

Recommended cleaning agents and disinfectants

sedus

Melamine surfaces
Veneered surfaces
HPL surfaces
Plastic materials (PP)
Plastic materials (TPU)
Fabrics
Acrylic glass



Recommended cleaning agents and disinfectants

It is now known that the novel coronavirus Sars-CoV-2 can remain active on surfaces for a certain period of time. If we touch contaminated objects, we can pick up the virus. And if we then touch our face with our contaminated hands, we risk an infection.

Surfaces can be cleaned and rendered virus-free using normal, regularly replaced cloths and cleaning agents. However, if you want to use a disinfectant after all, it is best to use a paper towel for applying it or wiping it off.

In the following we would like to give you an overview of suitable cleaning agents and disinfectants. Please note that these are only recommendations. **They are based on the information and experience passed on by suppliers and manufacturers.**

General care and cleaning instructions still apply.



1. Melamine surfaces

In general, melamine resin-coated wood-based materials are highly resistant to the effects of stain-forming substances. It is, however, recommended to test the disinfectant on an inconspicuous area before using it on the entire surface. This test will ensure that the durability of the material is not impaired.

Additional information from the supplier (linked):

Tested disinfectants

- [1 TL EGGGER Eurodekor disinfectants en](#)
- [2 DecoBoard chemical resistance en](#)

Cleaning and care instructions

- [3 TL EGGGER Eurodekor cleaning and care instructions en](#)

2. Veneered surfaces

Real wood surfaces are veneered with high-quality veneers. In general, the veneers are completely sealed by high-quality and highly resistant two-component polyurethane lacquer.

In the case of coarse-pored veneers, disinfectants should be carefully dosed (the same applies to cleaning agents).

Our lacquer supplier has tested the behaviour under chemical stress according to DIN 68861-1:2011-01 in connection with DIN EN 12720. Exposing the surface to the disinfectant for 2 or 10 minutes will not lead to changes in the surface (see [4 Arti test report](#)). The supplier of solutions for various segments of surface treatment recommends to wipe the disinfectant off the surface after a short period of time (2 to 5 minutes). Under no circumstances should the surface be covered with desk pads, cups, etc. if it is still moist with disinfectant. This may lead to changes in the surface.

Additional information from the supplier (linked):

- [4 Arti test report](#)

3. HPL surfaces

It is recommended to test the disinfectant on an inconspicuous area before using it on the entire surface. This test will ensure that the durability of the material is not impaired. The supplier has tested a number of disinfectants for their effect on HPL surfaces. The results can be found under the link [5_TL_EGGER Laminatereistance to chemicals en](#) in the table "Disinfectants and EGGER Laminates" in the right column.

Additional information from the supplier (linked):

Resistance to chemicals

- [5_TL_EGGER Laminatereistance to chemicals en](#)

General recommendations for cleaning and use

- [6_TL_EGGER Laminaterecleaning and care instructions en](#)

4. Plastic materials (PP)

It is recommended to use special plastic cleaners for cleaning RAUKANTEX PP edges (edges of melamine resin-coated surfaces). Solvent-containing and alcoholic substances should not be used.

Additional information from the supplier (linked):

- [7_TI_RAUKANTEX-PP en](#)

5. Plastic materials (TPU)

Most Sedus armrests are made of TPU. The durability and resilience of TPU products can generally not be guaranteed if these products are treated with disinfectants. Regular use of disinfectants reduces the lifetime of TPU products. If disinfecting the armrests is still necessary, we recommend the use of ethanol.

6. Fabrics

According to the manufacturer, all Gabriel polyester fabrics can be cleaned, washed and disinfected. Gabriel polyester fabrics can be disinfected with ethanol to effectively destroy viruses and bacteria. To eliminate viruses and bacteria, most Gabriel polyester fabrics are washable at 74 Celsius.

The Gabriel fabric groups include:

- Atlantic
- Atlantic Screen
- Twist/Twist Melange
- Xpress
- Step/Step Melange

The aforementioned does not apply to the wool fabrics Gaja and Fame.

Additional information from the supplier (linked):

- [8_Gabriel protection against virus and bacteria Covid-19](#)

7. Acrylic glass

With regard to acrylic glass, no general statement can be made regarding the effect of disinfectants. The supplier has tested various products for their effects on the chemical behaviour of acrylic glass in general use.

The disinfectants which are suitable for acrylic glass can be found in the information provided by the supplier.

Additional information from the supplier (linked):

- [9_Chemikalienbeständigkeit PMMA](#)

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Technical leaflet

Resistance of EGGER Eurodekor against
disinfectants



Product Description

Eurodekor is the name for wood-based boards that are coated with a decor paper soaked in melamine resin. Besides chipboard, the support material can also be made of MDF, OSB Combiline or lightweight board. These core boards are manufactured according to the requirements of the respective European standards. All Eurodekor boards also meet the requirements of the EN 14322 standard, which defines the requirements for melamine faced boards for interior applications. Eurodekor boards provide a wide range of possible applications for furniture and interior design.

Normative Properties of the Surface

The EN14322 standard imposes specific requirements regarding the surface resistance of melamine faced wood-based materials. This includes testing the surface against various substances for resistance to stains. The test investigates how substances commonly used in daily life affect boards with melamine faced surfaces. These substances are brought into direct contact with the surface for this purpose. The exposure times and conditions are specified for each staining agent. At the end of the respective exposure time, the specimens are washed and examined for residual surface marks.

If the product under test meets rating 3 or above then it is deemed to comply with the specification for stain resistance according to EN 14323. This means that exposure for the specified time period is only permitted to cause a moderate change in the gloss level and/ or colour.

Disinfectants

With melamine faced wood-based materials, disinfectants are mainly used to disinfect surfaces.

Various disinfectants are offered by the industry for this application. These vary both in regards to their composition and their effect.

Disinfectants used on surfaces are mainly those that exhibit one of the following active ingredients and/ or are based on one of the chemicals listed here:

- Oxidants
- Halogens (chlorine, iodine)
- Alcohols
- Aldehydes
- Phenols
- Ethylene oxide

In addition to the components listed here, the application instructions for the various disinfectants also differ significantly.

