good
Polyaramid Polymetaphenylene isophthalamide	Poor	Good-Fair	Good	Good-Poor	Good	Good	Good	-	Good
Polyaramid Polyparaphenylene terephthalamide	Poor	Fair	Good	Good-Poor	Good	Good	Good	Good	Good
Polybenzimidazole PBI	Poor	Fair-Poor	Good	Good-Poor	Good	Good	Good	-	Good
Polybutylene terephthalate PBT	Good-Poor	Good	Good	Fair	Good	Good	Good-Poor	Poor	Good-Poor
Polybutylene terephthalate - 30% Glass Fibre Reinforced PBT 30% GFR	Good-Poor	Good	Good	Fair	Good	Good	Good-Poor	Poor	Good-Poor
Polycarbonate PC	Good	Good	Good	Good-Poor	Poor	Good-Fair	Good-Poor	Poor	Poor
Polycarbonate - 30% Carbon Fiber Reinforced PC - 30% CFR	Fair	Good	Good	Poor	Poor	Good	-	Poor	Poor
Polycarbonate - 30% Glass Fibre Filled PC - 30% GFR	Fair	Good	Good	Poor	Poor	Good	-	Poor	Poor
Polychlorotrifluoroethylene PCTFE	Good	Good	Good	Good	Good	Good	-	Good	Good
Polyetheretherketone PEEK	Good-Poor	Good	Good	Good	Good	Good	Good	Good-Poor	Good-Poor
Polyetherimide PEI	Good(-Fair?)	Good	Good	Good-Poor	Poor	Good	Good-Poor	-	Poor
Polyethersulphone PES	Good-Poor	Good	Good	Good	Good	Good-Fair	Good	Fair-Poor	Good
Polyethylene - Carbon filled PE	Fair	Good	Good	-	-	-	-	-	Fair
Polyethylene - High density HDPE	Good-Fair	Good	Good	Good	Fair	Good-Fair	Fair-Poor	Fair-Poor	Good-Fair
Polyethylene - Low Density LDPE	Good-Fair	Good	Good	Good	Fair-Poor	Good-Fair	Fair-Poor	Fair-Poor	Good-Fair

Polymer - Chemical Resistance

	Acids - concentrated	Acids - dilute	Alcohols	Alkalis	Aromatic hydrocarbons	Greases and Oils	Halogenated Hydrocarbons	Halogens	Ketones
Polyethylene - Medium Density MDPE	Good-Fair	Good	Good	Good	Fair	Good-Fair	Fair-Poor	Fair-Poor	Good-Fair
Polyethylene - U.H.M.W. UHMW PE	Good-Fair	Good	Good	Good	Fair	Good-Fair	Fair-Poor	Fair-Poor	Good-Fair
Polyethylene naphthalate PEN	Good-Poor	Good	Good	Good	Good	Good	Good	-	Good
Polyethylene terephthalate Polyester, PET, PETP	Good-Poor	Good	Good	Poor	Good-Fair	Good	Good-Poor	Fair-Poor	Good-Fair
Polyhydroxybutyrate - Biopolymer PHB	-	Fair	Fair	Poor	-	Good	-	-	-
Polyhydroxybutyrate/ Polyhydroxyvalerate 8% - Biopolymer PHB92/PHV 8	-	Fair	Fair	Poor	-	Good	-	-	-
Polyhydroxybutyrate/ Polyhydroxyvalerate 12% - Biopolymer PHB88/PHV12	-	Fair	Fair	Poor	-	Good	-	-	-
Polyimide PI	Poor	Fair	Poor	Poor	Good	Good	Good	Fair	Good
Polymethylmethacrylate PMMA, Acrylic	Good-Poor	Good-Poor	Good-Poor	Good	Poor	Good	Poor	Poor	Poor
Polymethylpentene TPX®	Good-Fair	Good	Good	Good	Fair-Poor	Good-Fair	Fair-Poor	Fair-Poor	Good-Fair
Polyoxymethylene - Copolymer Acetal - Copolymer POMC	Poor	Good-Fair	Good-Fair	Good	Good	Good	Good-Poor	Poor	Good - Fair
Polyoxymethylene - Homopolymer Acetal - Homopolymer POMH	Poor	Poor - Fair	Good-Fair	Poor	Good	Good	Good-Poor(?)	Poor	Good - Fair
Polyoxymethylene/Acetal Copolymer - 10% Carbon Fibre Reinforced POMC - 10% CFR	Poor	Poor-Good	Good	Fair-Good	Good	Good	-	Poor	Good-Fair
Polyphenyleneoxide PPO (modified), PPE (modified)	Good-Fair	Good	Good	Good	Poor	Good-Poor	Fair-Poor	Poor	Poor
Polyphenyleneoxide (modified), 30% Glass Fibre Reinforced PPO 30% GFR	Good-Fair	Good	Good	Good	Poor	Good-Poor	Fair-Poor	Poor	Poor

Polymer - Chemical Resistance

	Acids - concentrated	Acids - dilute	Alcohols	Alkalis	Aromatic hydrocarbons	Greases and Oils	Halogenated Hydrocarbons	Halogens	Ketones
Polyphenylenesulphide PPS	Poor	Fair	-	-	-	-	-	-	-
Polyphenylenesulphide - 20% Carbon Fibre Reinforced PPS - 20% CFR	Fair	Good	Good	Good	Good	Good	-	Fair	Good
Polyphenylenesulphide - 40% Glass Fibre Reinforced PPS - 40% GFR	Good-Poor	Good	Good	Good	Good	Good	Good-Poor	Good-Poor	Good
Polypropylene PP	Good-Fair	Good-Fair	Good	Good	Fair	Good-Fair	Good-Poor	Poor	Good
Polystyrene PS	Fair-Poor	Good-Fair	Good-Fair	Good-Fair	Poor	Good-Poor	Poor	Poor	Poor
Polystyrene - Cross-linked PS - X - Linked	Fair-Poor	Good(-Fair?)	Good(-Fair?)	Good-Fair	Poor	Fair-Poor	Poor	Poor	Poor
Polysulphone PSu	Fair	Good	Good	Good	Fair	Good	-	Good	Poor
Polytetrafluoroethylene PTFE	Good	Good	Good	Good	Good	Good	Good	Good	Good
Polytetrafluoroethylene coated Glass Fabric PTFE 75 / Glass 25	Poor	Good	Good	Good-Fair	Good	Good	Good	Fair	Good
Polytetrafluoroethylene filled with Glass PTFE 25% GF	Poor	Good	Good	Good-Fair	Good	Good	Good	Good	Good
Polyurethane PU	Fair	Good	-	Good	-	-	-	-	-
Polyvinylchloride - Unplasticised UPVC	Good-Poor	Good	Good	Good	Poor	Good	Fair-Poor	Fair	Poor
Polyvinylidenechloride PVDC	Good-Fair	Good	Good	Good	Fair	Good	-	-	Fair
Polyvinylidenefluoride PVDF	Good	Good	Good	Fair	Good	Good	Good-Fair	Good-Poor	-
Silicone Elastomer	Good-Poor	Good-Poor	Good-Fair	Good-Fair	Poor	Good-Poor	Poor	Poor	Poor
Tetrafluoroethylene-perfluoro(alkoxy vinyl ether) - Copolymer PFA	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	-	Excellent	Excellent
Vectra A® - 15% Glass Fibre Reinforced Liquid Crystal Polyester - 15% GFR	Fair	Good	Good	Fair	Good	Good	-	-	Good

