

Heat transmittance: Measurement of the ease of heat escape caused by a temperature difference between interior and exterior, based on the amount of heat that would escape in 1 hour from a surface area of 10.8 square feet (1m²) when there is a temperature difference of 34°F (1°C).

Table A. Optical Performance Characteristics for All Product Designs. The optical values are calculated as theoretical values and compiled with existing data. In patterned Product designs, the value is an average across the pattern. The values in this table are typical, and are based on test data deemed reliable but are not warranted.

	Product Design	Thickness Film + adhesive (microns)	Shading Coefficient	Solar Heat (%)			Visible Light (%)		UV (%)	
				Reflectance	Transmittance	Absorbance	Reflectance	Transmittance	Transmittance	
New Designs	Cloud Patterns									
	Cloud Narrow (SH2FGCN)	93	0.93	9.2	77	13.8	10.8	83.4	0	
	Cloud Narrow blue gray (SH2FGCNB)	92	0.84	7.5	63.6	28.9	8.1	66.2	0	
	Cloud Narrow dark gray (SH2FGCND)	92	0.79	7	56.7	36.3	7.6	59.4	0	
	Cloud Narrow light gray (SH2FGCNL)	93	0.88	7.9	69.5	22.6	8.7	73	0	
	Milky Milky Patterns									
	Milky Milky blue gray (SH2MAMMB)	95	0.77	10.5	55.3	34.2	11	54.9	0	
	Milky Milky dark gray (SH2MAMMD)	93	0.74	9.7	51.1	39.2	10.3	51.4	0	
	Milky Milky light gray (SH2MAMML)	93	0.79	11.2	58.5	30.3	12.3	61	0	
	Embossed Patterns									
	Cross Hairline blue gray (SH2CHMAB)	129	0.83	6.7	61.6	31.7	6.8	61.2	0	
	Cross Hairline light gray (SH2CHMAL)	126	0.78	6.4	54.7	38.9	6.4	51.1	0	
	Cross Hairline Matte (SH2CHMA)	126	0.96	7.9	80.8	11.3	8.7	89.6	0	
	Cross Hairline Milky (SH2CHML)	125	0.52	28.8	31.4	39.8	38.8	26.4	0	
	Cross Hairline Sucre (SH2CHSC)	127	0.77	14.5	58	27.5	18.8	56.7	0	
	Hairline Matte (SH2HLMMA)	126	0.96	8.4	80.7	10.9	9.5	89.8	0	
	Mosaic Matte (SH2SMMA)	125	0.96	8.4	80.5	11.1	9.1	88.2	0	
	Wave Matte (SH2LWMA)	128	0.96	7.5	80.6	11.9	8.2	90	0	
	Gradation	Aerina (SH2FGAR)	81	0.91	12	76	13	13	79	0
		Cloud (SH2FGCL)	90	0.87	11	70	19	13	73	0.1
Diamond (SH2FGDM)		80	0.76	16	58	26	20	58	0	
Diamond reflect (SH2SIDR)		77	0.56	37	43	20	43	43	0	
Diamond Ghost reflect (SH2SIDGR)		77	0.36	60	27	14	69	27	0	
Illumina Alpha (SH4FGMIX)		153	0.8	16	63	21	22	65	0.4	
Illumina Silky S (SH2SSIM-S)		78	0.66	32	53	16	40	48	0.1	
Illumina Silky W (SH2SSIM-W)		78	0.7	29	57	14	36	54	0.1	
Illumina Silver (SH2SIIM)		77	0.44	50	33	17	59	36	0	
Illumina Black (SH2BKIM)		79	0.52	6	19	75	6	20	0	
Lontano (SH2FGLO)		81	0.74	20	57	23	22	61	0	
Sabrina (SH2FGSB)		90	0.93	9	77	14	10	83	0	
Tsurugi (SH2FGTG)		81	0.75	19	58	23	21	61	0	
Venetian (SH2FGVN)	85	0.73	18	55	27	23	54	0		