Disinfectants and Eurodekor

In general Eurodekor melamine faced wood-based materials are highly resistant against the impact of staining agents. However, the variety of available disinfectants with different compositions, effects and application recommendations makes it impossible to approve their use on Eurodekor. Even chemical-based disinfectants that are used to verify the quality of the surface successfully according to EN 14323 may cause a severe damage when following the manufacturer's directions for use. Many of them are also asking for applying the

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disinfectant covering the whole surface to allow a good evaporation. Exposure to high levels of moisture for extended periods may damage the transition from the board face to the edge which can cause swelling along the edges. Based on the above reasons and examples, we recommend testing the disinfectant on the surface of Eurodekor in all cases. Only this approach guarantees the durability of the material in the desired application. As additional information tested disinfectants are shown in appendix 1.

APPENDIX 1

[24h test]

Manufacturer	Product	Test Conditions	Grade	Result
BODE Chemie GmbH	Dismozon pur VAH und RKI	4% solution	Grade	5
BODE Chemie GmbH	Microbac Forte VAH	concentrated 40 times	Grade	5
BODE Chemie GmbH	Kohrsolin VAH	concentrated 33 times	Grade	4
Cleansept	AFwipes	ready for use	Grade	5
Dr. Hans Rosemann	Trichlorol RKI	5% solution	Grade	5
Dr. Hans Rosemann	Aldesan 2000 RKI	concentrated 10 times	Grade	5
Dr. Hans Rosemann	Lysoformin 2000 RKI	concentrated 13 times	Grade	5
Dr. Hans Rosemann	Lysoformin RKI	concentrated 16 times	Grade	5
Dr. Hans Rosemann	Fugaten	ready for use	Grade	5
Dr. Hans Rosemann	Lysoformin spezial	0,75% solution	Grade	5
Dr. Hans Rosemann	Lysoformin rapid	2% solution	Grade	5
Dr. Schumacher	Ultrasol F	5% solution	Grade	5
Dr. Schumacher	Descosept Pur	ready for use	Grade	5
Dr. Schumacher	Optisal N	1% solution	Grade	5
Dr. Schumacher	Optisept	4% solution	Grade	5
Dr. Schumacher	Perfektan TB VAH	concentrated 25 times	Grade	5
Dr. Schumacher	Cleanisept VAH	concentrated 13 times	Grade	5
Dr. Schumacher	Biguanid Fläche N VAH gl.	concentrate	Grade	5
Dr. Schumacher	Descosept VAH	ready for use	Grade	4
Dr. Schumacher	Descosept PUR	ready for use	Grade	5
Dr. Schumacher	Ultrasol active	1% solution	Grade	5
Kesla Hygiene AG	Wofasept FL VAH	ready for use	Grade	5
Kesla Hygiene AG	Wofasept VAH	concentrated 50 times	Grade	5
Kesla Hygiene AG	Wofasteril RKI ***	concentrated 400 times	Grade	1
Kesla Hygiene AG	Wofasteril RKI ***	5% solution	Grade	4
Sanosil Service GmbH	Sanosil Lösung	ready for use	Grade	4
Schülke & Mayr	Perform VAH und RKI	0,5 solution	Grade	4
Schülke & Mayr	Mikrozid HF Liquid	ready for use	Grade	5
Schülke & Mayr	Terralin Protect	concentrated 50 times	Grade	4
Schülke & Mayr	Terralin protect VAH	0,5% solution	Grade	5
Schülke & Mayr	Mikrozid VAH	ready for use	Grade	5
Schülke & Mayr	Perform VAH und RKI	3% solution	Grade	5
Schülke & Mayr	Pursept FD	7% solution	Grade	5

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Manufacturer	Product	Test Conditions	Grade	Result
Schülke & Mayr	Pursept FD	100% solution	Grade	5
Schülke & Mayr	antifect extra	2% solution	Grade	5
Schülke & Mayr	mikrozyd PAA wipes	ready for use	Grade	5
Schülke & Mayr	Pursept-A Xpress	ready for use	Grade	5
Schülke & Mayr	Pursept-AF	6% solution	Grade	5
Schülke & Mayr	Acryl Des	ready for use	Grade	5
Tana Chemie GmbH	Apesin rapid VAH	concentrate	Grade	5
Tana Chemie GmbH	Apesin rapid VAH	ready for use	Grade	5
Tana Chemie GmbH	Apesin AP 100 plus	3% solution	Grade	4
Tana Chemie GmbH	Apesin multi QUICK&EASY	ready for use	Grade	5
ECOLAB	Incidin PLUS RKI	8% solution	Grade	5
ECOLAB	Incidin Rapid	2% solution	Grade	5
ECOLAB	Incidin Pro	4% solution	Grade	5
ECOLAB	Sani Cloth active	ready for use	Grade	5
ECOLAB	Incidin Active	3% solution	Grade	5
ECOLAB	Incidin OxyFoam S (rot)	ready for use	Grade	5
ECOLAB	Incidin Foam	ready for use	Grade	5
ECOLAB	Incidin Liquid	ready for use	Grade	5
Antiseptica	Descogen Liquid VAH	3% solution	Grade	5
Antiseptica	Biguacid-S VAH	2% solution	Grade	4
Antiseptica	Descocid-N	2% solution	Grade	5
Antiseptica	Descogen-F (granulate)	1,5% solution	Grade	5
Antiseptica	Biguacid Liquid	ready for use	Grade	5
Antiseptica	Kombi-Flächen Desinfektion	4% solution	Grade	5
Dr. Nüsken	Nüscosept OFVAH	1% solution	Grade	5
Dr. Nüsken	Nüscosept Cl in VAH	1% solution	Grade	5
Dr. Nüsken	Nüscosept RKI	0,5% solution	Grade	5
Dr. Nüsken	Nüscosept Forte	2% solution	Grade	5
Dr. Nüsken	Nüscosept Rapid	ready for use	Grade	5
Dr. Nüsken	Nüscosept Foam	ready for use	Grade	5
Henkel	SIDOL Küchenkraft	ready for use	Grade	5
Dreiturm	Hexawol	7,5% solution	Grade	5
Dreiturm	Hexawol fix	ready for use	Grade	5
B. Braun	Hexaquart plus lemon	2% solution	Grade	5
B. Braun	Hexaquart S mit Fichtennadelduft	3% solution	Grade	5
B. Braun	Hexaquart plus	2% solution	Grade	5
B. Braun	Meliseptol Foam pure	spray bottle	Grade	5
B. Braun	Meliseptol rapid	ready for use	Grade	5
B. Braun	Softa-Man (Softalind) Visco Rub	ready for use	Grade	5
B. Braun	Softa-Man (Softalind) pure	ready for use	Grade	5
B. Braun	Softasept N gefärbt / ungefärbt	ready for use	Grade	5

