

# Dupital

Polyacetal Resin

Properties	Test Method	Terms	Units	Other quality-Improved					
				FU2025	FU2050	UR-20H	ET-20	TC3015	TC3030
				Impact Resistance	Impact Resistance Low Modulus	Impact Resistance	Electro-Conductive	-	-
				-	-	-	Conductive Carbon Filled	Talc 15%	Talc 30%
<b>Physical properties</b>									
Density	ISO 1183	-	g/cm <sup>3</sup>	1.35	1.29	1.36	1.41	1.52	1.63
Water absorption	-	23degC, 60%RH	%	-	-	0.26	0.22	0.21	0.20
<b>Rheological properties</b>									
Melt Mass-flow Rate	ISO 1133	Temperature Load	g/10min	6.0	4.5	2.0	11	11	9.5
Melt Volume-flow Rate			cm <sup>3</sup> /10min	5.2	3.9	1.7	9.5	8.3	6.9
			degC	190	190	190	190	190	190
			kg	2.16	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (3mmt)	-	MD TD	%	1.7 -	1.2 -	1.6 -	1.6 -	1.9 -	1.5 -
<b>Mechanical properties</b>									
Tensile modulus	ISO 527-1 , 527-2	-	MPa	1600	800	1700	2700	4900	6900
Yield stress				39	24	41	-	-	-
Yield strain			%	12	20	12	-	-	-
Nominal strain at break				>100	>200	>100	-	-	-
Stress at 50% strain			MPa	-	-	-	-	-	-
Stress at break				-	-	-	45	54	62
Strain at break	%	-	-	-	4.0	4.0	3.0		
Flexural strength	ISO 178	-	MPa	48	24	53	70	103	111
Flexural modulus				1400	750	1600	2400	4600	7000
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m <sup>2</sup>	NB	NB	NB	100	50	30
Charpy notched impact strength		23 degC	kJ/m <sup>2</sup>	19	65	22	4.0	4.0	4.0
<b>Thermal properties</b>									
Melting temperature	ISO 11357-3		degC	166	166	166	166	166	166
Glass transition temperature	ISO 11357-2		degC	-	-	-	-	-	-
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	76	64	80	97	135	144
Vicat softening temperature	ISO 306	-	degC	-	-	-	-	-	-
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	1.2E-04 1.2E-04	-	1.2E-04 1.2E-04	1.1E-04 1.1E-04	7.0E-05 7.0E-05	-
Flammability	UL94	0.8mmt	-	HB	HB	HB	HB	HB	HB
<b>Electrical properties</b>									
Relative permittivity	IEC 60250	100Hz	-	-	-	4.4	-	-	-
		1MHz	-	-	-	4.4	-	-	-
Dissipation factor	IEC 60250	100Hz	-	-	-	0.008	-	-	-
		1MHz	-	-	-	0.027	-	-	-
Volume resistivity	IEC 60093	-	ohm-m	-	-	1.E+12	1.E-01	-	-
Surface resistivity	IEC 60093	-	ohm	-	-	1.E+16	6.E+01	-	-
Electric strength	IEC 60243-1	1mmt	MV/m	-	-	28	-	-	-
		2mmt	-	-	-	-	-	-	-
		3mmt	-	-	-	-	17	-	-
Comparative tracking index	IEC 60112	-	-	-	-	600	-	-	-

The listed properties are portrayed as general information only and are not product specifications.

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