TENAC®-C PROPERTIES (ISO)

Items			Test method	Units	Grade	Standard Grade				
						High Viscosity	Medium Viscosity		High Flowability	
						3510	4520	5520	7520	8520
Density			1183('87)	g/cm³		1.41	1.41	1.41	1.41	1.41
Mechanical	Yield Stress or Tensile Stress at Break		527-1 & -2('93)	MPa		63	66	66	67	67
Mechanical	Tensile Strain at Break		527-1 & -2('93)	%		60	55	50	45	30
Mechanical	Tensile Modulus		527-1 & -2('93)	MPa		2650	2800	2850	2850	2900
Mechanical	Notched Charpy Impact Strength 23°C		179/1eA('93)	kJ/m²		9	7	6	5	4.5
Thermal	Melt Flow Rate		1133('97)D	g/10min		2.8	9	15	30	45
Thermal	Deflection Temperature Under Load	1.8 MPa	75-1 & -2('93)flat	°C		95	100	100	104	105
Thermal	Deflection Temperature Under Load	0.45 MPa	75-1 & -2('93)flat	°C		156	156	156	157	156
Flammability			UL 94	–		HB	HB	HB	HB	HB
Mold shrinkage	Flow		Asahi Kasei	%		1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0
Mold shrinkage	Right-angle		Asahi Kasei	%						
Features						High-impact, high-elongation grade, with increased molecular weight.	Standard-flow grade, with minimized mold deposit.	Similar to 4520, but with higher flow and minimized mold deposit.	High-flow grade, with minimized mold deposit.	Superhigh-flow grade, with minimized mold deposit.

Items			Test method	Units	Grade	HC Series		High-Cycle	Weather-Resistant			
						Medium Viscosity	High Flowability	High Flowability	High Viscosity	Medium Viscosity		High Flowability
						HC450	HC750	7554	3513	4513	4563	7513
Density			1183('87)	g/cm³		1.41	1.41	1.41	1.41	1.41	1.41	1.41
Mechanical	Yield Stress or Tensile Stress at Break		527-1 & -2('93)	MPa		69	71	66	62	65	64	66
Mechanical	Tensile Strain at Break		527-1 & -2('93)	%		55	45	30	55	50	50	40
Mechanical	Tensile Modulus		527-1 & -2('93)	MPa		3100	3200	2850	2550	2700	2650	2750
Mechanical	Notched Charpy Impact Strength 23°C		179/1eA('93)	kJ/m²		7	5	4	8	7	6	5
Thermal	Melt Flow Rate		1133('97)D	g/10min		8	30	30	3	9	9	30
Thermal	Deflection Temperature Under Load	1.8 MPa	75-1 & -2('93)flat	°C		106	107	100	93	97	91	100
Thermal	Deflection Temperature Under Load	0.45 MPa	75-1 & -2('93)flat	°C		160	161	157	153	154	152	156
Flammability			UL 94	–		HB	HB	HB	–	–	–	–
Mold shrinkage	Flow		Asahi Kasei	%		1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0	1.6~2.0
Mold shrinkage	Right-angle		Asahi Kasei	%								
Features						New Copolymer, the improvement of physical properties of standard grades.		High-flow grade, with properties necessary for VCR reels.	Weather-Resistant grade containing UV absorber and other additives for superior weatherability.			

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TENAC®-C PROPERTIES (ISO)

Items			Test method	Units	Grade	Glass-Reinforced		Carbon-Fiber Reinforced	
						Medium Viscosity	High Flowability		
						GN455	GN755	CF452	CF454
Density			1183('87)	g/cm³		1.59	1.59	1.43	1.46
Mechanical	Yield Stress or Tensile Stress at Break		527-1 & -2('93)	MPa		100	107	120	120
	Tensile Strain at Break		527-1 & -2('93)	%		2	2	2	1
	Tensile Modulus		527-1 & -2('93)	MPa		8300	8600	9000	14500
	Notched Charpy Impact Strength 23°C		179/1eA('93)	kJ/m²		7	7	4	5
Thermal	Melt Flow Rate		1133('97)D	g/10min		4	8	5	4
	Deflection Temperature Under Load	1.8 MPa	75-1 & -2('93)flat	°C		163	163	161	163
		0.45 MPa	75-1 & -2('93)flat	°C		165	165	165	166
Flammability			UL 94	–		HB	HB	HB	HB
Mold shrinkage	Flow		Asahi Kasei	%		0.4~0.6	0.4~0.6	0.3~0.6	0.1~0.2
	Right-angle		Asahi Kasei	%		1.0~1.2	1.0~1.2	0.8~1.2	0.6~0.8
Features						25% GF-filled, high-flow grades, with high stiffness and superior dimensional stability.		10% carbon fiber-filled, high-stiffness, high-strength grade with antistatic properties.	20% carbon fiber-filled, high-stiffness, high-strength grade with antistatic properties.

Items			Test method	Units	Grade	Mineral Reinforced	Electro Conductive	High Lubricity	
								High Flowability	High Viscosity
						MT754	TFC64	LD755	LT350
Density			1183('87)	g/cm³		1.58	1.37	1.52	1.41
Mechanical	Yield Stress or Tensile Stress at Break		527-1 & -2('93)	MPa		61	35	55	58
	Tensile Strain at Break		527-1 & -2('93)	%		5	2	10	75
	Tensile Modulus		527-1 & -2('93)	MPa		4900	2200	3600	2200
	Notched Charpy Impact Strength 23°C		179/1eA('93)	kJ/m²		4	3	3	7
Thermal	Melt Flow Rate		1133('97)D	g/10min		20	–	25	3
	Deflection Temperature Under Load	1.8 MPa	75-1 & -2('93)flat	°C		131	85	110	85
		0.45 MPa	75-1 & -2('93)flat	°C		161	146	160	152
Flammability			UL 94	–		HB	HB	HB	HB
Mold shrinkage	Flow		Asahi Kasei	%		1.0~1.2	1.3~1.6	1.4~1.6	1.6~2.0
	Right-angle		Asahi Kasei	%					
Features						20% inorganic-filled, high-stiffness, low-warp grade.	Volume resistivity 10^{0}~$10^{2}\Omega$ • cm	20% inorganic-filled, high-stiffness, low-warp grade.	Excellent friction and wear on metals.

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