Polymer - Chemical Resistance

	Acids - concentrated	Acids - dilute	Alcohols	Alkalis	Aromatic hydrocarbons	Greases and Oils	Halogenated Hydrocarbons	Halogens	Ketones
Vectra A® - 30% Glass Fiber Reinforced Vectra A® - 30% GFR	-	Good	Good	Fair	Good	Good	-	-	Good
Vectra A® - Liquid Crystal Polyester Vectra A®	Good-Poor	Good	Good	Good-Fair	Good	Good	Good(?)	Good	Good
Vectra B® - 30% Glass Fibre Reinforced Liquid Crystal Polyester - 30% GFR	Fair	Good	Good	Fair	Good	Good	-	-	Good
Vectra B® - Liquid Crystal Polyester/amide copolymer Vectra B®	Good-Poor	Good	Good	Fair	Good	Good	-	-	Good

Polymer - Electrical Properties

	Dielectric constant @1kHz	Dielectric constant @1MHz	Dielectric strength kV mm^{-1}	Dissipation factor @ 1kHz	Dissipation factor @ 1MHz	Surface resistivity Ohm/sq	Volume resistivity Ohmcm
Acrylonitrile/Methylacrylate copolymer **Barex®** - impact modified copolymer	-	-	-	-	-	-	1.9×10^{13}
Cellulose **Regenerated Cellulose**	-	4 (dry)	30-50 @ 1mm	0.06	-	-	10^{10} - 10^{12}
Cellulose Acetate **CA**	-	~5	11	0.06	-	-	5×10^{12}
Cellulose Acetate Butyrate **CAB**	-	2.5-6.2	10	0.04	-	-	10^{11}-10^{15}
Cyclo-olefin copolymer **Topas®**	-	-	-	-	-	10^{14}	10^{12}
Ethylene-Chlorotrifluoroethylene copolymer **E-CTFE**	-	2.3-2.5	40	0.002	-	10^{14}-10^{15}	10^{15}-10^{16}
Ethylene-Tetrafluoroethylene Copolymer **ETFE**	-	2.6	25	-	0.0005	$> 10^{14}$	10^{16}
Fluorinated Ethylene Propylene Copolymer **FEP**	-	2.1	20 @ 3.2mm	-	0.0007	10^{16}	10^{18}
Polyacrylonitrile-butadiene-styrene **ABS**	-	3.2 - 3.3	20-25	-	0.02	-	$> 10^{15}$
Polyamide - Nylon 4, 6 **PA 4,6**	-	3.8-4.3	20	0.35	-	10^{12}-10^{14}	10^{13}-10^{15}
Polyamide - Nylon 6 **PA 6**	-	3.6	25	0.2	-	5×10^{10}	5×10^{12}
Polyamide - Nylon 6, 6 **PA 6,6**	-	3.4	25	0.2	-	10^{11}	10^{13}
Polyamide - Nylon 6, 6 - 30% Carbon Fibre Reinforced **PA 6, 6 - 30% CFR**	-	-	-	-	-	10^{3}	10^{2}
Polyamide - Nylon 6, 6 - 30% Glass Fibre Reinforced **PA 6,6 30% GFR**	-	3.9-5.7	-	-	-	-	10^{12}-10^{15}
Polyamide - Nylon 11 **PA 11**	-	3.0	20	0.05	-	10^{14}	10^{14}

Polymer - Electrical Properties

	Dielectric constant @1kHz	Dielectric constant @1MHz	Dielectric strength kV mm^{-1}	Dissipation factor @ 1kHz	Dissipation factor @ 1MHz	Surface resistivity Ohm/sq	Volume resistivity Ohmcm
Polyamide - Nylon 12 - 30% Glass Fibre Reinforced PA 12 - 30% GFR	-	4	35	-	0.04	-	-
Polyamide - Nylon 12 PA 12	-	3.5 @ 100kHz	26-30 @ 1mm	0.06	-	10^{13}	10^{12}-10^{13}
Polyamide/imide PAI	-	3.9-5.4	23 at 1mm	-	0.03-0.042	8-50 x 10^{17}	0.08-2 x 10^{17}
Polyaramid Polymetaphenylene isophthalamide	2.3	-	32	-	-	-	6x10^{16}
Polybenzimidazole PBI	-	3.2	21	-	-	-	8x10^{14}
Polybutylene terephthalate PBT	3.2	-	20	0.002	-	-	10^{15}
Polybutylene terephthalate - 30% Glass Fibre Reinforced PBT 30% GFR	-	4	20	0.002	-	-	2x10^{14}
Polycarbonate PC	-	2.9	15-67	-	0.01	10^{15}	10^{14}-10^{16}
Polycarbonate - 30% Carbon Fiber Reinforced PC - 30% CFR	-	-	-	-	-	10^{2}	10^{3}
Polycarbonate - 30% Glass Fibre Filled PC - 30% GFR	-	3.3	30	-	0.009	10^{14}	10^{16}
Polycarbonate - Conductive PC	-	-	-	-	-	100-500	1-100
Polychlorotrifluoroethylene PCTFE	-	2.24-2.8	14	0.023-0.027	0.01	10^{15}	10^{16}
Polyetheretherketone PEEK	3.2-3.3 @ 50Hz-10Khz	-	190 @ 50µm	-	0.003	-	10^{15}-10^{16}
Polyetherimide PEI	3.1	-	30 @ 1.6mm	-	0.0013 @ 1KHz	4.10^{13}	7.10^{15}
Polyetherketoneketone PEKK	3.3	-	23.6	0.004	-	2x10^{16}	10^{16}
Polyethersulphone PES	-	3.7	16	-	0.003	-	10^{17}
Polyethylene - Carbon filled PE	-	-	-	-	-	10^{3}-10^{5}	< 10^{5}
Polyethylene - High density HDPE	-	2.3-2.4	22	-	1-10 x 10^{-4}	10^{13}	10^{15}-10^{16}