	Product Design	Thickness Film + adhesive (microns)	Shading Coefficient	Solar Heat (%)			Visible Light (%)		UV (%)
				Reflectance	Transmittance	Absorbance	Reflectance	Transmittance	Transmittance
Frost / Matte	CHAMONIX (SH2EMCH)	120	0.67	26	51	23	35	47	0
	Cielo (SH2FGCE)	81	0.74	19	58	23	26	56	0
	ESSEN (SH2EMES)	120	0.67	23	50	27	26	55	0.1
	Fine Crystal (SH2FNCR)	113	0.94	8	78	14	9	84	0.1
	Glace (SH2MAGL)	85	0.77	14	58	28	18	56	0
	LAUSANNE (SH2EMLA)	113	0.94	8	78	14	9	84	0.1
	Luce (SH2FGLU)	85	0.59	23	39	38	31	34	0
	Mare (SH2FGMR)	90	0.91	9	74	18	10	78	0
	Mat Crystal 2 (SH2MACRX2)	126	0.95	7	79	14	8	86	0.2
	Mat Crystal-i (SH2MACR-I)	95	0.94	8	78	14	9	85	0.1
	Milky Crystal (SH2MLCRX)	126	0.4	31	18	51	42	19	0
	Milky Milky (San Marino) (SH2MAMM)	105	0.44	34	25	41	43	21	0
	Milky White (Milano) (SH2MAML)	77	0.75	17	57	26	21	59	0
	Opaque Black (SH2BKOP)	79	0.39	5	1	94	5	0	0
	Opaque White (SH2MAOW)	142	0.3	46	13	41	57	10	0
	OSLO (SH2EMOS)	119	0.92	8	76	16	9	83	0.1
	Silver 1 (RE1SAIR)	74	0.08	78	0	21	91	0	0
Natural / Washi	Altair (SH2FGAT)	86	0.77	17	60	22	23	60	0
	Frost Walnut (SH2PTFW)	84	0.96	8	80	12	9	87	0.1
	Frost Walnut smoke (SH2PT-FWS)	87	0.75	7	50	43	7	49	0
	Grain champagne gold (SH2CSGC)	78	0.78	22	64	14	24	64	0
	Grain silver (SH2CSGS)	76	0.76	29	64	7	33	64	0
	Pyrgos (SH2PTPG)	88	0.66	19	45	36	25	43	0
	RIKYU (SH2PTRK)	103	0.86	7	67	26	8	72	0
	SAGANO (SH2PTSA2)	89	0.83	14	66	20	18	68	0
	Straight Washi (SH2FGSW)	90	0.77	14	57	29	18	57	0
	Vega (SH2FGVG)	86	0.77	16	60	24	21	60	0
	YAMATO (SH2PTYA)	89	0.89	12	74	14	15	79	0

