

# Dupital

Polyacetal Resin

Properties	Test Method	Terms	Units	Low friction and Wear-Resistant					
				FL2010	FL2020	FW-21	FW-24	FS2022	FM2020
				-	-	Oil Contained	Oil Contained	Silicone Oil Contained	MoS2 Contained
				PTFE 10%	PTFE 20%	-	-	-	-
<b>Physical properties</b>									
Density	ISO 1183	-	g/cm <sup>3</sup>	1.46	1.51	1.42	1.41	1.41	1.40
Water absorption	-	23degC, 60%RH	%	0.19	0.18	0.22	0.22	0.22	0.22
<b>Rheological properties</b>									
Melt Mass-flow Rate	ISO 1133	Temperature	g/10min cm <sup>3</sup> /10min degC	7.5	6	9.5	9.5	10	9.0
Melt Volume-flow Rate				6.1	4.7	8.2	8.2	8.6	7.7
				190	190	190	190	190	190
				2.16	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (3mmt)	-	MD TD	%	2.0 -	2.1 -	2.0 -	2.0 -	2.0 -	2.0 -
<b>Mechanical properties</b>									
Tensile modulus	ISO 527-1 , 527-2	-	MPa	2650	2400	2800	2600	2700	2900
Yield stress			52	44	56	51	56	83	
Yield strain			%	8.0	8.0	10.0	11.0	10.0	8.5
Nominal strain at break			18	15	30	35	51	15	
Stress at 50% strain			MPa	-	-	-	-	-	
Stress at break	-	-	-	-	-	-			
Strain at break	%	-	-	-	-	-			
Flexural strength	ISO 178	-	MPa	77	67	81	75	83	94
Flexural modulus			2400	2200	2500	2400	2500	2700	
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m <sup>2</sup>	60	50	100	100	150	100
Charpy notched impact strength		23 degC	kJ/m <sup>2</sup>	5.0	5.0	6.5	7.0	7.5	7.0
<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	102 154	101 151	104 154	102 154	105 150	105 156
Vicat softening temperature	ISO 306	-	degC	-	-	-	-	-	-
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	1.1E-04 1.1E-04	-	1.1E-04 1.1E-04	1.1E-04 1.1E-04	1.1E-04 1.1E-04	1.1E-04 1.1E-04
Flammability	UL94	0.8mmt	-	HB	HB	HB	HB	HB	HB
<b>Electrical properties</b>									
Relative permittivity	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	-
Dissipation factor	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	-
Volume resistivity	IEC 60093	-	ohm-m	1.E+12	-	-	-	-	-
Surface resistivity	IEC 60093	-	ohm	1.E+16	-	-	-	-	-
Electric strength	IEC 60243-1	1mmt 2mmt 3mmt	MV/m	25 - 16	- - -	- - -	- - -	- - -	- - -
Comparative tracking index	IEC 60112	-	-	600	-	-	-	-	-

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

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