Polymer - Electrical Properties

	Dielectric constant @1kHz	Dielectric constant @1MHz	Dielectric strength kV mm^{-1}	Dissipation factor @ 1kHz	Dissipation factor @ 1MHz	Surface resistivity Ohm/sq	Volume resistivity Ohmcm
Polyethylene - Low Density LDPE	-	2.2-2.35	27	-	1-10 x 10^{-4}	10^{13}	10^{15}-10^{18}
Polyethylene - Medium Density MDPE	-	2.3-2.4	22	-	1-10 x 10^{-4}	10^{13}	10^{15}-10^{18}
Polyethylene - U.H.M.W. UHMW PE	-	2.3	28	-	1-10 x 10^{-4}	10^{13}	10^{18}
Polyethylene naphthalate PEN	-	3.2 @ 10KHz	160 @ 0.075mm	0.005	0.0048 @ 10KHz	10^{14}	10^{15}
Polyethylene terephthalate Polyester, PET, PETP	-	3.0	17	0.002	-	10^{13}	> 10^{14}
Polyhydroxybutyrate - Biopolymer PHB	-	3.0	-	-	-	-	10^{16}
Polyhydroxybutyrate/ Polyhydroxyvalerate 8% - Biopolymer PHB92/PHV 8	-	3.0	-	-	-	-	10^{16}
Polyhydroxybutyrate/ Polyhydroxyvalerate 12% - Biopolymer PHB88/PHV12	-	3.0	-	-	-	-	10^{16}
Polyimide PI	-	3.4	22	0.0018	-	10^{16}	10^{18}
Polymethylmethacrylate PMMA, Acrylic	-	2.6	15	-	0.014	10^{14}	2-14 x 10^{15}
Polymethylpentene TPX[ii]	-	2.12	-	0.0002	-	-	> 10^{16}
Polyoxymethylene - Copolymer Acetal - Copolymer POMC	-	3.7 - 4.4	20 @ 2.3mm	-	0.006 - 0.18	10^{15}	10^{15}
Polyoxymethylene - Homopolymer Acetal - Homopolymer POMH	-	3.7	20	-	0.005	10^{15}	10^{15}
Polyoxymethylene/Acetal Copolymer - 10% Carbon Fibre Reinforced POMC - 10% CFR	-	-	-	-	-	10^{3}	10^{4}
Polyphenyleneoxide PPO (modified), PPE (modified)	-	2.7	16-20	0.004	-	2x10^{16}	10^{17}

Polymer - Electrical Properties

	Dielectric constant @1kHz	Dielectric constant @1MHz	Dielectric strength kV mm^{-1}	Dissipation factor @ 1kHz	Dissipation factor @ 1MHz	Surface resistivity Ohm/sq	Volume resistivity Ohmcm
Polyphenyleneoxide (modified), 30% Glass Fibre Reinforced PPO 30% GFR	-	3.1	15	0.01	-	-	10^{17}
Polyphenylenesulphide PPS	-	-	-	-	-	$1x10^{16}$	$1x10^{13}$
Polyphenylenesulphide - 20% Carbon Fibre Reinforced PPS - 20% CFR	-	-	-	-	-	10^{3}	10^{3}
Polyphenylenesulphide - 40% Glass Fibre Reinforced PPS - 40% GFR	-	3.8 - 4.2	18	-	0.0013-0.004	10^{16}	10^{16}
Polyphenylsulphone PPSu	3.45	-	14.1	0.0009	0.005	$> 10^{13}$	$> 10^{14}$
Polypropylene PP	-	2.2-2.6	30-40	-	0.0003 - 0.0005	10^{13}	10^{16}-10^{18}
Polystyrene PS	-	2.4-3.1	20	0.0002	-	-	$> 10^{16}$
Polystyrene - Conductive High Impact Conductive Polystyrene	-	-	-	-	-	10^{2}-10^{7}	10^{2}-10^{7}
Polystyrene - Cross-linked PS - X - Linked	-	2.5	27-47	-	0.0002	$> 10^{15}$	$> 10^{15}$
Polysulphone PSu	3.14	3.10	17	0.0013	0.0050	-	$5x10^{16}$
Polytetrafluoroethylene PTFE	-	2.0-2.1	50-170	-	0.0003 - 0.0007	10^{17}	10^{18}-10^{19}
Polytetrafluoroethylene coated Glass Fabric PTFE 75 / Glass 25	-	-	-	-	-	$> 10^{13}$	$> 10^{15}$
Polytetrafluoroethylene filled with Glass PTFE 25% GF	-	2.2-2.35	40	0.003	-	10^{15}	10^{16}
Polyvinylchloride - Unplasticised UPVC	-	2.7-3.1	14	0.025	-	-	10^{16}
Polyvinylfluoride PVF	8	-	20	0.04	-	-	10^{13}
Polyvinylidenechloride PVDC	-	3.0-6.0	-	-	-	10^{12}-10^{13}	10^{12}-10^{15}
Polyvinylidenefluoride PVDF	-	8.4	13	0.06	-	10^{13}	10^{14}

Polymer - Electrical Properties

	Dielectric constant @1kHz	Dielectric constant @1MHz	Dielectric strength kV mm^{-1}	Dissipation factor @ 1kHz	Dissipation factor @ 1MHz	Surface resistivity Ohm/sq	Volume resistivity Ohmcm
Silicone Elastomer	-	-	-	-	-	-	10^{18}-10^{7}0
Tetrafluoroethylene-perfluoro(alkoxy vinyl ether) - Copolymer PFA	2.05-2.06	2.05-2.06	-	0.0001-0.0002	0.0008	-	-
Vectra A® - 15% Glass Fibre Reinforced Liquid Crystal Polyester - 15% GFR	-	3.0	34	-	0.018	10^{13}	$> 10^{15}$
Vectra A® - 25% Glass Fibre Reinforced Vectra A® - 25% GFR	-	2.7	36.0	-	0.016	10^{15}	10^{12}
Vectra A® - 30% Glass Fiber Reinforced Vectra A® - 30% GFR	-	4.1	-	-	0.018	$> 10^{15}$	10^{13}
Vectra A® - Liquid Crystal Polyester Vectra A®	-	3.0	47 @ 1.5mm	-	0.02	$4x10^{13}$	10^{16}
Vectra B® - 30% Glass Fibre Reinforced Liquid Crystal Polyester - 30% GFR	-	3.5	38	-	0.008	$> 10^{15}$	10^{13}
Vectra B® - Liquid Crystal Polyester/amide copolymer Vectra B®	-	3.1	37 @ 1.5mm	-	0.01	-	10^{16}
Vectra MT1300 - Liquid Crystalline Polyester Vectra MT1300	-	2.7	36.0	-	0.016	10^{15}	10^{12}