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Manufacturer	Product	Test Conditions	Grade	Result
B. Braun	Meliseptol	ready for use	Grade	5
B. Braun	Promanum pure	ready for use	Grade	5
B. Braun	Hexaquart forte	ready for use	Grade	5
Hagleitner Hygiene	hygienic3000	7,5% solution	Grade	5
Hagleitner Hygiene	hygienicPLUS	ready for use	Grade	5
Hagleitner Hygiene	hygienicDES 2GO	0,5% solution	Grade	5
Hagleitner Hygiene	wcDISINFECT	ready for use	Grade	5
Hagleitner Hygiene	hygienicDES Perfect	2% solution	Grade	5
Hagleitner Hygiene	hygienicDES FORTE	ready for use	Grade	5
Suma	Suma BAC D10	1% solution	Grade	5
Suma	Suma MULTI D2	1% solution	Grade	5

Assessment table to test for resistance to stains [EN 14322:]

Grade	Rating
5	no visible change
4	slight change in shine and / or colour is only visible at certain angles
3	moderate change of gloss level and/ or colour
2	significant change of gloss level and/ or colour
1	surface damage and / or blistering

APPENDIX 2

Substances to test for resistance to stains [EN14322:2004 5.6]

Test substance	Test conditions
Group 1 Acetone – other organic solvents Toothpaste Hand cream Urine Alcoholic beverages Natural fruit and vegetable juices Lemonade and fruit beverages Meat products and sausage Animal and plant fats and oils Water Yeast suspension in water Sodium chloride solution (NaCl), saturated Mustard Bases, soap solutions, cleaning solutions 23 % dodecylbenzenesulfonate 10 % alkylaryl/polyglycoether 67 % water, spot or paint remover based on organic solvents Citric acid (10 % solution)	Application of the test substance at room temperature. Contact time: 16 h

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Test substance	Test conditions
Group 2 Coffee, black (120g coffee per litre of water) Black tea (9g tea per litre of water) Milk (all varieties)	Application of the test substance at approx. 80 °C. Contact time: 16 h
Cola beverages Wine vinegar Alkaline cleaning agents, diluted to 10 % concentration with water Hydrogen peroxide, 3 % Ammonia (10 % solution of the off-the-shelf concentration) Nail polish Nail polish remover Lipstick Watercolours Indelible inks Ballpoint ink	Application of the test substance at room temperature. Contact time: 16 h

Notice of provisional status:

This technical leaflet was prepared based on the best available information and with due diligence. The content is based on practical experience and own tests, and corresponds to our current state of knowledge. It is provided for information purposes and does not include the assurance of product characteristics or suitability for specific applications. There is no warranty for printing errors, specification errors or mistakes. Furthermore, the continuous further development of EGGER Eurodekor as well as the amendment of standards and public documents may result in technical changes. Therefore, the content of this technical leaflet cannot serve as instructions for use or as a legally binding agreement. Our general sales and delivery terms and conditions apply.

Responsible: Product management furniture & interior design

Release date: 06.11.2019

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Product Information

DecoBoard | chemical resistance

Melamine resin faced wood-based panels must be resistant to staining materials listed in EN 14323, Annex A. All textures and decors of Pfleiderer's DecoBoard fulfil the values required after a contact time of 16 hours.

In the test method a range of substances, widely used in day-to-day living, are brought into contact with DecoBoard. These substances are divided into groups.

Group 1:

Application of the test substances at room temperature. Contact time 16 hours

Acetone*

Other organic solvents

Tooth paste

Hand cream

Urine

Alcoholic drinks

Natural fruit and vegetable juices

Lemonade and fruit drinks

Meat products, sausages and cold meats

Animal and vegetable fats, oils

Water

Yeast suspension in water

Saline solution (NaCl), saturated

Mustard

Lyes, soap solutions

Cleaning solution

23% dodecylbenzenesulfonate

10% alkyl aryl polyglycol ether

67% water

Organic solvent-based stain or dye remover

Citric acid solution (10%)

Group 2:

Application of the test substances at around 80°C. Contact time 16 hours

Coffee, black (120 g coffee per litre of water)*

Black tea (9 g tea per litre of water)

Milk (all types)

Application of the test substances at room temperature. Contact time: 16 h

Cola drinks

Wine vinegar

Alkali cleaning agents, diluted with water to 10% concentration

Hydrogen peroxide, 3%

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- Ammonia (10% solution of the commercially available concentration)
- Nail varnish
- Nail varnish remover
- Lipstick
- Water colours
- Water-resistant inks
- Ballpoint pen paste

(If the product to be tested fulfils the requirements for substances marked with an asterisk (*), the stain resistance requirement is also considered to be fulfilled. The other test substances are listed merely for information purposes.)

The following rating scale is used to describe the results:

- Rating 5: No visible change
- Rating 4: Slight change of gloss and/or colour, only visible at certain viewing angles
- Rating 3: Moderate change of gloss and/or colour
- Rating 2: Marked change of gloss and/or colour
- Rating 1: Surface damage and/or delamination

Decor boards must be resistant to the staining materials listed in EN 14323, Annex A (as listed above) and achieve rating ≥ 3 , which means moderate change to gloss and colour. **Pfleiderer DecoBoard fulfils the required values for all decors and textures.**

Basically, there are more resistant and more sensitive textures within the requirement:

Stain resistance increases the smoother the surface texture and the darker the decor. For improved (or optimised) stain resistance, pearl or hand-made (vat) textures (e.g. MP or VV) should be used. Smooth textures (e.g. HG or ML) are then not recommended.

Disinfection and cleaning

In addition, our laboratory has already tested several disinfectants which are also used for cleaning, and has classified them as **safe** to use on the DecoBoard surface:

The test method was based on EN 14323 Group 1.
Application of the test substances at room temperature. Contact time 16 hours

Disinfectant	Concentration / %
Acryl Des	
Biotenside surface disinfectant	
Mikrobac Forte	
Terralin Protect 0.5 %	0.5
Perform 0.5%	0.5
Perform 1%	1
Perform 3%	3
Meliseptol	
Hexaquat forte	
Helipur	
Sterillium	
Incidin	
Incidin Plus	
Mikrobac forte	



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Bacillol AF	
Dismozon plus	0.4
Kohrsolin FF	0.5
Bacillol 30 tissues	

Provided they are used properly, the named approved surface disinfectants do not cause surface damage to our decor boards.

