GRADES AND PHYSICAL PROPERTIES

			ARLEN							Remarks			
			C/Eseries (For electrical and electronic parts)										
		Test method			flame-retardant	flame-retardant	flame-retardant	flame-retardant	flame-retardant	flame-retardant	flame-retardant	flame-retardant	flame-retardant
Physical properties	Unit	ASTM	C230	C240	C430N	E430N	CH230N	E630N	E440NK	PA46	PA9T	PPS	LCP
Glass fiber content	%	–	30	40	30	30	30	30	40	30	33	40	30
Specific gravity	–	D 792	1.42	1.53	1.66	1.66	1.63	1.58	1.75	1.63	1.68	1.67	1.62
Mechanical properties[*1]													
Tensile strength	MPa	D 638	170	210	170	170	160	210	190	180	180	170	140
Tensile elongation	%	D 638[*2]	3	3	3	3	4	6	3	3	3	2	3
Flexural strength	MPa	D 790	260	300	250	250	240	275	280	260	240	250	220
Flexural modulus	MPa	D 790	10,000	13,000	11,400	11,400	11,000	12,500	17,000	11,000	11,000	13,000	13,000
Izod impact strength (notched)	J/m	D 256	80	85	85	80	80	100	100	90	100	80	110
Rockwell hardness	M scale	D 785	110	110	95	100	95	100	100	—	—	100	—
Thermal properties													
Melting point	℃	–	310	310	310	320	310	320	320	290	306	280	—
Glass transition point	℃	–	85	85	85	95	85	95	95	89	125	90	—
Deflection temp. under load (1.82MPa)	℃	D 648	300	300	295	305	290	310	300	285	285	265	280
Coefficient of linear thermal expansion	Flow direction	E831-93	1.8	1.8	1.2	2.2	1.5	1.6	1.8	—	2.5	2.0	—
	×10^{-5}/℃ Vertical direction		10	8.0	9.2	7.3	8.9	6.8	6.9	—	4.0	4.0	—
Flammability	–	UL 94	HB	HB	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0
Electrical properties[*1]													
Volume resistivity	Ω·cm	D 257	10^{16}	10^{16}	10^{15}	10^{15}	10^{15}	10^{15}	10^{15}	10^{15}	10^{16}	10^{16}	10^{16}
Dielectric constant (10^6 Hz)	–	D 150	4.5	4.5	4.0	3.6	4.0	3.9	4.1	4.0	3.7	3.8	4.0
Dielectric dissipation factor (10^6 Hz)	–	D 150	0.018	0.018	0.013	0.012	0.013	0.013	0.011	—	0.014	0.0014	—
Dielectric breakdown voltage	KV/mm	D 149	28	30	26	24	25	24	18	—	38	17	—
Mold shrinkage(2mmt)													
Flow direction	%	D 955	0.5	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.4	0.2	0.02
Vertical direction			0.8	0.8	0.7	0.9	0.8	0.8	0.6	1.7	0.9	0.4	0.06
Reflow soldering test[*3]													
Water absorption[*4]	%	D 570	3.6	—	2.0	1.9	2.2	2.1	1.4	3.8	0.8	—	—
Peak Temperature under reflow soldering test	℃	Mitsui Method	250[*5]	—	240[*5]	250[*5]	240[*5]	255[*5]	250[*5]	< 210[*5]	245[*5]	265[*5]	> 265[*5]

Notes:
★ The above figures are just representative values but not specification values.
*1 Specimen was in the dry condition
*2 Elongation was measured between the chucks
*3 The Size of Specimen: 64L × 6W × 0.8Tmm
*4 Moist: In a saturated state in the atmosphere at 23℃ and a relative humidity of 65%
*5 Heat resistance under a reflow soldering process depends on the dimension of the products and the reflow conditions.

Unit conversion:
Tensile strength, flexural strength, flexural modulus.
1 MPa = 10.2 kg/cm^2

Izod impact strength.
1 J/m = 0.102 kg·cm/cm