

Plastic material property list

Raw material technical value	standard	unit	POM	POM-PTFE	UPE1000	ABS	PMMA	PP	UPE-ESD	NYLON-ESD	MC-NYLON	PETP/PET	PSU	PPS	PEEK	PEEK-30GF	PC
一、Basic value																	
1、Density (ρ)	ISO1183	g/cm ³	1.4	2.16	0.93	1.04	1.18	0.9	0.95	1.13	1.15	1.39	1.24	1.29	1.32	1.49	1.2
2、Water absorption rate	DIN53495	%	0.8	0.01	0.01	0.4	0.3	0.01	-	0.3	2.2	≥0.2	0.23	-	0.5	0.11	0.35
3、Chemical resistance			-		DIN8075	-	-	-					-	-	-	-	
4、Continuous use temperature (not subject to strong loads)																	125
Upper temperature limit	-	°C	90	250	90	70	75-90	100	200	150	105	110	160	180	260	260	135
Lower temperature limit	-	°C	-50	-	-150	-50	-40	5	-	-	-	-	-100	-50	-40	-40	-60
二、Mechanical properties																	
1、Yield tensile strength (σ _s)	ISO527	MPA	62	25	17	41	70	33	22	70	80	90	70	76	97	156	
2、Yield strain (ε _s)	ISO527	%	10	-	20	4	-	14		-	-	-	5.5	-	4.9	3	
3、Ultimate tensile strength (σ _R)	ISO527	MPA	-	-	40	35	72	-				15	-	-	-	157	
4、Ultimate tensile strain (ε _R)	ISO527	%	40	-	>350	45	5	>50	>600	50	50		50-100	30	>60	2.7	>50
5、Impact toughness (a _n)	ISO179	KJ/M ²	O.B.	-	O.B.	O.B.	15	O.B.					O.B.	O.B.	O.B.	40.3	
6、Shore D hardness	DIN53505		85	-	62	70	125	70	60	77	77	-	86	86	90	92	
7、Bending strength (σ _{B3.5%})	ISO178	MPA	-	50	27	70	-	-	30				106	-	170	250	M75
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三、Thermal performance																	
1、vicat vst/b/50	ISO306	°C	150		80	98	100	154					-	-	250	300	150
vst/a/50		°C	-		-	-	-	-					185	-	-	-	
2、HDT/B	ISO75	°C	-	121	65	97	95	103	70	255	195	-	181	-	240	340	130
HDT/A		°C	100		42	-	-	-					174	200	152	315	
4、Thermal conductivity20°C (λ)	DIN52612	W/(mxk)	0.31	0.25	0.42	0.25	0.19	0.22	0.43	0.28	0.29	0.29	0.26	0.35	0.25	0.43	0.21
四、Electrical performance																	
1、Volume resistance (ρ _o)	VDE0303	XCM	≥10 ¹⁵	≥10 ¹⁸	≥10 ¹⁴	≥10 ¹⁴	>10 ¹⁵	>10 ¹⁶	10 ⁶⁻⁸	10 ¹²	10 ¹²	≥10 ¹⁵	5×10 ¹⁶	≥10 ¹⁵	.9×10 ¹⁵	≥10 ¹³	>10 ¹⁵
2、Surface resistance (Ro)	VDE0303		≥10 ¹³	≥10 ¹⁷	≥10 ¹²	≥10 ¹³	>10 ¹⁵	≥10 ¹³	10 ³⁻⁵	10 ¹³	10 ¹³	≥10 ¹⁴	3×10 ¹⁶	≥10 ¹⁵	≥10 ¹⁵	≥10 ¹³	>10 ¹⁵
五、Other values																	
1、Adhesion			+	-	-	+	+	0					+	+	+	+	+
2、Non-toxic and harmless	EEC90/128		+	+	+	-	+	+					+	+	-	-	+
4、Combustion performance	UL94		HB		HB	HB	HB	HB			HB		V_0	V_0	V_0	V_0	V_0
5、UV resistance U.V.			0		-	-	+	0			-		-	+	0	0	+
六、Chemical properties																	
1、Acid resistance			+	+	+	+	+	+	+	+	+	-	+	+	+	+	+
2、Alkali resistance			+	-	+	0	+	+	+	+	+	-	+	0	+	+	+

1)The above data is measured by a professional and is based on our current experience. These data can be used directly to a large extent, but are not guaranteed to be suitable for any a
 2)0. B.=No breaks during the test +=YES 0=Subject to availability -=NOT

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