Other disinfectants may leave residues on the surface, as they do not evaporate completely. This can result in smears, streaks or whitish to yellowish residues. We therefore recommend testing in a concealed area before using a product for the first time.

Please always follow the recommendations of the disinfectant manufacturer.

Please also follow the instructions for the care and cleaning of DecoBoard.

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Technical leaflet

EGGER Eurodekor melamine faced boards

Material Specification:

Melamine faced wood-based panel with a decorative surface.

The substrate can be either EGGER Eurospan Rawboard, EGGER MDF or EGGER OSB Combiline

Area of application:

Decorative wood based panels for interior uses



Cleaning and care instructions

Due to their resistant and hygienic surfaces, Eurodekor melamine faced boards do not require any special maintenance.

The surface is generally easy to clean; this also applies to textured surfaces.

The recommended cleaning methods according to the degree of soiling are as follows:

Light, fresh soiling

Clean with a paper towel, a soft clean cloth (dry/damp) or a sponge.

If using a damp cloth, dry the surface with an absorbent paper towel or microfibre cloth.

How to avoid streaks

Streaks often form when the surface is cleaned with organic solvents, together with cold water and old cloths. To ensure no streaks occur when cleaning, we recommend wiping the surface down with warm water and then drying it using normal paper towels or microfibre cloths.

Normal soiling – extended contact time

Clean with warm water, a clean rag or microfibre cloth, a soft sponge or soft brush. Use normal domestic cleaners or soaps that have no abrasive ingredients. Then wipe with fresh water, removing all traces of the cleaning agent, to prevent streaks forming. Dry the surface with a clean, absorbent cloth or paper towels.

The following cleaning agents should not be used under any circumstances:

- Scouring and abrasive agents (abrasive powders, scouring pads, steel wool)
- Polish, washing powder, furniture cleaner, bleach
- Detergents with strong acids and acidic salts
- Steam cleaning equipment

Care and usage tips for matt surfaces

Surfaces with a matt finish have a very natural look and feel. The oiled or matt lacquered type finish thus retains the characteristics of the original, solid wood surface. Like high-gloss or solid wood surfaces, a few points need to be considered when using and caring for matt surfaces.

As with other synthetic surfaces, normal soiling is easy to remove without any problems. What is important is that the surfaces are only cleaned with a soft, moist cloth. Under no circumstances must abrasive agents/powders, steel wool, polish, washing powder, furniture cleaner, bleach, acidic cleaning agents or steam cleaning equipment be used.

The reason for these precautions is that abrasive cleaners, rough cloths or scouring pads will cause bright patches or highlights in the surface if applied too vigorously, which damage the surface and are impossible to remove. Remnants of fat should also be removed as quickly as possible (within 48 hours) as the surface may be damaged if they are allowed to remain in contact with it for too long.

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Advice on the cleaning of deep surface structures

The deeper surface of structures may seem to be more critical concerning staining and potential damage of the surface. However laboratory tests showed the similar high level of resistance like all other Eurodekor melamine faced panels. One main reason for this is the placement of the high and low gloss areas. Compared with similar surface structures existing in the market the advantage of the EGGER surface structure realizes a higher resistance against scratches. Also when used with very light decors this surface can be cleaned easily. The cleaning motion should follow the structures direction. In general the above mentioned advice regarding Eurodekor is valid.

Provisional Note:

This technical datasheet contains information added carefully and under precise investigation. Technical details are subject to change. The continuous development of EGGER Eurodekor might result in differences, as well as renewals of standards and documents of public law. Therefore EGGER can give no guarantee for misprint, or mistakes. This technical datasheet is not an instruction of use and not a legally binding document.

Responsible: Productmanagement furniture and interior design

released: 25/09/2018



Test report

Furniture surfaces - Behaviour at chemical influence (DIN 68861-1:2011-01)

system:

customer:

detergent		1 B	1 C		Test-Result
		Result	Exposition		
1 acetic acid	60 min	5			
2 citric acid	60 min	5			
3 ammonia solution	2 min	5			
4 ethanol non denatured	60 min	4			
5 red wine	6 h	5			
6 beer	6 h	5			
7 cola	16 h	5			
8 coffee	16 h	5		10 min.	
9 black tea	16 h	5		10 min.	
10 blackcurrant juice	16 h	5		10 min.	
11 milk, condensed	16 h	5		10 min.	
12 water	16 h	5		10 min.	
13 benzine	2 min	5			
14 acetone	10 sec	2			
15 ethyl-butyl acetate	10 sec	2			
16 butter	16 h	5			
17 olive oil	16 h	5			
18 mustard	6 h	5			
19 onion	6 h	5			
20 disinfectant	10 min	5		2 min.	
23 cleaning agent	60 min	5			
24 cleaning solution	60 min	5		2 min.	

Result

- 5 No visible changes (no damage)
- 4 Slight change in gloss and visible only when the lightsource is mirrored in the test surface on or quite near the mark and is reflected towards the observer's eye, or a few isolated marks just visible
- 3 Slight mark, visible in several viewing directions, for example almost complete disc or circle just visible
- 2 Strong mark, the structure of the surface being however largely unchanged.
- 1 Strong mark, the structure of the surface being changed or the surface material being totally or partially removed or the filter paper adhering on the surface

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Technical leaflet

Resistance to chemicals – EGGER Laminate



Thanks to its excellent decorative and physical properties EGGER Laminate has a very wide range of applications. By virtue of its robust surface, EGGER Laminate also provides high resistance to most chemicals. This leaflet contains information on the resistance of EGGER laminate to a range of substances including its application in laboratories, medical facilities, production sites and in the food industry.

Normative Properties of the Surface

The EN 438 Standard defines special requirements regarding the surface resistance of decorative laminates. This includes testing the laminate surface against various substances for resistance to stains. The test examines how the surface is affected by substances to which the laminate may be exposed during daily use. The laminate surface is brought into direct contact with a range of substances. The exposure times and conditions for contact between each substance and the specimen are prescribed. At the end of the respective exposure time, the specimens are washed and examined for permanent surface changes.

EN 438 defines the following three groups:

Group 1

Testing is conducted with an exposure time of 16 hours at ambient temperature. EGGER Laminate achieves rating 5 = no visible changes.

