ACRYLITE® Satinice df

ACRYLITE® Satinice df light diffusing acrylic polymers meet the demanding requirements for the injection molding or extrusion of lighting products in residential, industrial, office and automotive interior applications. These light diffusing acrylic polymers are available in four ACRYLITE® grades and an impact resistant grade.

Where high lighting efficiency and excellent hiding power are desired, ACRYLITE® Satinice df polymers provide added value in performance and reduced lighting costs. They allow higher lighting capacity at the same energy level or equivalent lighting capacity as traditional pigmented white diffusers at lower energy levels. They are frequently used in decorative lighting applications and LED applications to hide hot spots.

ACRYLITE® Satinice df polymers offer increased lighting efficiency with a 20 to 40 percent increase in light transmittance versus pigmented acrylic products. All ACRYLITE® Satinice df products are extremely weather resistant. They can be further customized with the addition of UV absorbers, lubricants and colorants.

ACRYLITE® Satinice df light diffusing polymers

Product Offering	Light Transmission	Haze	Status
ACRYLITE® Satinice df20 8N	90%	50%	Specialty df grade
ACRYLITE® Satinice df21 8N	90%	83%	Specialty df grade
ACRYLITE® Satinice df22 8N	88%	94%	Specialty df grade
ACRYLITE® Satinice df23 8N	86%	96%	Standard df grade
ACRYLITE® Satinice ZD23	85%	96%	Impact modified df grade – injection molding only

ACRYLITE® Satinice is available in acrylic sheet, rod, tube and polymers.

For more information on ACRYLITE® Satinice polymers, visit www.acrylite-polymers.com or call +1 800 631-5384.
For ACRYLITE® Satinice sheet, rod and tube products, visit www.acrylite.net.
ACRYLITE® Satinice can be purchased online at www.acrylite-shop.com.

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Physical Properties – ACRYLITE® Satinice df light diffusing acrylic polymers

Property	ASTM Method	df 20 8N	df 21 8N	df 22 8N	df 23 8N	ZD23
OPTICAL						
Light Transmission, %	D-1003	90	90	88	86	85
Haze, %	D-1003	50	83	94	96	96
Refractive Index	D-542	1.492	1.496	1.498	1.498	1.490
RHEOLOGICAL						
Avg Melt Flow, g/10 min @ 230°C & 3.8 kg	D-1238	3.2	3.1	3.0	2.9	3.1
MECHANICAL						
Tensile Strength, psi (MPa)	D-638	11,350 (78.3)	11,500 (79.3)	11,500 (79.3)	11,500 (79.3)	6,400 (44.1)
Tensile Modulus, x106 psi (GPa)	D-638	0.54 (3.7)	0.55 (3.8)	0.55 (3.8)	0.55 (3.8)	0.25 (1.7)
Tensile Elongation @ Yield, %	D-638	4	4	4	4	4
Tensile Elongation @ Break, %	D-638	4	4	4	4	20
Flexural Strength, psi (MPa)	D-790	19,000 (131)	20,000 (138)	20,000 (138)	19,000 (131)	10,000 (69.5)
Flexural Modulus, x106 psi (GPa)	D-790	0.50 (3.5)	0.50 (3.5)	0.50 (3.5)	0.50 (3.5)	0.26 (1.8)
Notched Izod, ft-lb/in (J/m) on 1/4" (6.35mm) bar @ 23°C	D-256	0.3 (16)	0.3 (16)	0.3 (16)	0.3 (16)	1.0 (52.5)
Rockwell Hardness, M scale	D-785	95	95	95	95	44
PHYSICAL						
DTL, °F (°C) @ 264 psi, annealed	D-648	221 (105)	221 (105)	221 (105)	221 (105)	185 (85)
Vicat Softening Point, °F (°C)	D-1525	243 (117)	246 (119)	246 (119)	246 (119)	226 (108)
Specific Gravity	D-792	1.19	1.19	1.19	1.19	1.15
Water Absorption, % max	D-570	0.3	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	0.003 – 0.006
Coefficient of Linear 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)	0.00005 (0.00009)
Flammability		UL 94 HB (f1)	UL 94 HB (f1)	UL 94 HB (f1)	UL 94 HB (f1)	UL 94 HB (f1)
CLASS						
	D-788-84	6	8	8	8	–
	D-788-93	PMMA0122V7	PMMA0112V7	PMMA0140V2	PMMA0140V2	PMMA0231V2

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