



3M™ Fasara™ Glass Decorative Films

Product Bulletin

Product Description

Fasara films are a tough, dimensionally stable, translucent polyester film, intended for use in creating window graphics and internally-illuminated displays applied to internal, flat, glass surfaces (Matte Crystal and Milky Crystal 2 can be applied externally).

These decorative films simulate a wide range of decorative effects, including acid etched, sandblast, stippled, rice paper, geometric designs, stripes, dots, gradations, etc. Please contact the 3M Sales Office for stock available and lead times.

As well as providing attractive privacy and obscuration and glare reduction, these films block up to 99% of UV light, reducing fade on fabrics.

Product Line

Window Decoration 53 different designs available (see appendix).

Product Characteristics

These are typical values for unprocessed product.
Contact your 3M representative for a custom specification.

Physical & Application

Material	Polyester
Thickness (film)	0.07 mm to 0.14 mm
Adhesive type	Pressure sensitive, removable
Adhesive appearance	Clear
Liner	Transparent synthetic
Adhesion	7.0 [N/25 mm] FTM 1 180° peel, substrate: glass; cond: 24h 23°C/50%RH FTM [Fimat Test Methods] refers to test methods listed by Fimat, the Association of European Tape Manufacturers
Application temperature	10°C to 38°C (air and substrate)
Application method	Wet (see Instruction Bulletin)
Applied film shrinkage	No detectable shrinkage
Service temperature	-29°C to 80°C (Matte Crystal 2 up to -29°C 65°C)
Surface type	Interior surface of flat glass only (except for Matte Crystal and Milky Crystal 2, which can also be applied externally).
Fasara removal	Removable without heat or chemicals from noted substrate. No guarantee is given for ease of removal of any graphic which will be dependent on air and substrate temperatures. Minimum recommended removal temperature is 10°C
Shatter Prevention	Fasara film can reduce the scattering and falling of broken glass in the event of glass breakage. It satisfies the glass scattering prevention capability (A method, B method) of the Japanese Code JIS A5759

Warranty	This warranty refers to applications in zone 1 (Northern of Central Europe)	
	Indoor application	Film applied to the indoor side of exterior wall glass Vertical surface 3 years Non-vertical surface 2 years
	Indoor application	Film applied to indoor interior decoration (no direct UV light) Vertical surface 5 years Non-vertical surface 5 years
	Outdoor application	Films (Matte Crystal 2 and Milky Crystal only) applied to the outdoor side of exterior wall glass Vertical surface 3 years Non-vertical surface 1 year
Durability	Unprocessed film	The durability data is given for unprocessed film only!
	Indoor application	Film applied to the indoor interior and side of exterior wall glass Vertical surface 10 years Non-vertical surface 5 years
	Outdoor application	Mat Crystal 2 and Milky Crystal films only Vertical surface 4 years Non-vertical surface 2 years
Storage	Shelf life	2 years from the date of manufacture on the original box Up to 2 years unprocessed, or processed within 1 year and apply within 1 year of processing.
	Storage conditions!	4°C to 40°C, out of sunlight, in original container in clean and dry area.

Flammability Flammability standards are different from country to country. Please ask your local 3M contact for details.
ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
Achieved level: Class 1 (A)

Limitations of End Uses

3M specifically does not recommend or warrant the following uses, but please contact us to discuss your needs to recommend other products.

- Applications on any other surface than flat glass
- Any applications other than interior applications (except Matte Crystal 2 and Milky Crystal)
- Applications on surfaces that are not clean and smooth
- Applications between two sheets of glass
- Application in locations where condensation continuously occurs
- Applications involving overlap joints in graphic
- Applications where graphic is screen or digitally printed
- Applications that would be exposed to petrochemical spills

Important Notice

- 3M Architectural Market Department products are not tested against automotive manufacturer specifications and are therefore not warranted for use in fabricating graphics for automotive Original Equipment Manufacturers (OEM)
- Non vertical applications will have a significantly decreased durability!

Converting Information

Converting

Many of the designs have a patterned effect, to ensure a uniform appearance it is essential the films are converted and applied in the same orientation

Electronic Cutting

The variable characteristics of electronically controlled cutting equipment require users to verify their specific requirements and the suitability of the equipment to process the film.

Based upon cutting evaluations the minimum height for text is 10 mm using upper and lowercase Helvetica Medium. The stroke width should not be lower than 1 mm.

Sharpness of knife blade

Dull blades impart a serrated look to the edge of the cut film.

Weight of knife blade

The ideal weight slightly scores the liner. Too little weight does not cut completely through the film and the adhesive. Excessive weight cuts the liner and causes the blade to drag, accelerating wear and creating a serrated cut edge on the film.

