

4.0 SURFACE PROTECTION

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Product

Standard surface masking is PE film with the following characteristics

	Top side	Underside
PLEXIGLAS® GS		
Standard	SK-film – white transparent, green print	SK-film – clear transparent
block material	SK-film – clear transparent	SK-film – clear transparent
PLEXIGLAS® Satinice SC	SK-film – white transparent	SK-film – clear transparent
PLEXIGLAS® Satinice DC	SK-film – white transparent	SK-film – white transparent
PLEXIGLAS® UV-transmitting	SH-film – natur transparent	SH-film – clear transparent
PLEXIGLAS® UV-transmitting SC	SK-film – white transparent	SH-film – clear transparent
PLEXIGLAS® LED	SK-film – white transparent	SK-film – clear transparent
PLEXIGLAS® XT		
clear ≤ 8 mm thickness	SH-film – white transparent, blue print (SD)	SH-film – blue transparent
clear and colored > 8 mm thickness	SK-film – white transparent, blue print	SK-film – blue transparent
white ≤ 8 mm thickness	SK-film – white transparent, blue print	SK-film – blue transparent
colored ≤ 8 mm thickness	SH-film - blue transparent	SH-film - blue transparent
UV 100 AR	SH-film - natur transparent	SH-film - blue transparent
UV 100	SK-film - blue transparent	SH-film - blue transparent
PLEXIGLAS® Satinice SC	SK-film – white transparent	SH-film – blue transparent
PLEXIGLAS® Satinice DC	SK-film – white transparent	SK-film – white transparent
PLEXIGLAS® Satinice DF	SK-film – white transparent	SK-film – white transparent
PLEXIGLAS® Resist 45	SH-film – blue transparent	SH-film – blue transparent
PLEXIGLAS® Resist 65	SH-film – grey transparent	SH-film – blue transparent
PLEXIGLAS® Resist 75	SH-film – orange transparent	SH-film – blue transparent
PLEXIGLAS® Resist 100	SH-film – green transparent	SH-film – blue transparent

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Product	Standard surface masking is PE film with the following characteristics	
	Top side	Underside
PLEXIGLAS® XT		
PLEXIGLAS® LED	SH-film – clear transparent	SH-film – clear transparent
PLEXIGLAS® Reflections	SH-film – blue transparent	coated, no surface masking
PLEXIGLAS® Heatstop	SK-film – blue transparent	SK-film – blue transparent
PLEXIGLAS® Soundstop	SK-film – clear transparent	SK-film – clear transparent
PLEXIGLAS® Textures	no surface masking	SH-film – blue transparent
PLEXIGLAS® Textures	no surface masking	no surface masking
PLEXIGLAS® Optical HC	SK-film – red transparent	SH-film – blue transparent
PLEXIGLAS® LED HC	SK-film – red transparent	SH-film – blue transparent
Multi-skin sheets		
PLEXIGLAS® Resist	SH-Folie – clear transparent, black print	SH-film – white transparent
PLEXIGLAS® Heatstop	SH-Folie – clear transparent, black print	SK-film – white transparent
PLEXIGLAS® Alltop	SH-Folie – clear transparent, black print	SH-film – white transparent
Corrugated sheets		
textured	no surface masking	no surface masking
smooth sheets	PE-film as an intermediate layer	PE-film as an intermediate layer

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PLEXIGLAS® solid or multi-skin sheet is normally protected on both sides with masking film. This mainly serves as protection against mechanical damage and soiling during transportation and handling.

Masking film frequently offers additional properties that have proved useful during subsequent processing of PLEXIGLAS® (especially solid sheet).

The type of film, film thickness and adhesion are selected according to common market requirements. Care is always taken to use the masking film that offers the widest scope for fabrication.

