

# EFALON<sup>®</sup> TECHNICAL VALUES

	Unit	Test ASTM	Virgin	Glass-filled		Carbon-filled		Bronze-filled	
			T-100	C-15	C-25	K-25	K-35	B-40	B-60
Density, 23°C	gr/cm <sup>3</sup>	D792	2.1-2.2	2.15-2.25	2.2-2.3	2.05-2.15	2.0-2.1	3.05-3.15	3.8-4.0
<b>Mechanical Properties</b>									
Tensile Strength at Break	Kg/cm <sup>2</sup>	D638	140-380	175-260	150-240	110-210	110-160	150-280	140-220
Elongation at Break 23°C	%	D638	200-400	250-280	200-270	70-110	55-90	120-280	110-220
Compressive Stress (%1 Deformation) 23°C	Kg/cm <sup>2</sup>	D695	45-50	60-65	65-70	85-110	95-120	100-105	105-110
Deformation Under Weight (140 kg/cm <sup>2</sup> , 24 hours, 23°C)	%	D621							
Total Deformation			14-16.8	11-15	9.5-13.5	2.9-4.8	2.3-4.3	3.8-4.9	3.7-4.8
Permanent Deformation			7.5-8.5	6-8	4-8	0.4-2.1	0.3-1.8	1.4-2.1	1.5-2
Total Deformation Under Weight	%								
10 kg/cm <sup>2</sup> load, 150°C, 24 hours			---	2.8-3	2.6-2.8	1.8-2	1.3-1.5	1.1-1.2	1-1.1
50 kg/cm <sup>2</sup> load, 150°C, 24 hours			---	18-19	15-16	8-9	5-6	10-11	9-10
Impact Resistance (Izod, notched)	Kj/m <sup>2</sup>	D256	15.5-16.5	14-15.5	12-15	8.5-9		11-12	10-11
Hardness	Shore D	D2240	54-60	60-64	64-68	65-68	66-70	64-68	65-70
<b>Physical Properties</b>									
Coefficient of Friction, Static			0.04	0.05	0.07	0.11	0.13	0.06	0.07
Coefficient of Friction, Dynamic			0.06	0.06	0.09	0.12	0.16	0.12	0.13
PV Limits	Kg.cm Cm <sup>2</sup> .min.								
3 m/min.			23-25	210-215	215-220	220-230	220-230	250-270	300-320
30 m/min.			37-40	250-270	270-300	250-400	250-400	350-380	390-400
300 m/min.			52-56	310-320	330-340	300-450	300-500	400-500	450-550
<b>Thermal Properties</b>									
Specific Heat	Kcal/kg.°C		0.23-0.25	---	---	---	---	---	---
Heat Conductivity (x10 <sup>-4</sup> ) 30°C	Cal/cm.sn.°C		5.5-6	8-9	10-11	15-17	19-21	17-20	17-20
Coefficient of Linear Thermal Expansion (x10 <sup>-5</sup> )	°C <sup>-1</sup>	D696							
25°C-100°C			12.5-16	12-14.5	7-11.5	9.5-10	7.5-8	8-9.5	7.5-9
25°C-200°C			15-19	9-16	7.5-14	11-12	9-11	9.5-11	10-11.5
25°C-300°C			21.5-25	15-18	8.5-18	13-15	12-14	12.5-13.5	13-14
Minimum Allowable Service Temperature in air-Continuous	°C		-260	-260	-260	-260	-260	-260	-260
Maximum Allowable Service Temperature in air-Continuous	°C		+270	+270	+270	+270	+270	+270	+270
<b>Electrical Properties</b>									
Electric Strength, 0,1 mm, Short-term	Kv/mm	D149	40-80	16-19	13-16	---	---	---	---
Relative Permittivity, 50Hz-10 <sup>7</sup> Hz		D150	2-2.1	2.3-2.5	2.5-2.8	---	---	---	---
Volume Resistivity, 23°C	Ohm-cm	D257	>10 <sup>18</sup>	>10 <sup>13</sup>	>10 <sup>13</sup>	>10 <sup>3</sup>	>10 <sup>2</sup>	>10 <sup>8</sup>	>10 <sup>7</sup>
Surface Resistivity, 23°C 50% Relative Humidity	ohm	D257	>10 <sup>16</sup>	>10 <sup>15</sup>	>10 <sup>15</sup>	>10 <sup>7</sup>	>10 <sup>4</sup>	>10 <sup>10</sup>	>10 <sup>9</sup>
Dielectric Loss Factor, 50 Hz., 23°C (dry)		D150	0.00005	0.00075	0.0007	---	---	---	---

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