This group includes the following substances:

- Acetone
- Other organic solvents
- Toothpaste
- Hand cream
- Urine
- Alcoholic beverages
- Natural fruit and vegetable juices
- Lemonade and fruit beverages
- Meat products and sausage
- Animal and plant fats and oils
- Water
- Yeast suspension in water
- Salt (NaCl) solutions
- Mustard
- Lyes, soap solutions
- Commercial disinfectants
- Citric acid (10% solution)
- Stain or paint removers based on organic solvents
- Cleaning solution consisting of: 23% dodecylbenzene sulfonate, 10% alkyl aryl polyglycol ether, 67% water



Responsible : PM Furniture and interior design



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GROUP 2

Testing is conducted with an exposure time of 16 hours at ambient temperature. Coffee, tea and milk are tested at a temperature of approximately 80°. EGGER laminate achieves rating 5 = no visible changes.

This group includes the following substances:

- Coffee (120 g coffee per litre of water)
- Black tea (9 g tea per litre of water)
- Milk (all types)
- Cola beverages
- Wine vinegar
- Hydrogen peroxide (3% solution)
- Alkaline cleaning agents (diluted to 10% concentration with water)
- Nail varnish
- Nail varnish remover
- Lipstick
- Watercolours
- Laundry marking inks
- Ballpoint inks
- Ammonia (10% solution of commercial concentrate)

GROUP 3

Testing is conducted with an exposure time of 10 minutes at ambient temperature. EGGER laminate achieves at least rating 4: slight change in gloss level and/ or colour, only visible from certain viewing angles.

This group includes the following substances:

- Sodium hydroxide (25% solution)
- Hydrogen peroxide (30% solution)
- Concentrated vinegar (30% acetic acid)
- Bleach and sanitary cleaners containing bleach
- Cleaning agents based on hydrochloric acid ($\leq 3\%$ HCl)
- Acid-based metal cleaners
- Carbon black suspension in paraffin oil
- Hair colouring and bleaching agents
- Iodine
- Boric acid
- Lacquers and adhesives (except fast curing materials)
- Amidosulphuric acid descaling agents (<10% solution).
- Mercurochrome (2.7-dibromo-4-hydroxymercur-fluoresein, merbromin disodium salt)

No Surface Change

Apart from the Group 1 and 2 substances and reagents listed in the Standard, there are additional substances that cause no change to EGGER laminate with melamine resin surface, even after an extended exposure time.

- Activated charcoal
- Aluminium chloride
- Aluminium sulphate
- Formic acid 10%
- Ammonium chloride
- Ammonium sulphate
- Ammonium thiocyanate
- Amyl acetate (acetic acid pentyl ester)
- Aniline
- Arabinose
- Ascorbic acid
- Asparagine
- Asparic acid
- p-aminoacetophenone
- Barium chloride
- Barium sulphate
- Lead acetate
- Lead nitrate
- Blood
- Butyl acetate
- Cadmium acetate
- Cadmium sulphate
- Calcium carbonate (chalk)
- Calcium chloride
- Calcium nitrate
- Calcium oxide
- Quinine
- Cholesterol
- Cocaine
- Caffeine
- Cyclohexane
- Dextrose
- Digitonin
- Dimethyl formamide
- Dulcete
- Soil
- Acetic acid
- Ethanol
- Ether
- Ethyl acetate
- Formaldehyde
- Fructose
- Animal feed
- Galactose
- Gelatine
- Plaster
- Glucose



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- Glycerine
- Glycocoll
- Glycol (ethylene glycol)
- Uric acid
- Urea solution
- Heparin
- Hexane
- Hydroquinone
- Inositol (=cyclohexane hexol)
- Isopropanol
- Caustic potash solution 10%
- Potassium aluminium sulphate
- Potassium bromate
- Potassium bromide
- Potassium carbonate
- Potassium chloride
- Potassium hexacyanoferrate
- Potassium iodate
- Potassium sodium tartrate
- Potassium nitrate
- Potassium sulphate
- Potassium tartrate
- Potato starch
- Casein
- Garlic
- Common salt
- Caffeine
- Charcoal
- Cosmetics
- Copper sulphate
- Lactose
- Laevulose
- Lithium carbonate
- Magnesium carbonate
- Magnesium chloride
- Magnesium sulphate
- Maltose
- Mannitol
- Mannose
- Meso-inositol
- Lactic acid 85%
- Lactose
- Foodstuffs
- Sodium acetate
- Sodium carbonate
- Sodium chloride
- Sodium citrate
- Sodium diethyl barbiturate
- Sodium hydrogen carbonate (sodium bicarbonate)
- Sodium hydrogen sulphate
- Sodium hyposulphite
- Sodium nitrate
- Sodium phosphate
- Sodium silicate
- Sodium sulphate
- Sodium sulphide
- Sodium sulphite
- Sodium tartrate
- Sodium thiosulphate
- Sodium hydroxide solution 10%
- Nickel sulphate
- Nicotine
- Oleic acid
- Paraffin
- Paraffin oil
- Phenol phthalein
- Polishes (creams and waxes)
- 1,2-propylene glycol
- Quicksilver
- Raffinose (melitose)
- Common household cleaners
- Rhamnose
- Rochelle salt
- Cane sugar
- Soot
- Saccharose (sucrose)
- Salves
- Salicylaldehyde
- Salicylic acid
- Saponin
- Soap
- Sorbitol
- Starch
- Stearic acid
- Talcum
- Tannin
- Tetrahydrofuran
- Tetralin
- Thiocarbamide
- Animal feed
- Toluol
- Clay
- Dextrose
- Trehalose
- Trypsin
- Tryptophan
- Urease
- Vanillin
- Vaseline
- Tartaric acid
- Zinc chloride
- Zinc sulphate



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No Surface Change after Brief Exposure Time

In addition to the Group 3 substances listed in the Standard, the surface of EGGGER laminate with melamine resin surface can also be exposed briefly to the substances listed below without resulting in changes. When these substances are spilled, they should be wiped quickly – within 10 to 15 minutes – using a damp cloth, and the surface should then be dried.

- Aniline dyes
- Ammonium hydrogen sulphate
- Boric acid
- Caustic potash solution 50%
- Potassium chromate
- Potassium dichromate
- Potassium hydrogen sulphate
- Potassium iodide
- Potassium permanganate
- Lithium hydroxide 10 %
- Sodium hydrogen sulphate
- Sodium hydroxide solution 48%
- Sodium thiosulphate
- Oxalic acid
- Silver nitrate

Marked Surface Change

The substances listed below lead to surface changes and/ or the destruction of the laminate, even after a very brief exposure time.