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compression set after 24 hr at 175C %	Compressive modulus GPa	Compressive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Acrylonitrile/Methylacrylate copolymer **Barex®** - impact modified copolymer	-	-	-	-	83.0	3	M60/R115	approx.100	-	-	approx.3	66
Cellulose **Regenerated Cellulose**	-	-	-	-	-	18/55	-	-	-	-	5/3	120/55
Cellulose Acetate **CA**	65	-	-	-	-	-	34-125	100-450	-	-	1.0-4.0	12-110
Cellulose Acetate Butyrate **CAB**	-	-	-	-	-	60	99	260	-	-	0.3-2.0	20-60
Cyclo-olefin copolymer **Topas®**	-	-	-	-	-	3	-	-	-	-	3.1	66
Ethylene-Chlorotrifluoroethylene copolymer **E-CTFE**	5	0.07-0.08	-	-	-	200	R95	< 1000	-	-	1.4-1.6	48
Ethylene-Tetrafluoroethylene Copolymer **ETFE**	-	-	-	-	-	250-350	R50	> 1000	-	-	0.8	28-48
Fluorinated Ethylene Propylene Copolymer **FEP**	-	0.27-0.67	-	-	-	150-300	R25-45, 60 Shore D	No break	0.48	-	0.5 - 0.6	14 - 30
Hexafluoropropylenevinylidenefluoride copolymer **FKM**	-	-	43	-	-	200	Shore A75	-	-	10	-	9
Poly L lactic acid - Biopolymer **PLLA**	-	-	-	-	-	2.4	-	-	-	-	3.6	70
Polyacrylonitrile-butadiene-styrene **ABS**	-	0.5	-	-	-	45	R100-110	200-400	0.35	-	2.1-2.4	41-45
Polyamide - Nylon 4, 6 **PA 4,6**	-	-	-	-	-	-	M92	80	-	-	3.1-3.3	55-100
Polyamide - Nylon 6 - 30% Glass Fibre Reinforced **PA 6 30% GFR**	-	0.46-0.52	-	-	-	2.5	E70	800-1500	-	-	8.5	140
Polyamide - Nylon 6 **PA 6**	5	0.2-0.3	-	-	-	-	M82	30-250	0.39	-	2.6-3.0	78

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compres-sion set after 24 hr at 175C %	Compres-sive modulus GPa	Compres-sive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Polyamide - Nylon 6, 6 PA 6,6	3-5	0.2-0.3	-	-	-	40	M89	40-110	0.41	-	3.3	82
Polyamide - Nylon 6, 6 - 30% Carbon Fibre Reinforced PA 6, 6 - 30% CFR	-	-	-	-	-	2	-	-	-	-	24	260
Polyamide - Nylon 6, 6 - 30% Glass Fibre Reinforced PA 6,6 30% GFR	-	-	-	-	-	5	M100	120	-	-	10-11	160-210
Polyamide - Nylon 11 PA 11	-	0.2-0.3	-	-	-	320	M60	96	-	-	1.5	44
Polyamide - Nylon 12 - 30% Glass Fibre Reinforced PA 12 - 30% GFR	-	-	-	-	110	8	R110	234	-	-	6	105
Polyamide - Nylon 12 PA 12	-	-	-	-	-	290-300	R84-107	-	-	-	-	50-55
Polyamide/imide PAI	-	-	-	-	170-220	7-15	E72-86	60-140 - notched	0.38	-	4.5-6.8	110-190
Polyaramid Polymetaphenylene isophthalamide	-	-	-	-	-	< 9	-	533 unnotched	-	-	-	1800-3900
Polyaramid Polyparaphenylene terephthalamide	-	-	-	-	-	-	-	-	-	-	59-124	2760
Polybenzimidazole PBI	-	0.19-0.27	-	6.2	400	3	K115	590 unnotched	0.34	-	5.9	160
Polybutylene terephthalate PBT	-	-	-	-	-	250	M70	60	-	-	2	50
Polybutylene terephthalate - 30% Glass Fibre Reinforced PBT 30% GFR	-	-	-	-	-	2	M93	70	-	-	12	185
Polycarbonate PC	10-15	0.31	-	-	> 80	100-150	M70	600-850	0.37	-	2.3-2.4	55-75
Polycarbonate - 30% Carbon Fiber Reinforced PC - 30% CFR	-	-	-	-	-	2	-	-	-	-	18	170
Polycarbonate - 30% Glass Fibre Filled PC - 30% GFR	-	-	-	-	-	3	-	-	-	-	5.8	70
Polycarbonate - Conductive PC	-	-	-	-	-	5-9	-	-	-	-	¯3.8	60-70

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compression set after 24 hr at 175C %	Compressive modulus GPa	Compressive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Polychlorotrifluoroethylene PCTFE	-	-	-	-	9-12	80-250	R75-112	267	-	-	1.3-1.8	31-41
	-	-	-	-	-	-	D75-90 - Shore	-	-	-	-	-
Polyetheretherketone PEEK	-	0.18	-	-	-	50	M99	85	0.4	-	3.7-4.0	70-100
Polyetherimide PEI	10	-	-	2.9	140	60	R125	50	0.44	-	2.9	85
Polyetherketoneketone PEKK	-	0.26	-	-	206	12	M88	69	-	-	4.5	110
Polyethersulphone PES	6	-	-	-	-	40-80	M88	85	0.4	-	2.4-2.6	70-95
Polyethylene - Carbon filled PE	-	-	-	-	-	-	-	-	-	-	-	20
Polyethylene - High density HDPE	-	0.29	-	-	-	-	D60-73 - Shore	20-210	0.46	-	0.5-1.2	15-40
Polyethylene - Low Density LDPE	-	-	-	-	-	400	D41-46 - Shore	> 1000	-	-	0.1-0.3	5-25
Polyethylene - Medium Density MDPE	-	-	-	-	-	100-150	D50 - Shore	-	0.46	-	-	12-19
Polyethylene - U.H.M.W. UHMW PE	-	0.1-0.2	-	-	-	500	R50-70	> 1000	0.46	-	0.2-1.2	20-40
Polyethylene naphthalate PEN	-	0.27 - biax film	-	-	-	60 - biax film	-	-	-	-	5-5.5 - biax film	200 - biax film
Polyethylene terephthalate Polyester, PET, PETP	-	0.2-0.4	-	-	-	-	M94-101	13-35	0.37-0.44(oriented)	-	2-4	80, for biax film 190-260
Polyhydroxyalkaonate - Biopolymer PHA	-	-	-	-	-	35	-	-	-	-	-	30
Polyhydroxybutyrate - Biopolymer PHB	-	-	-	-	-	6	-	35-60	-	-	3.5	40
Polyhydroxybutyrate/ Polyhydroxyvalerate 8% - Biopolymer PHB92/PHV 8	-	-	-	-	-	15	-	100	-	-	0.9	28

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compression set after 24 hr at 175C %	Compressive modulus GPa	Compressive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Polyhydroxybutyrate/ Polyhydroxyvalerate 12% - Biopolymer PHB88/PHV12	-	-	-	-	-	35	-	200	-	-	0.5	23
Polyimide PI	-	0.42	-	-	-	8-70	E52-99	80	-	-	2.0-3.0	70-150
Polymethylmethacrylate PMMA, Acrylic	-	-	-	-	-	2.5-4	M92-100	16-32	0.35 - 0.4	-	2.4-3.3	80
Polymethylpentene TPX®	-	-	-	-	-	15	R85	49	-	-	1.5	25.5
Polyoxymethylene - Copolymer Acetal - Copolymer POMC	-	-	-	-	-	15 - 40	M80	70-80	0.35	-	2.3 - 2.8	60-70
Polyoxymethylene - Homopolymer Acetal - Homopolymer POMH	-	0.2 - 0.35	-	-	-	40 - 75	M94	75 - 130	0.35	-	2.9 - 3.1	70
Polyoxymethylene/Acetal Copolymer - 10% Carbon Fibre Reinforced POMC - 10% CFR	-	-	-	-	-	1.2	-	59	-	-	8	70
Polyphenyleneoxide PPO (modified), PPE (modified)	20	0.35	-	-	-	50	M78/R115	200	0.38	-	2.5	55-65
Polyphenyleneoxide (modified), 30% Glass Fibre Reinforced PPO 30% GFR	35	-	-	-	-	2-3	L108	80	0.27	-	8-9	100-120
Polyphenylenesulphide - 20% Carbon Fibre Reinforced PPS - 20% CFR	-	-	-	-	-	2	-	53	-	-	17	180
Polyphenylenesulphide - 40% Glass Fibre Reinforced PPS - 40% GFR	-	-	-	-	-	1.2	R123	75-80	-	-	7.6-12.0	124-160
Polyphenylsulphone PPSu	-	-	-	1.7	99	30	M80/R122	700	-	-	2.5	76
Polypropylene PP	13-16	0.1-0.3	-	-	-	150-300, for biax film > 50	R80-100	20-100	-	-	0.9-1.5, for biax film 2.2-4.2,	25-40, for biax film 130-300,
Polystyrene PS	-	-	-	-	-	1.6	M60-90	19-24	0.35	-	2.3-4.1	30-100

