

Product Description

3M™ Fasara™ Glass Finishes are decorative glass and window films available in more than 100 designs. These decorative films can be used in vertical applications in commercial buildings to control both light and privacy through a building's interior glass, including the interior of an outside glass wall (the "Interior Applications"). 3M™ Fasara™ Glass Finishes Mat Crystal 2 and 3M™ Fasara™ Glass Finishes Milky Crystal are the only products designed for use on exterior glass. When used in exterior applications, the Mat Crystal 2 and Milky Crystal product designs scatter sunlight to reduce reflected light.

Product Line

3M™ Fasara™ Glass Finishes, more than 100 different designs, two designs for outdoor decoration only. For available color and pattern see appendix or refer to 3Mgraphics.com. Please contact the 3M Sales Office for stock available and lead times.

Expected Performance Life is 5 to 20 years for indoor, vertical applications on non-perimeter glass, depending on the design.

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value	
Material	Polyester Crystal 2 and Milky Crystal contain polyester and PVC	
Design	See "Product Design List". Follow the link to see the product designs of 3M™ Fasara™ Glass Finishes	
Thickness	Designs vary in thickness. With adhesive: 74 µm – 153 µm (0.074 mm – 0.153 mm)	
Adhesive	Acrylic, pressure-sensitive, permanent	
Adhesive Color Appearance	Clear	
Liner	Silicone coated polyester	
Adhesion, Typical Indicative values 24 hours after application FTM 1 24h 23°C / 50% RH	Substrate:	Adhesion:
	Glass	7 N/25 mm
Applied Shrinkage Indicative values FTM 14	No detectable shrinkage	
Flammability	Classification of the reaction to fire performance according to DIN EN 13501 is B-s1, d0 Design SH2MAOW: Classification of the reaction to fire performance according to DIN EN 13501 is C-s1, d0	

Application Characteristics

Characteristic	Value
Application Recommendation	Surface type: Flat Substrate type: Glass only Application Temperature: 53°F – 100°F (12 – 38 °C) Application Method: Wet
Temperature Range After Application	84°F – 176°F (-29°C - +80°C) 84°F – 150°F (-29°C - +65°C) Mat Crystal 2 and Milky Crystal
Electronic Cutting	Not recommended, however, should you wish to electrocut this material 3M would advise: Ensure the blades are as always as sharp as possible to reduce the risk of damage to the film edge during cutting. Avoid cutting sharp corners as these can tear during the application process.
Removal	Removable with heat and/or chemicals from supported substrate within the Expected Performance Life. After removal low adhesive residue is possible.
Shatter Prevention	Fasara™ film reduces the scattering and falling of broken pieces of glass in the even of glass breakage, and it satisfies the glass scattering prevention capability (A method, B method) according to the JIS A5759 (Japan code).
UV Block	Fasara™ films block at least 99% of the UV light to reduce the discolouring (fading caused by sunlight) of furniture that is mainly caused by UV light. Performance characteristics are based on data deemed reliable.

Warranty Information

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the 3M Graphics Warranties Bulletin.

Limited Remedy

Unsuitable End Uses

This bulletin provides technical information only. Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith. As outdoor graphics age, natural weathering occurs causing a gradual reduction in gloss, slight color changes, some lifting of the graphic at the edges or around rivets, and ultimately a minor amount of cracking. These changes are not evidence of product failure and are not covered by a 3M warranty.

Limitations of liability

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

Maintenance, Cleaning and Removal

NOTE: Fasara may be cleaned beginning 30 days after installation.

Regular cleaning will help maintain the appearance of the design. Use only clean, nickfree tools and wipe gently only in one direction (do not wipe back and forth). Do not use ammonia, chlorine, or organic based cleaning products, polishing or cleaning compound, sponges, brushes or electric polishing equipment.

- If there is dust and grit, wipe it off with a soft, damp cloth.
- If it is soiled, but not gritty, use water and a rubber squeegee. Carefully use a rubber squeegee for window glass in particular moving over edges.
- If there is heavier soil, use a mild liquid detergent and water solution, then clear water, and wipe gently with a cloth wipe.

Fasara is removable with heat and/or chemicals from supported substrate within the Expected Performance Life.

After removal low adhesive residue is possible.

LEED®v4 Credits

The products can contribute to credits under LEED®v4. Please note that each application is different.

