

# Comparison table of characteristic values with various plastic products

Variety items		Vulcanized Fibre (Thickness1.0mm)	Nylon 66 (polyamide)	Acrylonitrile butadiene styrene	Polycarbonate	Polypropylene	Unsaturated polyester	Polyvinyl chloride (hard)	Polyethylene (high density)	Bakelite (paper)
		VF	PA66	ABS	PC	PP	UP	PVC	HDPE	PF
Density	g/cm <sup>3</sup>	1.25~1.30	1.04~1.24	0.99~1.10	1.13~1.24	0.90~0.91	1.10~1.46	1.35~1.45	0.94~0.97	1.30~1.40
Tensile strength	MPa	Machine direction 110~140	42~84	32~58	57~90	30~80	42~70	35~63	23~48	70~130
Elongation	%	Machine direction 9~14	60~90	60~100	90~150	300~700	<5	2.0~4.0	50~400	<1
Breakdown strength	Kv/mm	18~25	15~19	12~16	16~20	30~32	15~20	17~50	18~20	>17
Arc resistance	sec	120~140	130~140	71~87	12	65~70	125	60~80	135~160	4~10
Volume resistivity	MΩ·cm	10 <sup>2</sup> ~10 <sup>3</sup>	10 <sup>7</sup> ~10 <sup>9</sup>	10 <sup>7</sup>	10 <sup>10</sup>	>10 <sup>10</sup>	10 <sup>8</sup>	>10 <sup>10</sup>	10 <sup>2</sup> ~10 <sup>9</sup>	10 <sup>4</sup> ~10 <sup>7</sup>
Compressive strength	MPa	180~240	42~91	15~83	75~88	39~56	92~255	56~91	150~1000	230~320
Impact strength Izod	KJ/m <sup>2</sup>	5.7~6.2	0.21	0.6~5.4	8.0~8.5	0.7~1.4	0.1~0.2	0.2~1.1	0.26~0.32	0.3~0.4
Hardness ROCKWELL	HR	R50~70	R90~120	R68~118	R121	R88~105	M70~115	70~90	60~70	M124~128
Bending strength	MPa	90~120	44~110	50~95	73~93	42~56	59~159	70~112	10	90~180
Water absorption rate 24Hr	%	45~50	0.4~1.5	0.1~0.3	0.23~0.26	<0.03	0.06~0.15	0.07~0.40	<0.01	0.6~1.0
Thermal deformation temperature 1.81MPa	°C	110	182	75~107	125~135	100~110	60~200	50~75	60~82	115~125