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compression set after 24 hr at 175C %	Compressive modulus GPa	Compressive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Polystyrene - Conductive **High Impact Conductive Polystyrene**	-	-	-	-	-	36	-	no break	-	-	1.6	27
Polystyrene - Cross-linked **PS - X - Linked**	60-100	-	-	-	-	3-5	R110-120	-	-	-	1.65	55-70
Polysulphone **PSu**	-	-	-	-	-	50-100	M91	69	-	-	2.48	70
Polytetrafluoroethylene **PTFE**	-	0.05-0.2	-	-	-	400	D50-55 - Shore	160	0.46	-	0.3-0.8	10-40
Polytetrafluoroethylene coated Glass Fabric **PTFE 75 / Glass 25**	-	-	-	-	-	< 8	-	-	-	-	-	> 102
Polytetrafluoroethylene filled with Glass **PTFE 25% GF**	-	0.08-0.10	-	-	-	100-300	D60-70 - Shore	144	-	-	1.7	7-20
Polyurethane **PU**	-	-	-	-	69	-	-	70	-	-	-	-
Polyvinylchloride - Unplasticised **UPVC**	-	-	-	-	-	60	R106-120	20-1000	-	-	2.5-4.0	25-70
Polyvinylfluoride **PVF**	-	-	-	-	-	90-250	D80 - Shore	180	0.4	130-200 (initial)	2.1 - 2.6	55-110
Polyvinylidenechloride **PVDC**	-	0.24	-	-	-	-	R98-106	16-53	-	-	0.3-0.55	25-110
Polyvinylidenefluoride **PVDF**	24	0.2-0.4	-	-	-	50	R77-83	120-320	0.34	-	1.0-3.0	25-60
Silicone Elastomer	-	-	-	-	-	200-800	60 degrees Shore A	-	-	-	-	6.5
Tetrafluoroethylene-perfluoro(alkoxy vinyl ether) - Copolymer **PFA**	-	-	-	-	-	300	-	-	-	-	-	25
TPE - 50% Leather Fiber Filled **TPE - 50% Leather Fibre Filled**	-	-	-	-	-	5-120	40-80 Shore A	-	-	-	-	1-10
Vectra A® - 15% Glass Fibre Reinforced Liquid Crystal Polyester - 15% GFR	-	-	-	10	85	3.1	M80	-	-	-	12	200

Polymer - Mechanical Properties

	Abrasive resistance - ASTM D1044 mg/1000 cycles	Coefficient of friction	Compression set after 24 hr at 175C %	Compressive modulus GPa	Compressive strength MPa	Elongation at break %	Hardness - Rockwell	Izod impact strength J m^{-1}	Poisson's ratio	Tear strength N mm^{-1}	Tensile modulus GPa	Tensile strength MPa
Vectra A® - 25% Glass Fibre Reinforced Vectra A® - 25% GFR	-	-	-	6.00	38.0	6	M55	67	-	-	7	160
Vectra A® - 30% Glass Fiber Reinforced Vectra A® - 30% GFR	-	-	-	-	-	1.1	M93	-	-	-	22	160
Vectra A® - Liquid Crystal Polyester Vectra A®	56	0.12-0.14	-	-	70	3	M60	520	-	-	2-10	55-165
Vectra B® - 30% Glass Fibre Reinforced Liquid Crystal Polyester - 30% GFR	-	-	-	21.5	150	1.0	M100	-	-	-	22	205
Vectra B® - Liquid Crystal Polyester/amide copolymer Vectra B®	-	-	-	-	84	1.3	M100	415	-	-	2.5-20	87-188
Vectra MT1300 - Liquid Crystalline Polyester Vectra MT1300	-	-	-	-	-	3.4	-	252	-	-	-	-

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Acrylonitrile/Methylacrylate copolymer **Barex®** - impact modified copolymer	-	1.15	-	-	-	-	1.511	-	-	-	-
Cellulose **Regenerated Cellulose**	-	1.44	-	~ 18	-	Fair	1.47	-	-	50	-
Cellulose Acetate **CA**	-	1.3	HB	19	-	Fair	1.49	Fair	-	-	1.9-7.0
Cellulose Acetate Butyrate **CAB**	80-84	1.20	HB	17	-	Fair	1.478	Good	-	-	0.9-2.2
Cyclo-olefin copolymer **Topas®**	58	1.02	HB	-	92-94	Good	1.53	Fair-Poor	< 0.01	-	< 0.01
Ethylene-Chlorotrifluoroethylene copolymer **E-CTFE**	-	1.68	V0	60	-	Fair	-	-	-	-	< 0.02
Ethylene-Tetrafluoroethylene Copolymer **ETFE**	-	1.7	V0	30-32	-	Fair	1.403	Excellent	0-0.03	-	-
Fluorinated Ethylene Propylene Copolymer **FEP**	-	2.15	V0	95	-	Poor	1.344	Excellent	0.01	-	-
Hexafluoropropylenevinylidenefluoride copolymer **FKM**	-	2.0	Self Extinguishing	-	-	Poor	-	Excellent	-	-	-
Poly L lactic acid - Biopolymer **PLLA**	-	1.25	-	-	-	-	-	Good	0.3	0.3	-
Polyacrylamide/acrylate Hydrogel	-	~1.5	-	-	-	-	-	-	-	-	-
Polyacrylonitrile **PAN**	-	1.18	-	-	-	-	-	-	-	-	-
Polyacrylonitrile-butadiene-styrene **ABS**	-	1.05	HB @ 1.5mm	19	-	Fair	-	Poor	-	-	0.3-0.7
Polyamide - Nylon 4, 6 **PA 4,6**	-	1.18	V2 @ 0.8mm	24	-	Fair	-	-	-	3.7	1.3
Polyamide - Nylon 6 - 30% Glass Fibre Reinforced **PA 6 30% GFR**	-	1.35	HB	-	-	-	-	-	6.6	-	8