It is the sole responsibility of the end user to evaluate and determine whether LEED®v4 credits are applicable.

Follow the link to the customer information '[LEED®v4 credits](#)'

Shelf Life, Storage and Shipping

The shelf life as defined below remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

The shelf life is never more than 2 years from the date of manufacture on the original box. If you process the film, the shelf life is changed to 1 year from the processing date, but not later than the 2-year maximum from the manufacturing date.

Storage conditions: +4°C to +40°C, out of sunlight, original container in clean and dry area.

Health and Safety

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information.

Follow the link to obtain SDS sheets for 3M products on [3M.com/SDS](https://www.3m.com/SDS).

IMPORTANT! When using any equipment, always follow the manufacturer's instructions for safe operation.

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3M United Kingdom PLC
Commercial Solutions Division
Cain Road
Bracknell, RG12 8HT
UK

3M Ireland (Dublin)
The Iveagh Building
The Park, Carrickmines
Dublin 18
Ireland

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Optical Performance Characteristics and Warranty of all Product Designs

Series	Product	Product Number	Film Thickness [µm] (Excluding liner)	G-value Solar Heat Gain Coefficient	Solar Heat			Visible Light		UV	U-value Heat Transmission Coefficient [W/m ² · K]	Warranty (vertical only)		
					Reflectance [%]	Transmittance [%]	Absorbance [%]	Reflectance [%]	Transmittance [%]	Transmittance [%]		Interior [years]	Interior with UV light [years]	Exterior [years]
Border	Leise	SH2FGLS	81	0,83	9	81	11	9	88	0,0	6,1	5	3	0
	Paracell	SH2FGPR	80	0,62	17	53	30	20	50	0,0	6,0	5	3	0
	Slat	SH2FGSL	88	0,53	22	41	37	28	36	0,0	6,0	5	3	0
	Slat g	SH2FGSL-G	83	0,67	14	58	28	16	56	0,0	6,0	5	3	0
Dot / Prism	Aura 9	SH2PCA9	81	0,84	8	89	3	8	87	0,0	6,0	5	3	0
	Kanon	SH2FGKN	79	0,77	13	73	14	14	78	0,0	6,0	5	3	0
	Luna 6	SH2PCL6	76	0,59	17	48	34	22	46	0,0	6,0	5	3	0
	Luna 9	SH2PCL9	83	0,55	19	43	39	24	39	0,0	6,0	5	3	0
	Shizuku	SH2FGSK	81	0,73	13	68	19	16	71	0,0	6,0	5	3	0