- Nitric acid 10%
- Hydrochloric acid up to 10%
- Sulphuric acid up to 10%
- Adhesive (chemically hardening)

Aggressive Gases

Frequent exposure to aggressive gases, e.g. bromine, chlorine, nitrous gases and sulphur oxide, leads to surface changes of EGGGER laminate.

Disinfectants

Disinfectants are used on EGGGER laminates as surface disinfectants.

Various disinfectants are offered by the industry for this application. These vary both in regard to their composition and their effects. Disinfectants used on surfaces are mainly those that exhibit one of the following active principles and/ or are based on one of the chemicals listed here:

- Oxidants
- Halogens (chlorine, iodine)
- Alcohols
- Aldehydes
- Phenols
- Ethylene oxide

In addition to the components listed here, the application instructions for the various disinfectants also differ significantly.



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Disinfectants and EGGER Laminate

The large number of available disinfectants with various compositions, effects and application recommendations makes it impossible to issue general approval for the use of these products on EGGER laminate.

For the above reasons, we recommend testing the disinfectants on the EGGER laminate surface in all cases. Only this approach guarantees the fabricator durability of the material for the desired application.

The following disinfectants have been tested in our laboratory according to the requirements of the EN438-2 test procedure 26 – resistance to staining at ambient temperature - with an exposure time of 16 hours. In the results column under "Laminate" you will find the test results of the laminates with melamine surface and under "PerfectSense" the results of the lacquer-based surfaces.

Manufacturer	Product	Concentration	Unit	Result*	
				Laminate	PerfectSense Matt/ Topmatt
Antiseptica	Acrylan (ready to use solution)	-	Rating	5	
Antiseptica	Biguacid S surface disinfection and cleansing	1%	Rating	5	
Antiseptica	Biguacid Liquid Big Spray new	-	Rating	5	
Antiseptica	Descocid-N	2%	Rating	5	5 / 5
Antiseptica	Descogen Liquid	3%	Rating	4	
Antiseptica	Descogen Liquid r.f.u	-	Rating	4	
Antiseptica	Descogen-F (Granulat/ granulate) Oxygenon-S	1.5%	Rating	5	
Antiseptica	Biguacid S surface disinfection and cleansing	2%	Rating	5	
Antiseptica	Kombi-Flächen Desinfektion Antiseptica Combi Surface	4%	Rating	5	5 / 5
B. BRAUN	Hexaquart plus lemon duft	2%	Rating	5	
B. BRAUN	Hexaquart S mit Fichtennadelduft	3%	Rating	5	
B. BRAUN	Hexaquart forte (ready to use solution)	-	Rating	5	5 / 5
B. BRAUN	Hexaquart plus	2%	Rating	5	
B. BRAUN	Meliseptol (ready to use solution)	-	Rating	5	5 / 5
B. BRAUN	Meliseptol Foam pure	-	Rating	5	
B. BRAUN	Meliseptol rapid	-	Rating	5	5 / 5
B. BRAUN	Promanum pure (ready to use solution)	-	Rating	5	5 / 5
B. BRAUN	Softa-Man (Softalind) Visco Rub	-	Rating	5	
B. BRAUN	Softa-Man (Softalind) pure (ready to use solution)	-	Rating	5	5 / 5
B. BRAUN	Softasept N gefärbt / ungefärbt	-	Rating	5	
PAUL HARTMANN AG Bode Chemie GmbH	Dismozon pur	4 %	Rating	5	
PAUL HARTMANN AG Bode Chemie GmbH	Microbac Forte	2.5%	Rating	5	
PAUL HARTMANN AG Bode Chemie GmbH	Kohrsolin Extra	6%	Rating	5	
PAUL HARTMANN AG Bode Chemie GmbH	Kohrsolin FF	3%	Rating	5	



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Manufacturer	Product	Concentration	Unit	Result*	
				Laminate	PerfectSense Matt/ Topmatt
PAUL HARTMANN AG Bode Chemie GmbH	Bacillol AF	100%	Rating	5	
Dr. Schuhmacher	CLEANISEPT WIPES (disinfecting cloth)	-	Rating	5	
Dr. Schuhmacher	Optisept	7%	Rating	5	
Dr. Schuhmacher	Descosept PUR	-	Rating	5	5 / 5
Dr. Schuhmacher	Optisal N	0.125%	Rating	5	
Dr. Schuhmacher	Ultrasol active	1%	Rating	5	
Dreiturm	Hexawol	0.7%	Rating	5	5 / 5
Dreiturm	Hexawol fix (ready to use solution)	-	Rating	5	5 / 5
Dr. Nüsken	Nüscosept Cl in	1%	Rating	5	
Dr. Nüsken	Nüscosept Foam (ready to use solution)	-	Rating	5	5 / 5
Dr. Nüsken	Nüscosept Forte	2%	Rating	5	5 / 5
Dr. Nüsken	Nüscosept OF	1%	Rating	5	
Dr. Nüsken	Nüscosept Rapid (ready to use solution)	-	Rating	5	5 / 5
ECOLAB	Incidin Active	3%	Rating	5	5 / 5
ECOLAB	Incidin Foam (ready to use solution)	-	Rating	5	5 / 5
ECOLAB	Incidin Liquid (ready to use solution)	-	Rating	5	5 / 5
ECOLAB	Incidin OxyFoam S (red) (ready to use solution)	-	Rating	3	5 / 5
ECOLAB	Incidin PLUS	8%	Rating	5	5 / 5
ECOLAB	Incidin Pro	4%	Rating	5	5 / 5
ECOLAB	Incidin Rapid	2%	Rating	5	5 / 5
ECOLAB	Sani-Cloth Active (disinfecting cloth)	-	Rating	5	
Fresenius Kali	Ultrasol F	5%	Rating	5	
Hagleitner Hygiene	hygienicDES Forte (ready to use solution)	-	Rating	5	5 / 5
Hagleitner Hygiene	hygienicDES PERFECT	2%	Rating	5	
Hagleitner Hygiene	Hygienic3000	7.5%	Rating	5	5 / 5
Hagleitner Hygiene	hygienicDES 2GO	0.5%	Rating	5	5 / 5
Hagleitner Hygiene	hygienicPLUS (ready to use solution)	-	Rating	5	5 / 5
Hagleitner Hygiene	wcDISINFECT (ready to use solution)	-	Rating	4	5 / 5
.bhannes Kiehl KG	Blutoxol	7.5%	Rating	4	5 / 5
.bhannes Kiehl KG	Desinet-compact concentrate	2%	Rating	5	5 / 5
.bhannes Kiehl KG	Desisan concentrate	6%	Rating	5	5 / 5
.bhannes Kiehl KG	RapiDes (ready to use solution)	-	Rating	5	5 / 5
Lysoform Dr. Hans Rosemann GmbH	Lysoformin rapid	2%	Rating	5	5 / 5
Lysoform Dr. Hans Rosemann GmbH	Lysoformin special	0.75%	Rating	5	5 / 5
Omnident	Omnizid (ready to use solution)	-	Rating	5	5 / 5



