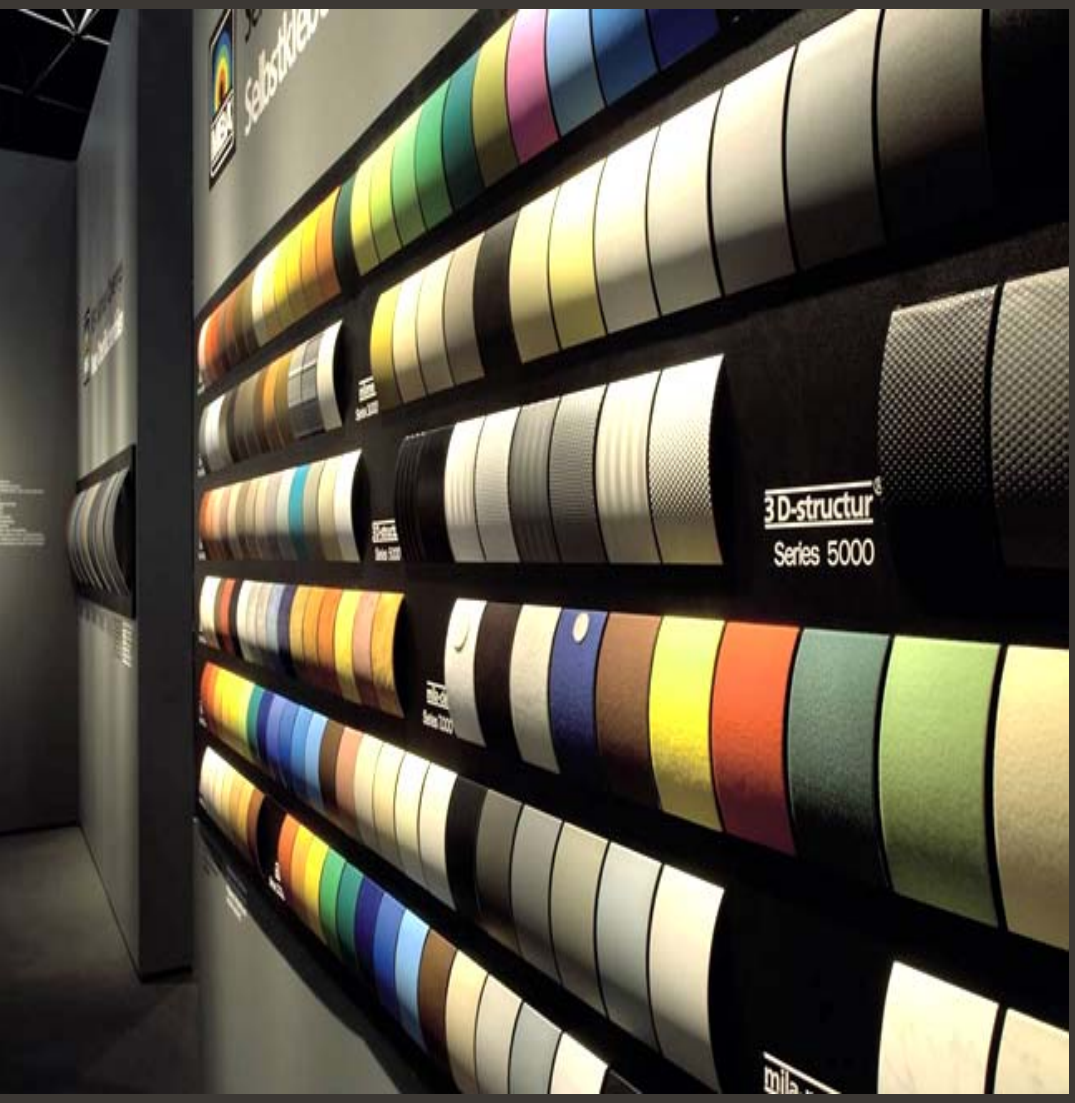
MBA Surface Coverings

Application and Use Guide



milament®	Series 1.000 - 4.000
3-D Structur®	Series 5.000
mila-suede®	Series 6.000
mila-clett®	Series 7.000
mila-decor®	Series 9.000
mila-naturel®	Series 10.000 - 11.000
mila-fix®	Series 12.000
mila-nova®	Series 13.000
mila-eco®	Series 14.000

