

Properties of Primalloy Type A

Mitsubishi Chemical Corporation
Performance Polymers Department

Item	Method	Unit	A1500N	A1600N	A1700N	A1800N	A1900N
Density	JIS K7112-1999	g/cm ³	0.97	1.00	1.02	1.08	1.11
MFR(230℃、21.2N)	JIS K7210-1999	g/10min	11	5	6	30	23
Hardness Duro-A	JIS K6253-1993	-	59	68	75	85	94
Hardness Duro-D		-	-	-	-	-	38
Tensile strength at break	JIS K6251-1993	MPa	6	8	9	11	15
Tensile elongation at break	JIS K6251-1993	%	810	910	840	930	960
Izod impact strength(-40℃)	JIS K7110-1984	KJ/m ²	NB	NB	NB	NB	NB
Compression Set(70℃、22hr)	JIS K6262-1993	%	59	66	65	65	70
Bonding strength to ABS	Mitsubishi Chemical meth	N/25mm	127	225	265	137	176
Bonding strength to PC		N/25mm	118	196	245	431	323
Bonding strength to PMMA		N/25mm	108	108	98	98	196
Taber Abrasion	JIS K7204-1999	mg	78	39	36	4	1
Oil Resistance △W	JIS K6258-1993	%	101	92	69	33	17
Oil Resistance △V		%	107	99	76	39	21
Melting peak point	DSC	℃	145	160	160	160	167
Softening Point(50℃/hr 2.5N)	Mitsubishi Chemical meth	℃	89	102	117	132	-
Flammability	UL-94		equivalent toHB	equivalent toHB	equivalent toHB	equivalent toHB	equivalent toHB
Mold shrinkage (MD/TD)	Mitsubishi Chemical meth	%	2.7/0.5	2.0/0.1	1.1/0.4	0.3/0.8	0.5/0.7

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Properties of Primalloy Type B

Item	Method	Unit	B1902N	B1900N	B1903N	B1910N	B1920N	B1922N	B1932N	B1942N
Density	JIS K7112-1999	g/cm ³	1.14	1.11	1.14	1.13	1.16	1.19	1.23	1.24
MFR(230℃, 21.2N)	JIS K7210-1999	g/10min	50	15	27	15	20	29	46	59
Hardness Duro-D	JIS K6253-1993	-	40	41	45	48	55	58	64	66
Tensile strength at break	JIS K6251-1993	MPa	18	17	23	27	30	41	42	45
Tensile elongation at break	JIS K6251-1993	%	860	900	910	850	800	800	700	730
Flexural modulus	JIS K7203-1982	MPa	64	70	90	110	200	200	350	405
Flexural strength	JIS K7203-1982	MPa	4	4.5	5.5	6.5	9.5	10	17	19
Tear strength	JIS K6252-1993	N/mm	-	105	130	117	122	-	147	163
Izod impact strength(23℃)	JIS K7110-1984	KJ/m ²	NB	NB	NB	NB	NB	NB	NB	NB
Izod impact strength(-40℃)		KJ/m ²	NB	NB	NB	NB	-	-	-	-
Taber Abrasion	JIS K7204-1999	mg	12	25	11	20	15	-	-	-
Oil Resistance △W	JIS K6258-1993	%	19	33	15	26	14	8	-	-
Oil Resistance △V		%	19	40	17	31	18	10	-	-
Melting peak point	DSC	℃	173	182	182	194	203	207	215	225
Vicat Softening Point	JIS K7206-1999	℃	136	135	142	-	179	185	-	-
Flammability	UL-94		equivalent to HB	HB	equivalent to HB	HB	HB	equivalent to HB	HB	equivalent to HB
Mold shrinkage (MD/TD)	Mitsubishi Chemical meth	%	0.8/0.8	0.9/0.7	0.9/0.7	1.1/1.0	1.4/1.3	1.4/1.3	-	-

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Properties of Primalloy Type A Special Grades

Item	Method	Unit	A1606C	A1706C	A1602N	A1704N	A1610N	A1710N
Density	JIS K7112-1999	g/cm ³	1.00	1.02	0.995	1.08	1.01	1.03
MFR(230°C、21.2N)	JIS K7210-1999	g/10min	3.5	7	3	6	9	10
Hardness Duro-A	JIS K6253-1993	-	70	78	73	83	68	79
Tensile strength at break	JIS K6251-1993	MPa	13	14	11	8	8.5	10
Tensile elongation at break	JIS K6251-1993	%	870	890	920	525	900	928
Izod impact strength(-40°C)	JIS K7110-1984	KJ/m ²	NB	NB	NB	NB	NB	NB
Compression set(70°C×22hr)	JIS K6262-1993	%	62	64	63	63	71	72
Bonding strength to ABS	Mitsubishi Chemical meth	N/25mm	137	210	118	139	41(PA6)	57(PA6)
Bonding strength to PC		N/25mm	190	207	204	156	-	-
Taber Abrasion	JIS K7204-1999	mg	0.4	0	17	6	-	3
Oil Resistance △W	JIS K6258-1993	%	94	67	80	43	85	59
Oil Resistance △V		%	101	74	86	50	78	66
HAZE(1mmt)	JIS K7136-2000	%	23	28	-	-	-	-
Melting peak point	DSC	°C	160	160	185	185	160	160
Softening Point(50°C/hr 2.5N)	Mitsubishi Chemical meth	°C	112	118	120	140	-	115
Flammability	UL-94		equivalent toHB	equivalent toHB	HB	equivalent toHB	equivalent toHB	equivalent toHB
Mold shrinkage (MD/TD)	Mitsubishi Chemical meth	%	1.8/0.8	1.3/0.7	1.4/0.6	1.4/0.8	1.4/0.7	0.8/0.6
Features			Transparent	Transparent	Easy Process	Easy Process	PA6 Bond	PA6 Bond

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Properties of Primalloy Type B Special Grades

Item	Method	Unit	B1600N	B1700N	B1800N	B1921N
Density	JIS K7112-1999	g/cm ³	0.97	0.99	1.03	1.19
MFR(230°C, 21.2N)	JIS K7210-1999	g/10min	2	0.5	10	12
Hardness Duro-A	JIS K6253-1993	-	63	73	83	-
Hardness Duro-D	JIS K6253-1993	-	15	28	30	60
Tensile strength at break	JIS K6251-1993	MPa	7	8.5	11	42
Tensile elongation at break	JIS K6251-1993	%	720	550	570	850
Tear strength	JIS K6252-1993	N/mm	35	41	56	137
Izod impact strength(23°C)	JIS K7110-1984	KJ/m ²	NB	NB	NB	NB
Izod impact strength(-40°C)		KJ/m ²	NB	NB	NB	-
Oil Resistance Δ W	JIS K6258-1993	%	57	42	33	9
Oil Resistance Δ V		%	59	44	36	11
Melting peak point	DSC	°C	182	182	182	203
Vicat Softening Point	JIS K7206-1999	°C	-	-	92	178
Softening Point(50°C/hr 2.5N)	Mitsubishi Chemical meth	°C	106	108	-	-
Flammability	UL-94		equivalent toHB	equivalent toHB	equivalent toHB	equivalent toHB
Mold shrinkage (MD/TD)	Mitsubishi Chemical meth	%	2.5/0.9	2.6/0.9	1.7/1.4	1.3/1.3
Features			Soft & Oil Resistance			High Strength

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