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Fabric	Buckram (SH2FGBU)	79	0.86	12	69	19	14	69	0
	Buckram pearl + gray (SH2FG-BUG)	77	0.76	11	55	34	12	55	0
	Burlap (SH2FGBL)	75	0.75	15	57	28	20	57	0
	Burlap champagne gold (SH2CS-BLC)	79	0.71	23	56	21	26	56	0
	Canvas (SH2FGCV)	77	0.66	21	47	33	28	47	0
	Canvas champagne gold (SH2CSCVC)	78	0.74	25	61	14	29	61	0
	Linen (SH2FGLN)	78	0.79	17	64	19	23	65	0
	Linen Crystal (SH2LNCR)	81	0.81	13	62	25	17	63	0
	Sensai Linen (SH2FGSE)	74	0.75	16	56	28	21	56	0
	Sensai Linen champagne gold (SH2CSSEC)	79	0.77	22	63	15	25	63	0
	Weave pearl (SH2EMWP)	90	0.84	12	66	22	15	66	0
Weave pearl + dark gray (SH2EMWG)	94	0.73	10	50	40	10	50	0	
Geometric	Chain Mesh reflect (SH2SICMR)	76	0.46	51	36	14	59	36	0
	Cut Glass (SH2CSC)	76	0.75	15	55	30	20	55	0.1
	Cut Glass pearl (SH2CSCP)	78	0.76	16	58	26	18	58	0.1
	Cut Glass silver (SH2CSCS)	77	0.63	26	46	27	30	46	0
	Grid (SH2FGGD)	79	0.72	18	53	29	23	53	0
	Grid reflect (SH2SIGDR)	76	0.7	25	55	20	30	55	0
Stripe	Arpa (SH2FGAP)	79	0.78	17	61	22	22	67	0.1
	Arpa Black (SH2BKAP)	81	0.54	8	25	67	8	22	0
	Arpa Crystal (SH2APCR)	81	0.78	13	59	28	17	58	0
	Fine (SH2FGFN)	81	0.65	22	46	32	27	48	0
	Fine String (SH2PTFS)	76	0.86	13	69	18	16	69	0
	Fusion pearl (SH2CSFP)	78	0.78	16	60	24	21	60	0.1
	Safari (SH2PTSR)	85	0.81	13	63	24	16	63	0
	Seattle (SH2DGST)	81	0.85	16	70	14	22	74	0
	Seattle Fine (SH2DGST-F)	80	0.85	16	71	13	25	68	0
	Shutie (SH2FGST)	81	0.77	17	60	24	22	59	0
	Shutie Black (SH2BKST)	81	0.7	21	53	26	29	51	0
	String (SH2PTST)	77	0.88	17	74	9	22	74	0
	String Reverse (SH2PTSTR)	78	0.74	16	54	30	21	54	0
	Wind (SH2PTWD)	88	0.81	11	61	28	13	61	0
Border	Leise (SH2FGLS)	81	0.96	9	81	11	9	88	0
	Paracell (SH2FGPR)	80	0.71	17	53	30	20	50	0
	Slat (SH2FGSL)	88	0.6	22	41	37	28	36	0
	Slat g (SH2FGSL-G)	83	0.77	14	58	28	16	56	0

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Dot	Aura 9 (SH2PCA9)	81	0.96	8	89	3	8	87	0
	Cielo (SH2FGSK)	81	0.74	19	58	23	26	56	0
	KANON (SH2FGKN)	79	0.88	13	73	14	14	78	0
	Luna 6 (SH2PCL6)	76	0.68	17	48	34	22	46	0
	Luna 9 (SH2PCL9)	83	0.63	19	43	39	24	39	0
	SHIZUKU (SH2FGSK)	81	0.84	13	68	19	16	71	0
	Vista (SH2FGVI)	81	0.83	15	67	18	17	72	0
Transparent AR (SH2CLAR)*	76	0.98	8	83	9	8	90	0.1	

* All product designs were applied to a 3 mm transparent glass substrate to calculate the values in this table.

IMPORTANT NOTE

Please see 3M Glass Finishes sample book for contemporary Frost Matte patterns.

Product Use

Interior Use: Most Products are designed for application to building interior glass and building interior perimeter glass, meaning the interior of an outside glass wall.

Exterior Use: Mat Crystal 2 and Milky Crystal are the only Products designed for use on exterior glass.

Anti-reflection effect: When used in Exterior Applications, the Mat Crystal 2 and Milky Crystal Product designs scatter sunlight to reduce reflected light.

Application and Removal Guidelines

Avoid scratching, denting, or stretching the Product during installation. The values in these tables are typical, and are based on test data deemed reliable but are not warranted. See the 3M FASARA Glass Finishes Installation Guide for additional information.

Characteristic	Value
Application Surface Type	Flat
Application Surface Material	Use only glass substrates.
Application Location	Mat Crystal 2 and Milky Crystal Product designs can be applied to Exterior Applications. All other Product designs are only for Interior Applications.
Application Temperature	54°F - 100°F (12°C - 38°C) air and application surface
Application Method	Wet application
Applied Product Shrinkage	Nominal
Applied Product Exposure Temperature	Exterior Applications: -40°F - +149°F (-40°C - +65°C) Interior Applications: maximum 176°F (+80°C)
High Humidity Environments	Products are not recommended for Interior Applications where condensation consistently occurs.
Product Removal	Low heat or 3M Adhesive Remover Citrus Base and scraper

NOTE: Removing the Product too quickly can result in excessive adhesive left on the substrate. If necessary, heat a small section of the film with a heat gun to soften the adhesive, peel back slowly, then heat and remove the next section.

Processing Options

Processing of the Product is on a user test and approve basis only. The user is responsible for results in all processing applications.