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Polyamide - Nylon 6 PA 6	-	1.13	HB	25	-	Fair	1.53	Poor	-	> 8	2.7
Polyamide - Nylon 6, 6 PA 6,6	-	1.14	HB	23	-	Fair	1.53	Poor	8.5	8	2.3
Polyamide - Nylon 6, 6 - 30% Carbon Fibre Reinforced PA 6, 6 - 30% CFR	-	1.28	HB	22	-	-	-	-	-	-	< 0.1
Polyamide - Nylon 6, 6 - 30% Glass Fibre Reinforced PA 6,6 30% GFR	-	1.4	HB	22	-	-	-	-	-	-	1-5
Polyamide - Nylon 11 PA 11	-	1.04	V2	22	-	Fair	-	Fair?	-	2.5	0.8
Polyamide - Nylon 12 - 30% Glass Fibre Reinforced PA 12 - 30% GFR	-	1.23	HB	-	-	-	-	Good	-	0.6	-
Polyamide - Nylon 12 PA 12	-	1.02	HB-V2	21	-	Fair	-	Fair?	-	1.6	-
Polyamide/imide PAI	-	1.42-1.46	V0	44-45	-	Good	-	Good	-	3-4	0.3
Polyaramid Polymetaphenylene isophthalamide	-	1.38	-	29	-	Good	-	-	-	9	0.08
Polyaramid Polyparaphenylene terephthalamide	-	1.44	-	-	-	-	-	Fair	3.5	3.5	-
Polybenzimidazole PBI	-	1.3	Does not burn	58	-	Good	-	-	-	-	0.4
Polybutylene terephthalate PBT	-	1.31	HB	25	-	Good	-	Fair?	-	-	0.1
Polybutylene terephthalate - 30% Glass Fibre Reinforced PBT 30% GFR	-	1.63	HB	23	-	-	-	-	-	-	0.15-0.35
Polycarbonate PC	34.0	1.2	V0-V2	25-27	-	Fair	1.584-6	Fair	-	0.35	0.1
Polycarbonate - 30% Carbon Fiber Reinforced PC - 30% CFR	-	1.33	V0	25-27	-	-	-	-	-	-	< 0.2
Polycarbonate - 30% Glass Fibre Filled PC - 30% GFR	-	1.43	V-1	-	-	-	-	-	0.28	0.11	-

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Polycarbonate - Conductive PC	-	1.28 - 1.35	-	-	-	-	-	-	-	~0.9	-
Polychlorotrifluoroethylene PCTFE	-	2.10 - 2.14	V-0	-	-	-	1.435	-	< 0.01	-	-
Polyetheretherketone PEEK	-	1.26 - 1.32	V-0 @ 1.5mm	35	-	Good	-	Fair	-	0.5	0.1-0.3
Polyetherimide PEI	-	1.27	V-0 @ 0.4mm	47	-	Good	-	Good/Fair	-	1.3	0.25
Polyetherketoneketone PEKK	-	1.31	V-0	-	-	Good	-	-	-	-	< 0.20
Polyethersulphone PES	-	1.37	V-0 @ 0.4mm	34-41	-	Good-Fair	1.65	Fair	-	2.2	0.4-1
Polyethylene - Carbon filled PE	-	0.96	-	-	-	-	-	Good	-	-	-
Polyethylene - High density HDPE	-	0.95	HB	17	-	Fair	1.54	Poor	-	-	< 0.01
Polyethylene - Low Density LDPE	-	0.92	HB	17	-	Fair	1.51	Poor	-	-	< 0.015
Polyethylene - Medium Density MDPE	-	0.935	HB	17	-	Fair	-	Poor	-	< 0.01	-
Polyethylene - U.H.M.W. UHMW PE	-	0.94	HB	17	-	Fair	-	Poor	-	-	< 0.01
Polyethylene naphthalate PEN	-	1.36	VTM-2 - UL94, 0.075mm	-	84 @ 0.075mm	-	-	Fair	0.4	-	-
Polyethylene terephthalate Polyester, PET, PETP	-	1.3-1.4	HB	21	-	Good	1.58-1.64	Fair?	-	< 0.7	0.1
Polyhydroxyalkaonate - Biopolymer PHA	-	1.23	-	-	-	-	-	-	< 0.4	-	-
Polyhydroxybutyrate - Biopolymer PHB	-	1.25	-	-	-	-	-	Fair	-	-	-
Polyhydroxybutyrate/ Polyhydroxyvalerate 8% - Biopolymer PHB92/PHV 8	-	1.25	-	-	-	-	-	Fair	-	-	-

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Polyhydroxybutyrate/ Polyhydroxyvalerate 12% - Biopolymer PHB88/PHV12	-	1.25	-	-	-	-	-	Fair	-	-	-
Polyimide PI	-	1.42	V0	53	-	Good	1.66	Poor	-	-	0.2-2.9
Polymethylmethacrylate PMMA, Acrylic	57.2	1.19	HB	17-20	-	Fair	1.49	Good	-	-	0.2
Polymethylpentene TPX®	-	0.835	HB	17	-	-	1.463	Poor	-	-	0.01
Polyoxymethylene - Copolymer Acetal - Copolymer POMC	-	1.41	HB	15	-	Poor	-	Poor	-	0.6 - 0.8	0.2 - 0.25
Polyoxymethylene - Homopolymer Acetal - Homopolymer POMH	-	1.42	HB	15	-	Poor	-	Poor	-	0.6 - 0.9	0.25
Polyoxymethylene/Acetal Copolymer - 10% Carbon Fibre Reinforced POMC - 10% CFR	-	1.43	HB	-	-	-	-	-	-	-	< 0.1
Polyphenyleneoxide PPO (modified), PPE (modified)	-	1.06	HB	20	-	Good	-	-	-	-	0.1-0.5
Polyphenyleneoxide (modified), 30% Glass Fibre Reinforced PPO 30% GFR	-	1.29	HB	26	-	-	-	-	-	-	0.06-0.33
Polyphenylenesulphide PPS	-	1.35	V0	-	-	-	-	-	-	-	0.02
Polyphenylenesulphide - 20% Carbon Fibre Reinforced PPS - 20% CFR	-	1.41	V-0	-	-	-	-	-	-	-	< 0.05
Polyphenylenesulphide - 40% Glass Fibre Reinforced PPS - 40% GFR	-	1.66	V0	46	-	Good	-	Good	-	-	< 0.05
Polyphenylsulphone PPSu	-	1.29	V-0	44	-	-	-	-	1.2	0.6	0.35
Polypropylene PP	-	0.9	HB	18	-	Fair	1.49	Poor	-	0.03	-
Polystyrene PS	30.8	1.05	HB	19	-	Good	1.59-1.60	Poor	-	-	< 0.4

