

Denka

DENKA Glass Fiber reinforced ABS Physical properties

Property	Test Methods	Conditions	Unit	GR-2010G	GR-2020G	GR-2030G	K-5110G	K-5120G	K-5130G
				General Purpose GF=10%	General Purpose GF=20%	General Purpose GF=30%	Heat Resistant GF=10%	Heat Resistant GF=20%	Heat Resistant GF=30%

◆ISO Method

Melt Mass Flow Rate	ISO 1133	220deg.C 98N	g/10min	8	4	2	0.6	0.4	0.2
	-	265deg.C 98N		-	-	-	14	9	6
Tensile Modulus	ISO 527-1, -2	1mm/min	MPa	3,920	5,860	7,980	4,000	6,050	8,000
Tensile stress at yield		50mm/min	MPa	55	88	94	-	-	-
Tensile stress at break			MPa	55	88	94	58	88	116
Flexural Modulus	ISO 178	2mm/min	MPa	3,850	5,820	7,920	3,800	5,800	7,850
Flexural Strength			MPa	100	120	130	97	141	185
Charpy Impact Strength	ISO 179	Notched	kJ/m ²	7	7	6	8	10	11
Temp of deflection under load	ISO 75-1, -2	1.8MPa Flatwise	deg.C	95	103	104	129	134	136
Vicat Softening Temp	ISO 306	50N	deg.C	108	109	110	135	138	140
Rockwell Hardness	ISO 2039-2	R-scale	-	117	118	119	115	115	116
Density	ISO 1183	23 deg.C	kg/m ³	1,110	1,180	1,260	1,150	1,220	1,240

◆ASTM Method

Tensile Modulus	ASTM D-638	5mm/min	MPa	78	98	108	58	77	84
Flexural Modulus	ASTM D-790	15mm/min	MPa	4,410	5,590	687	3,550	4,700	5,900
Flexural Strength			MPa	127	137	147	93	108	118
Izod Impact Strength	ASTM D-256	Notched	J/m	127	108	98	108	98	87
Heat Deflection Temperature	ASTM D-648	1.8MPa Edgewise	deg.C	103	104	105	127	129	130
Vicat Softing Temperature	ASTM D-1525	50N	deg.C	111	112	113	134	135	136
Rockwell Hardness	ASTM D-785	R-scale	-	119	121	122	120	122	123
Density	ASTM D-792	23 deg.C	-	1.10	1.17	1.26	1.13	1.21	1.23

◆Other properties

Flammability	UL94 (UL File No.E49895)		HB	HB	HB	HB	HB	HB
Molding Shrinkage	DENKA Method	2mmt	%	0.2~0.4	0.1~0.3	0.1~0.3	0.2~0.4	0.1~0.3

* The above values are typical and not guaranteed.

Last update : 31-May-2016