Weeding

The excess film should be weeded (removed) as soon after cutting as practical. This is to minimise the effect of possible adhesive flow. Slow weeding is recommended.

Temperature and relative humidity

Temperature and relative humidity are minor considerations, but avoid extreme or rapid fluctuating conditions.

Further information

For more details refer to our instruction bulletin 4.1 "Sheeting, Scoring, Film Cutting"

Pre-Masking/Pre-spacing

When these films are used for complete coverage pre-masking is not required. If however, it is necessary to protect the film during shipment and application 3M pre-mask tape SCPM-19 may be used.

For general pre-spacing of graphics for application 3M pre-scspacing tape SCPS-100 may be used.

Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

Maintenance and Cleaning

If the surface of the film becomes dirty, it should be cleaned as leaving it could cause film to deteriorate.

- Carefully wash with the water using a rubber squeegee or a damp, soft cloth (do not wipe with a dry cloth).
- Wipe only one direction on the film surface (do not wipe back and forth).
- When using a rubber squeegee for cleaning take care over edges of film.
- Any cleaning should be carried out as recommended in Instruction Bulletin 6.5.

Important Notice to Purchasers

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

Related 3M Literature

Subject	Bulletin No.
Design of Markings	2.1
Pre-masking and pre-spacing	4.3
Surface Preparation	5.1
Application	5.81 (TBC)
Storage, Maintenance & Removal	6.5

Appendix

3M™ Fasara™ Glass Decorative Films.

Definition	Shading Coefficient	This index shows the sun blocking effect. It shows the percentage of sunlight entering a room when the film is applied to 6 mm thick transparent glass when the value "1" is used for the amount of sunlight passing through 3 mm thick transparent glass.
	Transmittance Reflectance Absorbance	This shows the respective rates at which UV (ultraviolet), brightness (visible light), and hotness (sunlight) are transmitted, reflected, or absorbed when the film is applied to the glass.
	Heat Transmission	This index shows the ease of heat escape caused by a temperature difference between indoor and outdoor. It shows the amount of heat that would escape in 1 hr from a surface area of 1m ² when there is a temperature difference of 1°C.

Appendix 3M™ Fasara™ Glass Decorative Films.

		Product	Product Number	Film Thickness [µm] (Excluding liner)	Shading Coefficient	Solar Heat			Visible Light		UV	Heat Transmission Coefficient
						Reflectance [%]	Transmittance [%]	Absorbance [%]	Reflectance [%]	Transmittance [%]	Transmittance [%]	U value [W/m ² · K]
Gradation	1	Illumina	SH2FGIM	83	0.72	16	53	31	20	51	0.0	6.0
	2	Illumina g	SH2FGIM-G	81	0.83	13	66	21	14	66	0.0	6.0
	3	Illumina-P	SH2FGIM-P	83	0.72	16	53	31	20	51	0.0	6.0
	4	Aerina	SH2FKAR	81	0.91	12	76	13	13	79	0.0	6.0
	5	Illumina Silver	SH2SIIM	77	0.44	50	33	17	59	36	0.0	5.9
	6	Illumina α	SH4FGIMX	153	0.80	16	63	21	22	65	0.4	6.0
	7	Lontano	SH2FGLO	81	0.74	20	57	23	22	61	0.0	6.0
	8	Tsurugi	SH2FGTG	81	0.75	19	58	23	21	61	0.0	6.0
	9	Venetian	SH2FGVN	85	0.73	18	55	27	23	54	0.0	6.1
	10	Robe	SH2FGRB	85	0.59	23	39	38	31	35	0.0	6.1
Stripe	13	Nokto	SH2CSNK	81	0.44	7	12	81	7	13	0.0	6.0
	14	Radius	SH2CSRD	81	0.40	7	7	86	7	6	0.0	6.0
	15	Shutie	SH2FGST	81	0.77	17	60	24	22	59	0.0	6.1
	16	Shutie Black	SH2BKST	81	0.70	21	53	26	29	51	0.0	6.1
	17	Arpa	SH2FGAP	79	0.78	17	61	22	22	67	0.1	6.0
	18	Arpa Black	SH2BKAP	81	0.54	8	25	67	8	22	0.0	6.1
	19	Seattle	SH2DGST	81	0.85	16	70	14	22	74	0.0	6.1
	20	Seattle Fine	SH2DGST-F	80	0.85	16	71	13	25	68	0.0	6.1
	21	Fine	SH2FGFN	81	0.65	22	46	32	27	48	0.0	6.0
Border-Horizontal	22	Lattice	SH2FGLT	84	0.60	22	41	37	28	36	0.0	6.0
	23	Lattice g	SH2FGLT-G	79	0.80	13	62	26	14	60	0.0	6.0
	24	Slat	SH2FGSL	88	0.60	22	41	37	28	36	0.0	6.0
	25	Slat g	SH2FGSL-G	83	0.77	14	58	28	16	56	0.0	6.0
	26	Pixela	SH2FGPX	81	0.78	16	62	22	18	60	0.0	6.0
	27	Paracell	SH2FGPR	80	0.71	17	53	30	20	50	0.0	6.0
	28	Leise	SH2FGLS	81	0.96	9	81	11	9	88	0.0	6.1
Prism/Dot	29	Prism Noir	SH2CSPN	78	0.67	7	42	51	7	42	0.0	6.1
	30	Prism Silver	SH2CSPS	78	0.64	28	49	24	31	53	0.0	5.9
	31	Astral Silver	SH2CSAS	82	0.42	44	28	28	51	30	0.0	5.8
	32	Cielo	SH2FGCE	81	0.74	19	58	23	26	56	0.0	6.0
	33	Luna 6	SH2PCL6	76	0.68	17	48	34	22	46	0.0	6.0
	34	Vista	SH2FGVI	81	0.83	15	67	18	17	72	0.0	6.0
	35	Luna 9	SH2PCL9	83	0.63	19	43	39	24	39	0.0	6.0
	36	Aura 9	SH2PCA9	81	0.96	8	89	3	8	87	0.0	6.0
	37	SHIZUKU	SH2FGSK	81	0.84	13	68	19	16	71	0.0	6.0
	38	KANON	SH2FGKN	79	0.88	13	73	14	14	78	0.0	6.0
Fabric/Japan Paper	39	Linen	SH2FGLN	78	0.79	17	64	19	23	65	0.0	6.1
	40	RIKYU	SH2PTRK	103	0.86	7	67	26	8	72	0.0	6.0
	41	Altair	SH2FGAT	86	0.77	17	60	22	23	60	0.0	6.1
	42	Vega	SH2FGVG	86	0.77	16	60	24	21	60	0.0	6.1
	43	SAGANO	SH2PTSA2	89	0.83	14	66	20	18	68	0.0	6.1
	44	SAFU	SH2PTSF	95	0.72	20	54	26	27	54	0.0	6.2
	45	YAMATO	SH2PTYA	89	0.89	12	74	14	15	79	0.0	6.1
	46	KEN-UN	SH2PTKU	97	0.70	21	53	26	28	51	0.0	6.2