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Polystyrene - Conductive **High Impact Conductive Polystyrene**	-	1.04	-	-	-	-	-	-	-	-	-
Polystyrene - Cross-linked **PS - X - Linked**	-	1.05	HB	-	-	Good	1.59	-	-	-	0.02-0.03
Polysulphone **PSu**	-	1.24	HB	30	-	Good	-	Poor	0.40	0.85	-
Polytetrafluoroethylene **PTFE**	-	2.2	V0	95	-	Poor	1.38	Excellent	-	-	0.01
Polytetrafluoroethylene coated Glass Fabric **PTFE 75 / Glass 25**	-	2.08	-	-	-	-	-	-	-	-	-
Polytetrafluoroethylene filled with Glass **PTFE 25% GF**	-	2.25	V0	95	-	-	-	Good	-	-	0.15
Polyurethane **PU**	-	1.2	-	-	-	-	-	-	0.1	-	-
Polyvinylchloride - Unplasticised **UPVC**	-	1.4	V0	42	-	Fair	1.54	Good	-	-	0.03-0.4
Polyvinylfluoride **PVF**	-	1.37-1.39	V0	35	-	-	1.46	Excellent	-	-	0.05
Polyvinylidenechloride **PVDC**	-	1.63	-	60	-	Fair	-	Poor	-	-	0.1
Polyvinylidenefluoride **PVDF**	-	1.76	V0	44	-	Fair	1.42	Excellent	-	-	0.04
Silicone Elastomer	-	1.1 - 1.5	-	-	-	Poor	-	-	-	-	-
Tetrafluoroethylene-perfluoro(alkoxy vinyl ether) - Copolymer **PFA**	-	2.15	V0	> 95%	-	-	1.35	-	< 0.03	-	-
TPE - 50% Leather Fiber Filled **TPE - 50% Leather Fibre Filled**	-	1.02-1.05	-	-	-	-	-	-	-	1-3	-
Vectra A® - 15% Glass Fibre Reinforced Liquid Crystal Polyester - 15% GFR	-	1.50	V-0	-	-	Good	-	Good	-	-	-
Vectra A® - 25% Glass Fibre Reinforced Vectra A® - 25% GFR	-	1.5	V0	-	-	-	-	-	-	-	-

Polymer - Physical Properties

	Abbe number	Density g cm^{-3}	Flammability	Limiting oxygen index %	Optical transmission %	Radiation resistance	Refractive index	Resistance to Ultra-violet	Water absorption %	Water absorption - equilibrium %	Water absorption - over 24 hours %
Vectra A® - 30% Glass Fiber Reinforced Vectra A® - 30% GFR	-	1.62	UL94 V-0	45	-	Good	-	Good	-	0.04	0.005
Vectra A® - Liquid Crystal Polyester Vectra A®	-	1.40	V0 @ 0.8mm	35	-	Good	-	Good	-	0.03	0.02
Vectra B® - 30% Glass Fibre Reinforced Liquid Crystal Polyester - 30% GFR	-	1.60	V-0	50	-	Good	-	Good	-	0.08	0.009
Vectra B® - Liquid Crystal Polyester/amide copolymer Vectra B®	-	1.40	V0 @ 0.4mm	50	-	Good	-	Good	-	0.1	0.03
Vectra MT1300 - Liquid Crystalline Polyester Vectra MT1300	-	1.4	-	-	-	-	-	-	0.03	-	-

Polymer - Thermal Properties

	Coefficient of thermal expansion $x10^{-6}$ K^{-1}	Heat-deflection temperature - 0.45MPa C	Heat-deflection temperature - 1.8MPa C	Lower working temperature C	Specific heat $J\ K^{-1}\ kg^{-1}$	Thermal conductivity $W\ m^{-1}\ K^{-1}$	Upper working temperature C
Acrylonitrile/Methylacrylate copolymer Barex® - impact modified copolymer	0.665	77	69	-	1800	0.17	-
Cellulose Regenerated Cellulose	-	-	-	-	~ 1400	0.0035 @10C	-
Cellulose Acetate CA	80-180	52-105	48-86	-20	1200-1900	0.16-0.36 @23C	55-95
Cellulose Acetate Butyrate CAB	140	73	62	< -40	-	0.16-0.32 @23C	60-100
Cyclo-olefin copolymer Topas®	60	130	-	-	-	0.16	-
Ethylene-Chlorotrifluoroethylene copolymer E-CTFE	80	115	75	-75	-	0.16 @23C	130-170
Ethylene-Tetrafluoroethylene Copolymer ETFE	90-170	105	70	< -100	1900-2000	0.24 @23C	150-160
Fluorinated Ethylene Propylene Copolymer FEP	83 - 104	50	70	-250	1100	0.19 - 0.24 @23C	150 - 200
Hexafluoropropylenevinylidenefluoride copolymer FKM	160	-	-	-10 to -50	-	0.2 @23C	220 to 300
Poly L lactic acid - Biopolymer PLLA	-	-	-	-10	-	-	50
Polyacrylonitrile-butadiene-styrene ABS	80	98	89	-	-	0.17 @23C	70-100
Polyamide - Nylon 4, 6 PA 4,6	80-90	220	160	-40	-	0.30 @23C	100-200
Polyamide - Nylon 6 - 30% Glass Fibre Reinforced PA 6 30% GFR	2.5	210	220	-	1500	0.28 @23C	180
Polyamide - Nylon 6 PA 6	95	200	80	-40	1700	0.24-0.28 @23C	80-160
Polyamide - Nylon 6, 6 PA 6,6	90	200	100	-30	1670	0.25 @23C	80-180

Polymer - Thermal Properties

	Coefficient of thermal expansion $x10^{-6}$ K^{-1}	Heat-deflection temperature - 0.45MPa C	Heat-deflection temperature - 1.8MPa C	Lower working temperature C	Specific heat $J K^{-1} kg^{-1}$	Thermal conductivity $W m^{-1} K^{-1}$	Upper working temperature C
Polyamide - Nylon 6, 6 - 30% Carbon Fibre Reinforced PA 6, 6 - 30% CFR	14	-	260	-	-	0.51	120-200
Polyamide - Nylon 6, 6 - 30% Glass Fibre Reinforced PA 6,6 30% GFR	20-30	257	252	-	-	0.23 @23C	80-200
Polyamide - Nylon 11 PA 11	125	150	55	-50	-	0.3 @23C	70-130
Polyamide - Nylon 12 - 30% Glass Fibre Reinforced PA 12 - 30% GFR	20	-	160	-78	-	0.16	105-150
Polyamide - Nylon 12 PA 12	100-120	130-135	48-55	-	-	-	-
Polyamide/imide PAI	25-31	-	278-9	= < -200	1000	0.26-0.54 @23C	200-260
Polyaramid Polymetaphenylene isophthalamide	20	-	149	-	1200	0.13 @23C	200 - 300
Polyaramid Polyparaphenylene terephthalamide	-2 along axis	-	-	-200	1400	0.04 @23C	180-245
Polybenzimidazole PBI	23	435	-	-	-	0.41 @23C	260-400
Polybutylene terephthalate PBT	-	150	60	-	1200-2300	-	120-?
Polybutylene terephthalate - 30% Glass Fibre Reinforced PBT 30% GFR	20-70	220	200	-	-	0.24 @23C	120-200
Polycarbonate PC	66-70	140	128-138	-135	~1200	0.19-0.22 @23C	115-130
Polycarbonate - 30% Carbon Fiber Reinforced PC - 30% CFR	14	-	-	-	-	0.7	130
Polycarbonate - 30% Glass Fibre Filled PC - 30% GFR	30	147	142	-	1080	0.26	140
Polychlorotrifluoroethylene PCTFE	70	126	-	-240	900	0.13	120-149
Polyetheretherketone PEEK	47/108	> 260	160	-	1340	0.25 @23C	250
Polyetherimide PEI	56	200	190	-	2000	0.22 @23C	170-200