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Flexibility, Efficiency, Durability

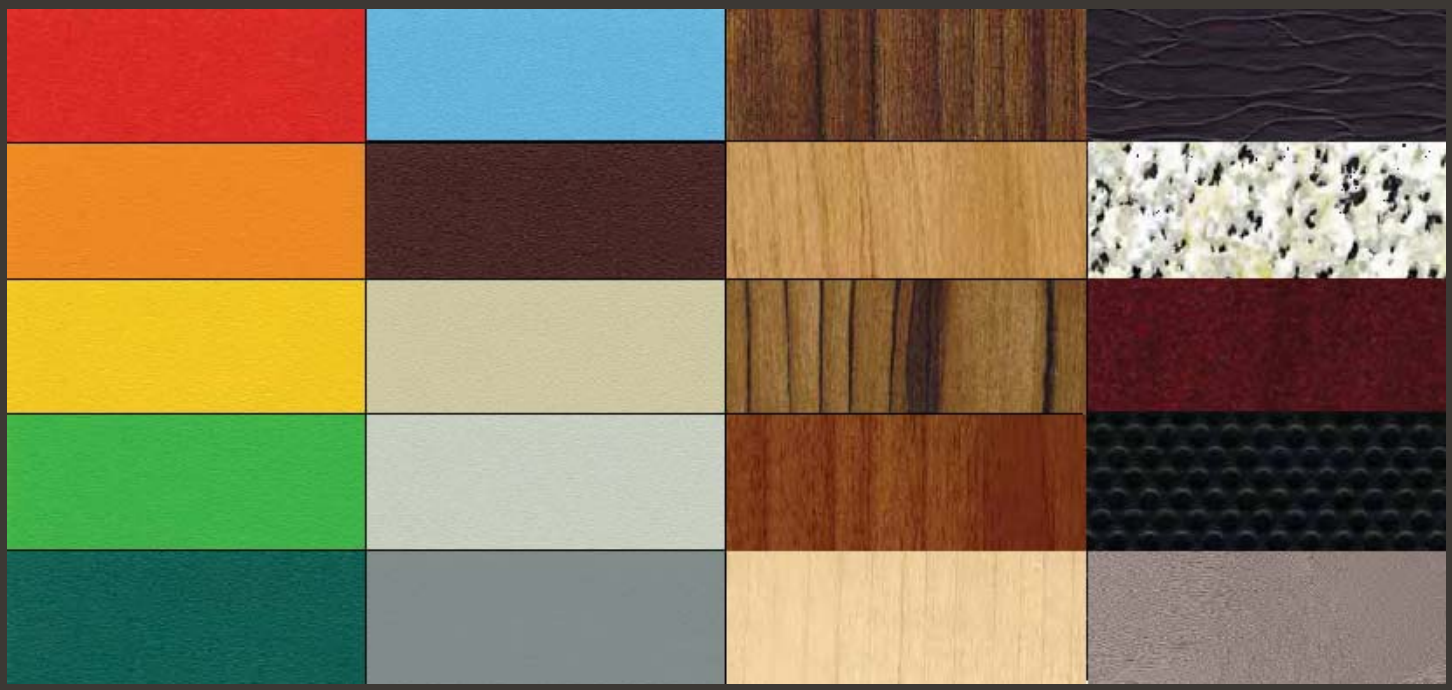
- MBA Surface Covering is a thin, flexible and durable interior design solution for retail interiors, renovations, building remodeling, commercial and office space, tradeshow applications, institutions, signage and more.

- MBA Surface Coverings (foils) are produced in over 175 styles, textures and colors including primary colors, structured patterns, wood grains, standard and designer metallics, textiles and more.

- Quick and easy installation with little to no downtime, pre-cutting, routing, dust or construction debris. You can send an installer into a location with a roll of surface covering and a couple of hand tools to completely renovate a space in a few hours.

- MBA foils can be produced in custom colors and adhesive strengths. We can also apply custom protective coatings for ultimate flexibility and durability.

- MBA standard rolls are 40” or 50” wide and 82’ long. MBA coverings are also produced in various thicknesses to better manage installation techniques.