	Vista	SH2FGVI	81	0,72	15	67	18	17	72	0,0	6,0	5	3	0
Emboss	Cross Hairline matte	SH2CHMA	126	0,84	8	81	11	9	90	0,0	6,1	3	1	0
	Cross Hairline matte blue gray	SH2CHMAB	129	0,72	7	62	32	7	61	0,0	6,1	3	1	0
	Cross Hairline matte light gray	SH2CHMAL	126	0,68	6	55	39	6	51	0,0	6,1	3	1	0
	Cross Hairline milky	SH2CHML	125	0,45	29	31	40	39	26	0,0	6,2	3	1	0
	Cross Hairline surce	SH2CHSC	127	0,67	15	58	28	19	57	0,0	6,2	3	1	0
	Hairline matte	SH2HLMA	126	0,84	8	81	11	10	90	0,0	6,1	3	1	0
	Mosaic matte	SH2SMMA	125	0,84	8	81	11	9	88	0,0	6,1	3	1	0
	Wave matte	SH2LWMA	128	0,84	8	81	12	8	90	0,0	6,2	3	1	0
Fabric	Altair	SH2FGAT	86	0,67	17	60	22	23	60	0,0	6,1	5	3	0
	Buckram	SH2FGBU	79	0,75	12	69	19	14	69	0,0	6,1	3	1	0
	Buckram pearl + gray	SH2FGBUG	77	0,66	11	55	34	12	55	0,0	6,1	3	1	0
	Burlap	SH2FGBL	75	0,66	15	57	28	20	57	0,0	6,1	3	1	0
	Burlap champagne gold	SH2CSBLC	79	0,62	23	56	21	26	56	0,0	5,9	3	1	0
	Canvas	SH2FGCV	77	0,58	21	47	33	28	47	0,0	6,1	3	1	0
	Canvas champagne gold	SH2CSCVC	78	0,65	25	61	14	29	61	0,0	5,9	3	1	0
	Grain champagne gold	SH2CSGC	78	0,68	22	64	14	24	64	0,0	5,8	3	1	0
	Grain silver	SH2CSGS	76	0,66	29	64	7	33	64	0,0	5,9	3	1	0
	Linen	SH2FGLN	78	0,69	17	64	19	23	65	0,0	6,1	5	3	0
	Linen Crystal	SH2LNCR	81	0,70	13	62	25	17	63	0,0	6,2	5	3	0
	Rikyu	SH2PTRK	103	0,75	7	67	26	8	72	0,0	6,0	5	3	0
	Sagano	SH2PTSA2	89	0,72	14	66	20	18	68	0,0	6,1	5	3	0
	Sensai Linen	SH2FGSE	74	0,65	16	56	28	21	56	0,0	6,1	3	1	0
	Sensai Linen champagne gold	SH2CSSEC	79	0,67	22	63	15	25	63	0,0	5,9	3	1	0
	Vega	SH2FGVG	86	0,67	16	60	24	21	60	0,0	6,1	5	3	0
	Weave pearl	SH2EMWP	90	0,73	12	66	22	15	66	0,0	6,2	3	1	0
	Weave pearl + dark gray	SH2EMWG	94	0,63	10	50	40	10	50	0,0	6,1	3	1	0
	Yamato	SH2PTYA	89	0,78	12	74	14	15	79	0,0	6,1	5	3	0
	Frost / Matte	Chamonix	SH2EMCH	120	0,58	26	51	23	35	47	0,0	6,1	5	3
Cielo		SH2FGCE	81	0,65	19	58	23	26	56	0,0	6,0	5	3	0
Essen		SH2EMES	120	0,58	23	50	27	26	55	0,1	6,1	5	3	0
Fine Crystal		SH2FNCR	113	0,82	8	78	14	9	84	0,1	6,1	5	3	0
Glace		SH2MAGL	85	0,67	14	58	28	18	56	0,0	6,1	5	3	0
Lausanne		SH2EMLA	113	0,82	8	78	14	9	84	0,1	6,1	5	3	0
Luce		SH2FGLU	85	0,51	23	39	38	31	34	0,0	6,1	5	3	0
Mare		SH2FGMR	90	0,79	9	74	18	10	78	0,0	6,1	5	3	0