Protective masking film on PLEXIGLAS® is usually made of low density polyethylene (LD-PE), unless explicitly stated otherwise in the product description leaflet. That means the film can be recycled without any problems, provided it is carefully separated from other types of plastic. If recycling is not possible, the film can be incinerated in a plant for household waste or conveyed to a corresponding landfill.¹

Two major types of film are employed for masking PLEXIGLAS® products:

- cling film abbrev. SH film
- self-adhesive film abbrev. SK film

Adhesion between the PLEXIGLAS® sheet and the masking film is obtained by special adhesive constituents in the PE or additional adhesive layers. The films are normally between 30 and 130 µm thick. Thicker film can be supplied on sheets manufactured to order (minimum order quantities, delivery periods).

The following table shows the general field of application for the corresponding masking film.

¹) PE can be landfilled „without harm“ to the environment because it decomposes upon exposure to the weather in a foreseeable period, giving rise to non-toxic oxidation products.

Table 1: Various types of film and their field of application for PLEXIGLAS®

Film Type	Adhesion Level	Products	Characteristics/Application
Cling film (SH-) ca. 30–100 µm	average –strong uniform	extruded and cast PLEXIGLAS® (incl. multi-skin sheet)	SH film has no adhesive on the cling side and can be applied by either hot or cold lamination. SH film is suitable for cut-to-size sections and can be used for thermoforming under certain conditions.
Self-adhesive film (SK-) ca. 60–130 µm	average –strong dependent on the adhesive layer	depending on thickness of preferably cast PLEXIGLAS®, but also extruded (incl. PLEXIGLAS® Satinice)	SK film offers strong adhesion due to an additional adhesive layer on the adhesive side. The film adheres to the sheet again at any time after removal. It is especially suitable for small cut-to-size sections where it is important for the film to adhere to the PLEXIGLAS® sheet.

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No masking film can meet all market requirements in equal measure. That is why it is very important to know the field of application (thermoforming, frequent cutting to size, subsequent coating of PLEXIGLAS® sheets) in order to select the correct film. For thermoforming in particular, masking film cannot always remain on the PLEXIGLAS® surface.

Exposure to prolonged pressure may also cause adhesive residues to adhere to PLEXIGLAS®. The more is known about the field of application, the easier it is to ensure optimum surface protection. Special wishes always entail manufacture to order (costs, delivery periods, minimum order quantities).

Hints on the Storage of PLEXIGLAS® Products with PE Masking Film

Polyethylene does not possess the well-known durability of PLEXIGLAS® in outdoor applications. Unlike PMMA, unmodified PE is not weatherresistant and rapidly becomes brittle due to photo-oxidation processes (aging due to light). We therefore advise against storing PLEXIGLAS® sheets masked with PE films outdoors.

Even when stored indoors, the correct storage conditions must be observed to ensure the prolonged functionality of the masking film on PLEXIGLAS®. The recommended ambient conditions are:

Storage conditions

Storage temperature	no extreme temperatures, optimal temp. 15 – 20 ° C	
Environment	dry, no wetness, no high atmospheric humidity, storage indoors	
Light	no direct sunlight, no lamps with a high proportion of UV radiation, ideally in darkened room	
Resistance	Avoid contact with other substances such as oils, greases, solvents.	

Generally speaking, masking film with high adhesive strength (self-adhesive SK film) poses more problems than ordinary adhesive film. In the former, heat and UV radiation rapidly damage the adhesive layer, leading to problems after prolonged storage. It is advisable to remove the protective masking directly after installing or fabricating the PLEXIGLAS® sheet. If stored correctly indoors 1), the film remains serviceable for at least 12 months (from delivery date). If there is no alternative to outdoor storage, we recommend covering the sheets to protect them from weathering, e. g.

by means of white PE sheeting. No statement can be made on the maximum storage period in this case, because of the variety of seasonal influences. Since we do not manufacture the masking film ourselves, we have to rely on the statements and product specifications of our suppliers with regard to storage stability. Here too, the product properties may vary slightly from batch to batch.

1) A correct storage can be proved by the degree of embrittlement of the PE.