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The MBA Advantage

MBA surface coverings have been in production for over 35 years. MBA foils were originally designed for tradeshow and exhibit applications. Since its inception, its usage has expanded beyond simple wall applications to include retail interiors, institutional applications, commercial construction, interior revitalization projects and more.

There are many advantages to using MBA foils over traditional laminates and rigid surface coverings - most importantly: decreased installation time and increased design flexibility. MBA foils do not require any pre-fabrication or routing which means an installer can go onto a site armed with a roll of MBA foil and a few simple cutting tools and permanently transform the interior of your space in just a few hours.

With a simple design that utilizes a pressure sensitive peel and place application technique, your installers have more flexibility to measure and cut right on site! You save time and money without sacrificing aesthetics or durability.

Not only is MBA vinyl easier to install than laminates, but it is also much more cost effective.

PRACTICAL APPLICATIONS:

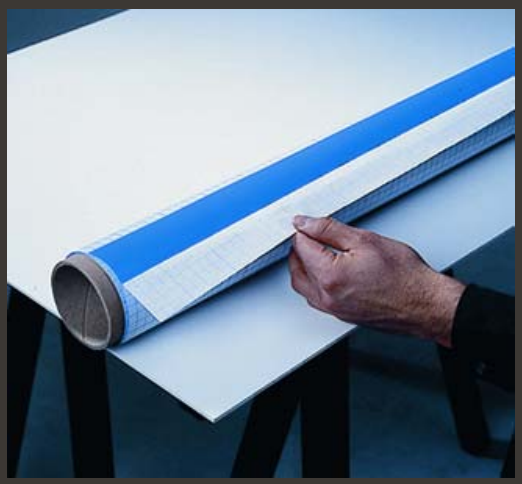
Glass, Aluminum,

Acrylic, Sintra,

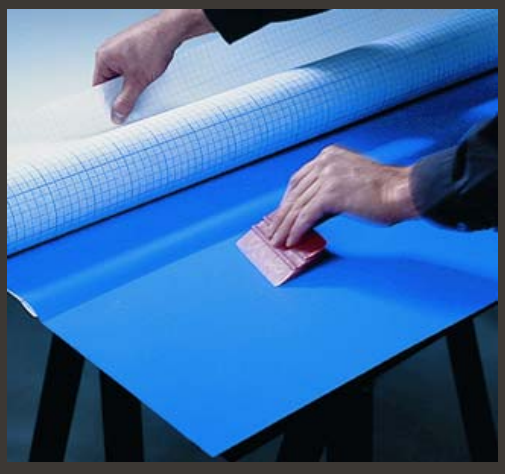
PVC, Gator Board,

HPL, Metal,

Existing Laminated Surfaces



Pressure sensitive adhesive with a peel back release paper makes installation quick and easy. Simply peel it back, apply it to any flat surface and trim to a perfect finish.



* MBA surface coverings are not recommended for use on bare or untreated wooden or highly porous surfaces.

