

Property Table (PA66/SPS grade)

Properties	Test Method	condition	Units	N WA 5030 >(PA66+PS-ST)- GF(30)<	N WA 7020 >(PA66+PS-ST)- GF(20)<	N WA 7030 >(PA66+PS-ST)- GF(30)<	-	-	-	-	-	-
ISO Identification Mark												
Physical												
Density	ISO 1183		g/cm ³	1.35	1.25	1.32						
Glass Content			wt%	30	20	30						
Water Absorption	ISO 62	24h 50%RH	%	0.19	0.22	0.2						
Mechanical properties												
Tensile Strength at Break			MPa	165	150	175						
Tensile Modulus	ISO 527		MPa	10,000	7,300	10,000						
Tensile Elongation at Break			%	2.4	2.9	2.6						
Flexural Strength	ISO 178		MPa	235	215	250						
Flexural Modulus			MPa	9,400	6,700	9,100						
Izod Impact	ISO 180	Notched at 23°C	kJ/m ²	10	8	11						
		Unnotched at 23°C		40	45	57						
Charpy Impact	ISO 179	Notched at 23°C	kJ/m ²	11	9	11						
		Unnotched at 23°C		47	55	68						
Thermal properties												
Temperature of deflection under load	ISO 75 A	1.8MPa		245	245	245						
	ISO 75 B	0.45MPa		260	260	260						
Linear Thermal Expansion coefficient	TMA	Flow direction, -30~30°C	x10 ⁻⁶ mm/mm/°C	23	30	24						
		Cross flow direction, -30~30°C		43	54	49						
Mould Shrinkage	Idemitsu Method	flow direction	%	0.2 - 0.4	0.3 - 0.6	0.2 - 0.5						
		cross flow direction		0.3 - 0.6	0.7 - 1.0	0.6 - 0.9						
Flammability												
Flammability	UL 94	HB minimum thickness	mm	1.5	1.5	1.5						
		V-0 minimum thickness		-	-	-						
		5VA minimum thickness		-	-	-						
RTI Electrical (Elec)			°C	50	50	50						
RTI Mechanical with impact (Imp)	UL 746B		°C	50	50	50						
RTI Mechanical without impact(Str)			°C	50	50	50						
Comparative Tracking Index(CTI)	IEC 60112, Solution A		PLC level	2	1	2						
High Voltage Arc Tracking Rate(HVTR)	UL 746A		PLC level	-	-	-						
Hot Wire Ignition (HWI)	UL 746A	@ 3.0 mm	PLC level	4	4	4						
		@ 1.5 mm		4	5	4						
		@ 0.75 mm		-	-	-						
High Ampere Arc Resistance (HAI)	UL 746A	@ 3.0 mm	PLC level	0	0	0						
		@ 1.5 mm		0	0	0						
		@ 0.75 mm		-	-	-						
Arc Resistance	ASTM D495		PLC level	5	5	5						
Electrical properties												
Volume Resistivity	IEC 60093		Ohm-cm	7.4E+15	3.1E+15	6.7E+15						
Dielectric Strength	ASTM D149		kV/mm	22	25	18						
Dielectric Constant	IEC 60250	1MHz		3.3	3.1	3.2						
Dissipation Factor	IEC 60250	1MHz		0.034	0.034	0.069						
Standard Molding Parameters												
Melt Temperature			°C	280 - 310	280 - 310	280 - 310						
Mold Temperature			°C	50 - 80	50 - 80	50 - 80						
Pre-drying				80°C , 3-5hrs, with vacuum dryer or dehumidification dryer	80°C , 3-5hrs, with vacuum dryer or dehumidification dryer	80°C , 3-5hrs, with vacuum dryer or dehumidification dryer						

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◇Data in this Catalogue shows sample figures measured under certain specific conditions.

◇USAGE OF THE PRODUCTS IN THIS CATALOGUE DOES NOT WARRANT ANY SUCCESSFUL RESULTS OF APPLICATIONS OF THE PRODUCTS FOR SPECIFIC USAGE.

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◇Figures of physical characteristics of other producer's resins have been referred from their Catalogues and information source thereof.

◇Please note that the content of this Catalogue may be altered from time of time according to the improvement of the products without prior notice.

◇Flammability rating in this Catalogue was evaluated with small-scale test method and it is not intended to reflect fire proof performance in case of actual fire.