Polymer - Thermal Properties

	Coefficient of thermal expansion $x10^{-6}$ K^{-1}	Heat-deflection temperature - 0.45MPa C	Heat-deflection temperature - 1.8MPa C	Lower working temperature C	Specific heat $J K^{-1} kg^{-1}$	Thermal conductivity $W m^{-1} K^{-1}$	Upper working temperature C
Polyetherketoneketone PEKK	38	-	175	-	-	0.25	260
Polyethersulphone PES	55	> 260	203	-110	-	0.13-0.18 @23C	180-220
Polyethylene - High density HDPE	100-200	75	46	-	1900	0.45-0.52 @23C	55-120
Polyethylene - Low Density LDPE	100-200	50	35	-60	1900-2300	0.33 @23C	50-90
Polyethylene - Medium Density MDPE	100-200	62	43	-118	1900	0.45-0.52	-
Polyethylene - U.H.M.W. UHMW PE	130-200	69	42	-	1900	0.42-0.51 @23C	55-95
Polyethylene naphthalate PEN	20-21 - biax film	-	-	-	-	0.15 @23C	155
Polyethylene terephthalate Polyester, PET, PETP	20-80	115	80	-40 to -60	1200 - 1350	0.15-0.4 @23C	115-170
Polyhydroxybutyrate - Biopolymer PHB	-	-	-	-	-	-	95
Polyhydroxybutyrate/ Polyhydroxyvalerate 8% - Biopolymer PHB92/PHV 8	-	-	-	-	1400	0.15 @23C	-
Polyhydroxybutyrate/ Polyhydroxyvalerate 12% - Biopolymer PHB88/PHV12	-	-	-	-	1400	0.15 @23C	-
Polyimide PI	30-60	-	360	-270	1090	0.10-0.35 @23C	250-320
Polymethylmethacrylate PMMA, Acrylic	70-77	105	95	-40	1400 - 1500	0.17-0.19 @23C	50 to 90
Polymethylpentene TPX®	117	100	40	-20 to -40	2000	0.17 @23C	75-115
Polyoxymethylene - Copolymer Acetal - Copolymer POMC	80-120	160	110	-40	1500	0.23-0.3 @23C	80-120
Polyoxymethylene - Homopolymer Acetal - Homopolymer POMH	122	170	135	-	1500	0.22-0.24 @23C	80-120

Polymer - Thermal Properties

	Coefficient of thermal expansion $x10^{-6}$ K^{-1}	Heat-deflection temperature - 0.45MPa C	Heat-deflection temperature - 1.8MPa C	Lower working temperature C	Specific heat $J K^{-1} kg^{-1}$	Thermal conductivity $W m^{-1} K^{-1}$	Upper working temperature C
Polyoxymethylene/Acetal Copolymer - 10% Carbon Fibre Reinforced POMC - 10% CFR	60	-	-	-	-	0.4	100
Polyphenyleneoxide PPO (modified), PPE (modified)	60	137	125	-40	-	0.22 @23C	80-120
Polyphenyleneoxide (modified), 30% Glass Fibre Reinforced PPO 30% GFR	25-30	165	135	-	-	0.28 @23C	90-160
Polyphenylenesulphide PPS	4.0	-	104	-	-	23/	170
	-	-	-	-	-	0.3	-
Polyphenylenesulphide - 20% Carbon Fibre Reinforced PPS - 20% CFR	15	-	260	-	-	0.47	220
Polyphenylenesulphide - 40% Glass Fibre Reinforced PPS - 40% GFR	22-35	> 260	240	-	-	0.29-0.45 @23C	200-260
Polyphenylsulphone PPSu	55	210	200	-	-	0.35	180-210
Polypropylene PP	100-180	100-105	60-65	-10 to -60	1700 - 1900	0.1-0.22 @23C	90-120
Polystyrene PS	30-210	90	80	-	1200	0.1-0.13 @23C	50-95
Polystyrene - Conductive High Impact Conductive Polystyrene	4.5	-	85	-	-	-	-
Polystyrene - Cross-linked PS - X - Linked	70-90	-	-	-	-	0.17 @23C	93
Polysulphone PSu	56	-	174	-	-	0.26	150-180
Polytetrafluoroethylene PTFE	100-160	120	54	-260	1000	0.25 @23C	180-260
Polytetrafluoroethylene coated Glass Fabric PTFE 75 / Glass 25	-	-	-	-190 to -60	-	-	260
Polytetrafluoroethylene filled with Glass PTFE 25% GF	75-100	-	-	-	-	0.33-0.42 @23C	260

Polymer - Thermal Properties

	Coefficient of thermal expansion $x10^{-6}$ K^{-1}	Heat-deflection temperature - 0.45MPa C	Heat-deflection temperature - 1.8MPa C	Lower working temperature C	Specific heat $J K^{-1} kg^{-1}$	Thermal conductivity $W m^{-1} K^{-1}$	Upper working temperature C
Polyvinylchloride - Unplasticised UPVC	75-100	70	67	-30	1000-1500	0.12-0.25 @23C	50-75
Polyvinylfluoride PVF	50-97	120	80	-70	1000 - 1800	-	150 - 200
Polyvinylidenechloride PVDC	190	-	-	-	-	0.13 @23C	80-100
Polyvinylidenefluoride PVDF	80-140	120-150	80-115	-40	-	0.1-0.25 @23C	135-150
Silicone Elastomer	250-300	-	-	-70 to -50	1300 - 1500	0.22 @23C	200-260
Tetrafluoroethylene-perfluoro(alkoxy vinyl ether) - Copolymer PFA	76-78	63-80	48-50	-	-	0.19	260
Vectra A® - 15% Glass Fibre Reinforced Liquid Crystal Polyester - 15% GFR	5-18	-	230	-	-	3.0-3.3	200-220
Vectra A® - 25% Glass Fibre Reinforced Vectra A® - 25% GFR	1.00	227	165	-	-	-	-
Vectra A® - 30% Glass Fiber Reinforced Vectra A® - 30% GFR	3-10	250	235	-	-	-	200-220
Vectra A® - Liquid Crystal Polyester Vectra A®	-5 to +75	220	180	-200	1000	0.18 @23C	200-220
Vectra B® - 30% Glass Fibre Reinforced Liquid Crystal Polyester - 30% GFR	3-13	-	235	-	1626	-	200-220
Vectra B® - Liquid Crystal Polyester/amide copolymer Vectra B®	-5 to +40	-	200	-	1000	0.18 @23C	-
Vectra MT1300 - Liquid Crystalline Polyester Vectra MT1300	4	94	187	-	-	-	-