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Manufacturer	Product	Concentration	Unit	Result*	
				Laminate	PerfectSense Matt/ Topmatt
Schülke & Mayr	acryl-des (ready to use solution)	-	Rating	5	
Schülke & Mayr	Pursept	100%	Rating	5	
Schülke & Mayr	Pursept-A Xpress	-	Rating	5	
Schülke & Mayr	Pursept-AF	6%	Rating	5	
Schülke & Mayr	antifect extra	2.5%	Rating	5	
Schülke & Mayr	Mikrozid HFLiquid (ready to use solution)	-	Rating	5	
Schülke & Mayr	Mikrozid (ready to use solution)	-	Rating	5	
Schülke & Mayr	Mikrozid PAA wipes	-	Rating	5	
Schülke & Mayr	Perform	3%	Rating	5	
Schülke & Mayr	Perform	0.5%	Rating	5	
Schülke & Mayr	Terralin Protect	50%	Rating	5	
Schülke & Mayr	Terralin Protect	0.5%	Rating	5	
Schülke & Mayr	TPH protect	2%	Rating	5	
Servi Canto	Acrilim (ready to use solution)	-	Rating	5	5 / 5
Suma	Suma BACD10	1%	Rating	5	
Suma	Suma MULTI D2	1%	Rating	5	
Tana Chemie GmbH	Apesin AP100 plus	3%	Rating	3	4 / 5
Tana Chemie GmbH	Apesin multi QUICK&EASY (ready to use solution)	-	Rating	5	5 / 5

* Rating scale resistance to staining

Grades	Requirement
Rating 5	No visible change
Rating 4	Slight change of gloss and/ or colour, only visible at certain viewing angles
Rating 3	Moderate change of gloss and/ or colour
Rating 2	Marked change of gloss and/ or colour
Rating 1	Surface distortion and/ or blistering

EGGER laminate surfaces must be cleaned regularly during the period of use. More detailed information can be found in our leaflet "EGGER laminate cleaning and use instructions".

Provisional note:

This technical leaflet has been carefully drawn up to the best of our knowledge. The information provided is based on practical experience, in-house testing and reflects our current level of knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or its suitability for specific applications. We accept no liability for any mistakes, errors in standards, or printing errors. In addition, technical modifications may result from the continuous development of EGGER laminates, as well as from changes to standards and public law documents. The contents of this technical leaflet should therefore not be considered as instructions for use or as legally binding. Our General Terms and Conditions apply.



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Technical leaflet

Cleaning and Maintenance instructions
 EGGER Laminate



Cleaning

Due to the resistant and hygienic, dense surface, EGGER Laminate does not require any special form of care. The laminate surfaces consists of melamine resin impregnated decor paper and the surfaces are generally easy to clean. This also applies to textured surfaces. There is no need to use any care products. Furniture polishes and cleaning agents that contain wax should not be used as they have a tendency to dog up the surface structure of laminates and to form a sticky layer that attracts dirt. EGGER Laminate surfaces should be cleaned regularly. When cleaning is necessary, mild agents should be used. Cleaning agents must in particular not contain any abrasive components, as they may adversely affect the gloss level or scratch the surface. As many kinds of soiling can occur, from slight and fresh to heavy and obstinate, and a huge range of different substances may be involved, it is essential to use the correct cleaning procedure. Because there are so many different possibilities, please refer to the table (see pages 3, 4 and 5). This table lists cleaning instructions and examples that clarify specific problems relating to different kinds of soiling. Obviously, the least harsh method should always be tried first when attempting to clean the surface.

Maintenance

As a general rule spilled substances such as tea, coffee and wine etc. should be cleaned immediately as the cleaning effort increases if they are left to dry. The following instructions should be observed in daily use:



Placing burning cigarettes on the laminate surface leads to surface damage. Always use an ashtray.



Laminate surfaces should not be used as a cutting surface as this can also leave cutting marks on highly resistant laminate surfaces. Always use a chopping board.



Placing hot cooking utensils such as saucepans and frying pans directly from the hob or oven onto the laminate surface should be avoided, as, depending on the heat exposure, a change in the gloss appearance or damage to the surface can arise. Always use heat resistant mats.



Spilled liquids should always be cleaned up immediately, especially in the areas around cut-outs and joints as prolonged exposure to some substances may cause a change in the gloss appearance of the laminate surface.

These recommendations apply especially to matt and gloss laminate surfaces. These have a distinctive look and feel, but have a greater tendency to show wear and tear. EGGER laminates essentially conform to EGGER's high quality standards as well as the applicable Standards and Regulations. EGGER laminates are tested according to EN 438-2 in respect of all the relevant quality requirements. The various laminate qualities required for particular application areas conform to these requirements. For use / application areas, quality requirements, technical data and supply formats, please refer to the individual data sheets.



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Warning! EGGER Laminate surfaces must be cleaned regularly throughout their service life! There is no need to use any care products! Do not use scouring or abrasive agents (abrasive powders, steel wool), polishes, waxes, furniture cleaners or bleach. Do not use cleaning products which contain strong acids or strong acidic salts, e.g. limescale removers based on formic acid and aminosulphuric acid, drain cleaners, hydrochloric acid, silver cleaners or oven cleaners. When cleaning with solvents: observe the accident prevention regulations! Open the window! No naked flames!