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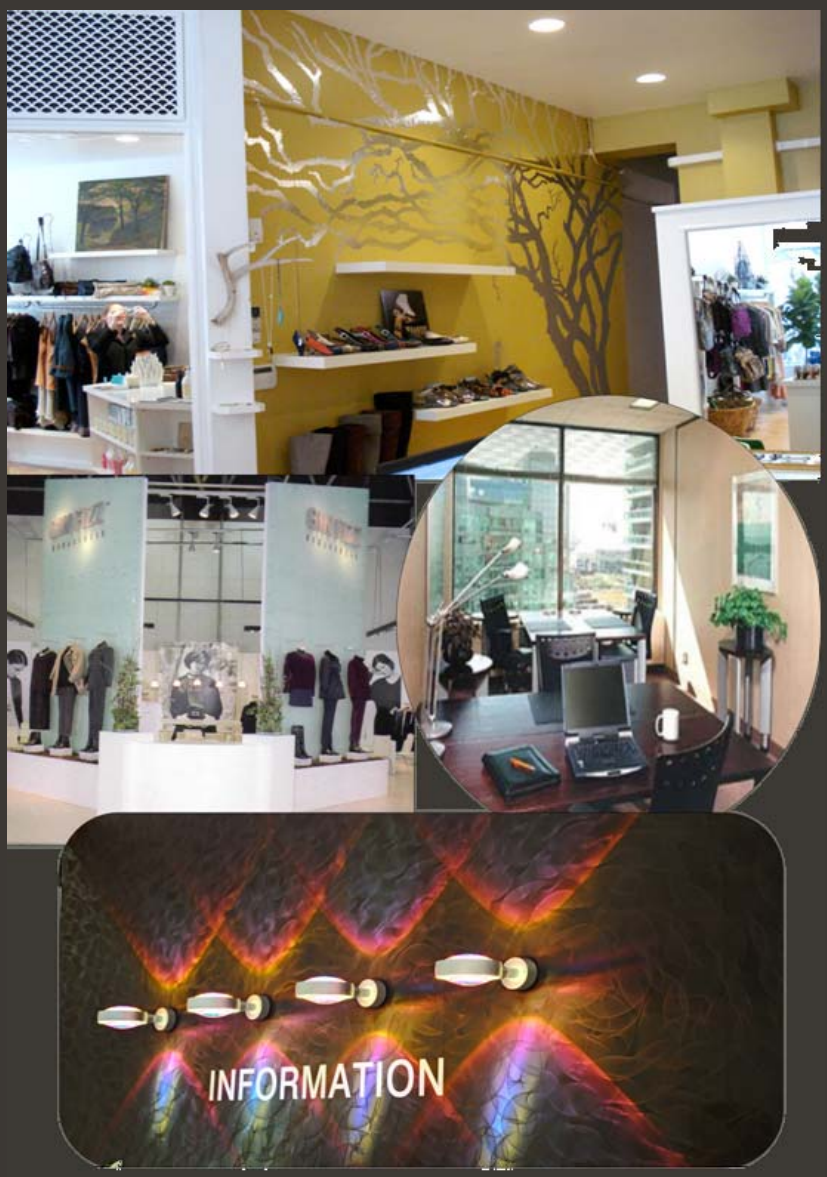
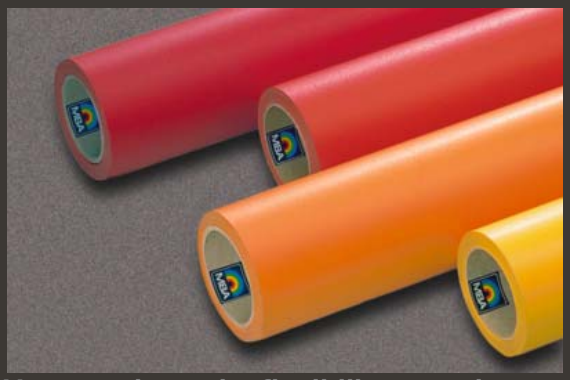
Ultimate Flexibility





You now have the flexibility to make measurements and cuts right on site. An experienced installer can simply go into an area without prior knowledge of the layout and quickly and efficiently transform and revitalize the space.

Complex angles, bends, curves and corners are easy to navigate with MBA vinyl surface covering. Simply peel and apply for a perfect finish!

Walls, Ceilings, Doors, Glass, Fixtures, Facades, Merchandise Cases, Office Spaces, Columns.

Limitless Applications make MBA the Smart Choice!

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Application Tips:

More than three decades of MBA experience, continuous development and international marketing are the reasons for the worldwide success of self-adhesive MBA surface coverings.
The MBA surface coverings are self-adhesive surface foils and textiles for various application possibilities. Choose between permanent adhesive or removable adhesive backing depending on the product group or series.
Use one lot number per color for coating work if possible.
Make sure the material is applied in the same running direction when used in further processing.
All self-adhesive MBA surface coverings can be applied manually or with a laminating machine.

Processing instructions

1. Preparation
- The substrate materials to be coated must be smooth, level and free of dust, dirt, oil, grease and separators.
  - NOTE: Sweat from human hands contains salts and greases. These can cause blistering and release of the surface coverings.

