

Product Properties for ACRYLITE® df light diffusing acrylic polymers

	ASTM Method	ACRYLITE df20 8N (Specialty Grade)	ACRYLITE df21 8N (Specialty Grade)	ACRYLITE df22 8N (Specialty Grade)	ACRYLITE df23 8N (Standard Grade)
Optical Properties					
		Typical Value	Typical Value	Typical Value	Typical Value
Light Transmission, %	D 1003	90	90	88	86
Haze, %	D 1003	50	83	94	96
Yellowness Index	D 1925	<1	<2	<4.5	<6.5
Rheological Properties					
Melt Flow Rate, g/10 min (230°C & 3.8 kg)	D 1238	3.2	3.1	3.0	2.9
Mechanical Properties					
Tensile Strength, psi [MPa]	D 638	11350 [78.3]	11500 [79.3]	11500 [79.3]	11500 [79.3]
Tensile Modulus, x 10 ⁶ psi [GPa]	D 638	0.54 [3.7]	0.55 [3.8]	0.55 [3.8]	0.55 [3.8]
Tensile Elongation @ Yield, %	D 638	4	4	4	4
Tensile Elongation @ Break, %	D 638	4	4	4	4
Flexural Strength, psi [MPa]	D 790	19000 [131]	20000 [138]	20000 [138]	19000 [131]
Flexural Modulus, x 10 ⁶ psi [GPa]	D 790	0.5 [3.5]	0.5 [3.5]	0.5 [3.5]	0.5 [3.5]
Notched Izod, ft-lb/in [J/m]					
¼" [6.35 mm] bar @ 23°C	D 256	0.3 [16]	0.3 [16]	0.3 [16]	0.3 [16]
1/8" [3.15 mm] bar @ 23°C	D 256				
1/8" [3.15 mm] bar @ 0°C	D 256				
Rockwell Hardness, M Scale	D 785	95	95	95	95
Physical Properties					
Deflection Temperature, °F, [°C] @ 1.8MPa, annealed, 0.250"	D 648	221 [105]	221 [105]	221 [105]	221 [105]
Vicat Softening Point, °F [°C]	D 1525	243 [117]	246 [119]	246 [119]	246 [119]
Specific Gravity	D 792	1.19	1.19	1.19	1.19
Water Absorption, % Max	D 570	0.3	0.3	0.3	0.3
Mold Shrinkage, in/in, mm/mm	D 955	0.003 - 0.006	0.003 - 0.006	0.003 - 0.006	0.003 - 0.006
Bulk Density, g/cc	D 1895	0.66	0.66	0.66	0.66
Coefficient of Linear Thermal Expansion in/ in/°F, 32 -212°F [mm/mm/°C, 0 -100°C]	D 696	0.00004 [0.000072]	0.00004 [0.000072]	0.00004 [0.000072]	0.00004 [0.000072]
Recommended Processing Conditions					
Drying Temperature, °F [°C]		175 [80]	175 [80]	175 [80]	175 [80]
Drying Time, hour		3 – 4	3 – 4	3 – 4	3 – 4
Melt Temperature, °F [°C]		464 - 482 [240 -250]	464 - 482 [240 -250]	464 - 482 [240 -250]	464 - 482 [240 -250]
Cylinder Temperature, °F [°C]		464 - 482 [240 -250]	464 - 482 [240 -250]	464 - 482 [240 -250]	464 - 482 [240 -250]
Mold Temperature, °F [°C]		100 - 175 [38 - 80]	100 - 175 [38 - 80]	100 - 175 [38 - 80]	100 - 175 [38 - 80]

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

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