Frost/Mat/Mirror	47	ESSEN	SH2EMES	120	0.67	23	50	27	26	55	0.1	6.1
	48	LAUSANNE	SH2EMLA	113	0.94	8	78	14	9	84	0.1	6.1
	49	OSLO	SH2EMOS	119	0.92	8	76	16	9	83	0.1	6.1
	50	OSLO-P	SH2EMOS-P	119	0.92	8	76	16	9	83	0.1	6.1
	51	CHAMONIX	SH2EMCH	120	0.67	26	51	23	35	47	0.0	6.1
	52	Opaque White	SH2MAOW	142	0.30	46	13	41	57	10	0.0	6.0
	53	Glaze	SH2MAGL	85	0.77	14	58	28	18	56	0.0	6.1
	54	Fine Crystal	SH2FNCR	113	0.94	8	78	14	9	84	0.1	6.1
	55	Mat Crystal i	SH2MACR-I	95	0.94	8	78	14	9	85	0.1	6.1
	56	Mat Crystal 2	SH2MACRX2	126	0.95	7	79	14	8	86	0.2	6.2
	57	Milky White	SH2MAML	77	0.75	17	57	26	21	29	0.0	6.0
	58	Milky Milky	SH2MAMM	105	0.44	34	25	41	43	21	0.0	6.1
	59	Milky Crystal	SH2MLCRX	126	0.40	31	18	51	42	19	0.0	6.2
	60	Luce	SH2FGLU	85	0.59	23	39	38	31	34	0.0	6.1
	61	Transparent	SH2CL	74	0.96	9	81	10	10	89	0.1	6.0
	62	Transparent	SH2CL-P	74	0.96	9	81	10	10	89	0.1	6.0
63	Transparent	SH2CLAR	76	0.98	8	83	9	8	90	0.1	6.0	
64	Silver 1	RE1SIAR	74	0.08	78	0	21	91	0	(0.0)	5.9	

Note	Thickness [mm]	Shading Coefficient	Solar Heat			Visible Light		UV	Heat transfer coefficient
			Reflectance [%]	Transmittance [%]	Absorbance [%]	Reflectance [%]	Transmittance [%]	Transmittance [%]	U value [W/m ² · K]
Transparent Float Glass (3 mm thickness)	3	1.00	8	86	6	8	90	71	6.0

The above data are not guaranteed. The product specifications may be changed without prior notice for further improvements.

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