2. Cleaning
- Sand wooden materials before coating depending on the condition of the surface, and remove all sanding dust.
  - Hard fiber boards may contain paraffin as a separator. Make sure that hard fiber boards without paraffin separators are used on the surface.
  - Plastic substrates: Handling can apply salts and grease to the surface of the board. Clean the board surfaces with degreasing cleaners (e.g. denatured alcohol etc.). Do not use cleaners containing solvents (nitro).
  - Metal sheets: Only use metal sheets with a grease-free surface for coating. (Some manufactures use oils / greases as a corrosion protection, depending on the type of material and the manufacturer.
  - Painted surfaces: Depending on the manufacturer and paint composition, oil paints and varnishes may contain additives which act as separators in the mid and long term and lead to lifting of self-adhesive coverings.
  - Automotive paints are treated with wax and preservatives; these must be cleaned of all separators before applying MBA self-adhesive coverings.
  - Do not use solvents (thinners) for cleaning - residue from solvents attack removable adhesives, and the adhesive loses the property of removability and presents a challenge when trying to remove the coverings.
  - Use non-greasing household cleaner, denatured alcohol or white spirit for smooth surfaces.

3. Processing / Application temperature
The adhesion strength is influenced by the processing temperature. Permanent and removable adhesives have a reduced adhesion strength when cold, this increases with rising temperature.
- The recommended minimum temperature of the substrate material and the self-adhesive surface covering is 18° - 21° C (65 – 70F)
- Do not process surfaces and substrate material at temperatures below 15° C (59 F).
  At low outdoor and indoor temperatures (Winter season), adapt surface coverings and substrate material to the minimum temperature by storing them in a temperature controlled area. Substrates and MBA coverings should be of equal temperature.

4. Surface coating (application by hand)
- Cut the self-adhesive surface about 3 – 5 cm bigger (longer and wider) than the area to be coated.
- Pull off the release paper from the back of the MBA covering about 3 – 5 cm, turn over and free the adhesive strip.
- Place the surface covering on the substrate, align, fix the adhesive strip to the substrate and press down without creasing.

Recommendations / Suggestions:

- Before processing self-adhesive surface coverings, check their suitability for the intended purpose.
- Make sure you keep the same running direction for further processing of metallic surfaces. The basic color of the substrate material can influence the color appearance of the surface covering. Do not pull or stretch textile MBA surface coverings (mila-clett, milour-top) during application. MBA surface coverings can be screen printed, coated with dispersion inks and will accept self-adhesive texts, logos, etc.

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Third Party Reactivity Testing Information

Seite 2 Entwurf DIN 68 861 Teil 1

3 Beanspruchungsgruppen

Möbeloberflächen sind bei chemischer Beanspruchung entsprechend ihrer Widerstandsfähigkeit in die Gruppen 1 A bis 1 F eingeordnet (Prüfung nach Abschnitt 6).

Prüfmittel	Beanspruchungsgruppen											
	1 A		1 B		1 C		1 D		1 E		1 F	
	Ewd[1]	Erg[2]	Ewd	Erg	Ewd	Erg	Ewd	Erg	Ewd	Erg	Ewd	Erg
1 Essigsäure	16 h	0	60 min	0								
2 Zitronensäure	16 h	0	60 min	0								
3 Natriumcarbonat	16 h	0	2 min	0								
4 Ammoniakwasser	16 h	0	2 min	0								
5 Äthylalkohol	16 h	0	60 min	0								
6 Weißwein, Rotwein, Südwein	16 h	0	5 h	0	10 min	0	2 min	0				
7 Bier	16 h	0	5 h	0	10 min	0	2 min	0				
8 Cola-Getränke	16 h	0	16 h	0	10 min	0	2 min	0				
9 Pulverkaffee	16 h	0	16 h	0	10 min	0	2 min	0				
10 Schwarzer Tee	16 h	0	16 h	0	10 min	0	2 min	0				
11 Schwarzer Johannisbeersaft	16 h	0	16 h	0	10 min	0	2 min	0				
12 Kondensmilch	16 h	0	16 h	0	10 min	0	2 min	0				
13 Wasser	16 h	0	16 h	0	10 min	0	10 min	0	10 min	0	2 min	0
14 Benzin	16 h	0	2 min	0								
15 Aceton	16 h	0	10 s	3								
16 Äthyl-Butylacetat	16 h	0	10 s	3								
17 Butter	16 h	0	16 h	0								
18 Olivenöl	16 h	0	16 h	0								
19 Senf	16 h	0	5 h	0								
20 Kochsalz	16 h	0	5 h	0								
21 Zwiebel	16 h	0	5 h	0								
22 Lippenstift	16 h	0	16 h	0								
23 Desinfektionsmittel	16 h	0	10 min	0	2 min	0	2 min	0				
24 Schwarze Kugelschreiber-Pastentinte	16 h	0	16 h	3								
25 Stempelfarbe	16 h	0	16 h	0								
26 Reinigungsmittel	16 h	0	60 min	0								
27 Reinigungslösung	16 h	0	60 min	0	2 min	0	2 min	0	2 min	0	2 min	0