Series	Product	Product Number	Film Thickness [µm] (Excluding liner)	G-value Solar Heat Gain Coefficient	Solar Heat			Visible Light		UV	U-value Heat Transmission Coefficient [W/m² · K]	Warranty (vertical only)		
					Reflectance [%]	Transmittance [%]	Absorbance [%]	Reflectance [%]	Transmittance [%]	Transmittance [%]		Interior [years]	Interior with UV light [years]	Exterior [years]
Frost / Matte	Matte Crystal 2	SH2MACRX2	126	0,83	7	79	14	8	86	0,2	6,2	3	3	3
	Matte Crystal i	SH2MACR-I	95	0,82	8	78	14	9	85	0,1	6,1	5	3	0
	Milky Crystal	SH2MLCRX	126	0,35	31	18	51	42	19	0,0	6,2	3	3	3
	Milky Milky	SH2MAMM	105	0,38	34	25	41	43	21	0,0	6,1	5	3	0
	Milky White	SH2MAML	77	0,65	17	57	26	21	59	0,0	6,0	5	3	0
	Opaque Black	SH2BKOP	79	0,34	5	1	94	5	0	0,0	6,1	2	0	0
	Opaque White	SH2MAOW	142	0,26	46	13	41	57	10	0,0	6,0	5	3	0
	Oslo	SH2EMOS	119	0,80	8	76	16	9	83	0,1	6,1	5	3	0
	Reflect (Silver 1)	RE1SIAR	74	0,07	78	0	21	91	0	0,0	5,9	5	3	0
Geometric	Chain Mesh reflect	SH2SICMR	76	0,40	51	36	14	59	36	0,0	5,9	3	1	0
	Cut Glass	SH2CSC	76	0,65	15	55	30	20	55	0,1	6,1	3	1	0
	Cut Glass pearl	SH2CSCP	78	0,66	16	58	26	18	58	0,1	6,1	3	1	0
	Cut Glass silver	SH2CSCS	77	0,55	26	46	27	30	46	0,0	6,0	3	1	0
	Grid	SH2FGGD	79	0,63	18	53	29	23	53	0,0	6,1	3	1	0
	Grid reflect	SH2SIGDR	76	0,61	25	55	20	30	55	0,0	6,0	3	1	0
Gradation	Aerina	SH2FGAR	81	0,79	12	76	13	13	79	0,0	6,0	5	3	0
	Cloud	SH2FGCL	90	0,76	11	70	19	13	73	0,1	6,2	5	3	0
	Diamond	SH2FGDM	80	0,67	16	58	26	20	58	0,0	6,1	3	1	0
	Diamond Ghost reflect	SH2SIDGR	77	0,31	60	27	14	69	27	0,0	5,8	3	1	0
	Diamond reflect	SH2SIDR	77	0,49	37	43	20	43	43	0,0	6,0	3	1	0
	Illumina Reflect (Illumina Silver)	SH2SIIM	77	0,38	50	33	17	59	36	0,0	5,9	5	3	0
	Illumina	SH2FGIM	83	0,62	16	53	31	20	51	0,0	6,0	5	3	0
	Illumina Black	SH2BKIM	79	0,45	6	19	75	6	20	0,0	6,0	2	0	0
	Illumina g	SH2FGIM-G	81	0,72	13	66	21	14	66	0,0	6,0	5	3	0
	Illumina Silky S	SH2SSIM-S	78	0,57	32	53	16	40	48	0,1	6,0	5	3	0
	Illumina Silky W	SH2SSIM-W	78	0,61	29	57	14	36	54	0,1	6,0	5	3	0
	Lontano	SH2FGLO	81	0,64	20	57	23	22	61	0,0	6,0	5	3	0
	Sabrina	SH2FGSB	90	0,81	9	77	14	10	83	0,0	6,1	5	3	0
	Tsurugi	SH2FGTG	81	0,65	19	58	23	21	61	0,0	6,0	5	3	0
Venetian	SH2FGVN	85	0,63	18	55	27	23	54	0,0	6,1	5	3	0	
Natural	Frost Walnut	SH2PTFW	84	0,84	8	80	12	9	87	0,1	6,2	3	1	0
	Frost Walnut smoke	SH2PTFWS	87	0,65	7	50	43	7	48	0,0	6,2	3	1	0
	Pyrgos	SH2PTPG	88	0,57	19	45	36	25	43	0,0	6,2	3	1	0
	Straight Washi	SH2FGSW	90	0,67	14	57	29	18	57	0,0	6,2	3	1	0
Stripe	Arpa	SH2FGAP	79	0,67	17	61	22	22	67	0,1	6,0	5	3	0
	Arpa Black	SH2BKAP	81	0,47	8	25	67	8	22	0,0	6,1	5	3	0
	Arpa Crystal	SH2APCR	81	0,68	13	59	28	17	58	0,0	6,2	5	3	0
	Fine	SH2FGFN	81	0,56	22	46	32	27	48	0,0	6,0	5	3	0
	Fine String	SH2PTFS	76	0,74	13	69	18	16	69	0,0	6,1	3	1	0
	Fusion pearl	SH2CSFP	78	0,68	16	60	24	21	60	0,1	6,1	3	1	0
	Safari	SH2PTSR	85	0,71	13	63	24	16	63	0,0	6,2	3	1	0
	Seattle	SH2DGST	81	0,74	16	70	14	22	74	0,0	6,1	5	3	0
	Seattle Fine	SH2DGST-F	80	0,74	16	71	13	25	68	0,0	6,1	5	3	0
	Shutie	SH2FGST	81	0,67	17	60	24	22	59	0,0	6,1	5	3	0
	Shutie Black	SH2BKST	81	0,61	21	53	26	29	51	0,0	6,1	5	3	0
	String	SH2PTST	77	0,76	17	74	9	22	74	0,0	6,1	3	1	0
	String Reverse	SH2PTSTR	78	0,64	16	54	30	21	54	0,0	6,1	3	1	0
	Wind	SH2PTWD	88	0,70	11	61	28	13	61	0,0	6,2	3	1	0