[1] Einwirkdauer
[2] Ergebnis

1 Acetic Acid
2 Citric Acid
3 Sodium
4 Amonia
5 Ethyl Alcohol
6 White Wine, Red Wine, Fortified Wine
7 Beer
8 Cola
9 Coffee
10 Black Tea
11 Black Currant Juice
12 Evaporated Milk
13 Water
14 Petrol
15 Acetone
16 Ethyl-Butyl Acetate
17 Butter
18 Olive Oil
19 Mustard
20 Sodium Chloride
21 Onion
22 Lipstick
23 Disinfectant
24 Black Ballpoint Ink
25 Stamp Ink
26 Detergent
27 Cleaning Solution

4 Bewertung

Das Ergebnis der Prüfung nach Abschnitt 6 ist durch Vergleich (Besichtigung) der bei der Prüfung beanspruchten Fläche mit der nicht beanspruchten Fläche wie folgt zu bewerten:

0 Keine sichtbaren Veränderungen
1 Eben erkennbare Änderungen in Glanz oder Farbe
2 Leichte Veränderungen in Glanz oder Farbe; die Struktur der Prüffläche ist nicht verändert
3 Starke Markierungen sichtbar; die Struktur der Prüffläche ist jedoch weitgehend unbeschädigt
4 Starke Markierungen sichtbar; die Struktur der Prüffläche ist verändert

**The above reactivity testing information is strictly for our standard series of PVC based vinyl.
This does not include the eco series, the textile based surface coverings or coverings with custom adhesives or coatings.

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TECHNICAL DATA, Properties / Test Methods / Values / Tolerances

1. Thickness (*)
DIN EN ISO 2286-3, 1998-07
0,10 - 0,50 mm,
tolerance +/- 7,5 %

2. Dimensional Stability
10 min. 100°C, circulated air
longitudinal max. - 5 %
transverse max. + 2 %

3. Embossing Stability
10 min. 120°C, circulated air
no visible changes to gloss, embossing or colour compared to the standard

4. Light fastness
DIN EN ISO 4892-2, 2006-06
DIN EN ISO 105 B 02, 2002-07
> 6 (blue scale)

5. Chemical Resistance
DIN EN 12720, 1997-10
(test substances and exposure times acc. DIN 68861/1, 2001-04)
Class 1 B (*1)

6. Scratch Resistance
DIN 68861/4, 1981-12
Class 4 D (> 1,0 - 1,5 N)

7. Resistance to Dry Heat
DIN 68861/7, 2001-04
Class 7 C (100°C)

8. Resistance to Wet Heat
DIN 68861/8, 2001-04
Class 8 B (75°C)

9. Abrasion Resistance
DIN 68861/2, 1981-12
Class 2 B (> 350 - 650 rpm)

10. Tensile Strength
DIN EN ISO 527-3/2/200, 2003-07
longitudinal > 40 N/mm2
transverse > 30 N/mm2
(depending on embossing)

11. Gloss Level Tolerances
DIN 67530, 60° measuring head, 1982-01
< 15 +/- 2
16 to 30 +/- 3
31 to 50 +/- 5
> 50 +/- 7

12. Colour Tolerance for plain films, for production; not valid for metallic
DIN 53236 (45/0), 1983-01
DIN 6174, 2007-10
(only light colour) E < 0,50
L +/- 0,30
a +/- 0,20
b +/- 0,30

13. Colour Consistency of printed films and metallic designs:
Original specimen comparison
Manufacture and visual assessment with original specimen.

14. Fault definition
Optical deviations are regarded as faults if they are recognisable with the naked eye from a distance of 50 cm, within 30 seconds in good lighting.

(*) the thickness refers to the smooth film surface and it may be up to 10 % more while using deep embosses than it will be during one whole order and from order to order in the shown tolerance
(*1) for UV-cured lacquers: with the exception of red wine, coffee, mustard and onion

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