Provisional note:

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Source of mark	Degree of soiling					
	light recent marks		normal soiling, of longer duration		hard, stubborn marks; old stains	
1. Dust, Dirt, Dust/ Grease mixture, Pencil, Chalk 2. Chalk residue, Chalk rims (Water rims), Rust 3. Coffee, Tea, Fruit juice, Sugar solutions 4. Grease, Oil, Fingermarks, Felt- pen, Marker-pen, Ballpoint pen, Nicotine deposits, (Tar residues), Rubber marks 5. Wax residues (candle-grease, separating agents for presses), Wax crayon	Use paper towels; soft, clean cloths (dry or damp); sponge or similar. → After using a damp cloth, wipe down afterwards with absorbent paper towels.	Use clean hot water, clean cloths or towels, soft sponge or brush (e.g. nylon brush). Use normal cleaning agent without abrasive constituent, washing powder (especially heavy duty detergent), liquid soap or hard soap. → Remove dirt with solution of solution of cleaning agent, or let it soak according to the degree of soiling, then wash off with clean water or glass cleaner. Wipe several times if necessary.	Organic solvents (e.g. acetone, spirits, petrol, trichlorethylene, MEK). Nail varnish remover.	Carefully remove wax or paraffin by hand. Avoid scrapers – use plastic or wooden spatulas. Remove any residue using absorbent paper and flatiron.	Soak overnight using detergent or a washing powder and water paste. Liquid cleaning product containing calcium carbonate. → A mild solution of bleach may be used, but with extreme caution. N.B. Use liquid cleaning products containing calcium carbonate or bleach only very occasionally	Certain chalk residues may be removable by an acidic cleaning agent (e.g. 10% acetic or citric acid).



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Source of mark	Degree of soiling					
	light recent marks		normal soiling, of longer duration		hard, stubborn marks; old stains	
6. Lipstick, Shoe polish, Floor polish, Wax polish, All-purpose stick 7. Bacteriological stains (Soap residues, skin excretions, germs, blood, urine, vomit) 8. Dark patches appearing after treatment with solvents (streaks) 9. Water colours, Corrosives, Disperse, Dyes, Water-soluble adhesives, Dispersion media (pvc)	Important: Streaks usually occur when cleaning with organic solvents, or using cold water, dirty cloths, or window leathers. To avoid dark patches or streaks when cleaning, a hot water	→ Remove all traces of cleaning agent, to prevent streaks developing. With clean, absorbent cloths (or better still, paper towels) wipe the surface dry. Change cloths frequently.	Additional treatment with disinfectant Disinfect as appropriate	Water or organic solvent	Soften with water or organic solvent, then peel or pull off.	



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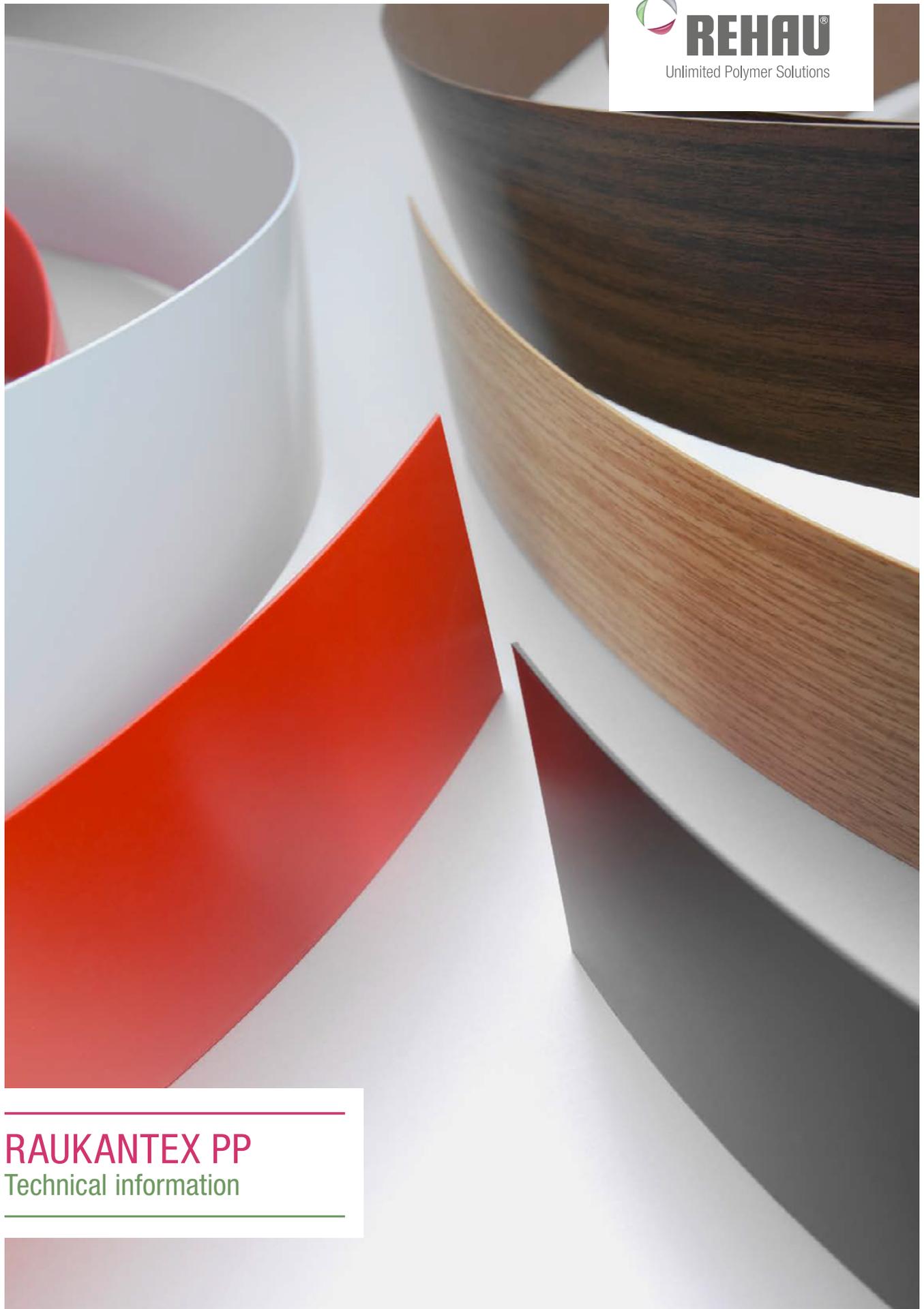


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Source of mark	Degree of soiling					
	light recent marks		normal soiling, of longer duration			hard, stubborn marks; old stains
10. Varnishes containing solvents, dyes and adhesives (varnish residues, varnish sprays, colour sprays, marking ink)	Organic solvents	rinse is recommended, followed by wiping dry with household paper towels.	Organic solvents, e.g. acetone, spirits, petrol, trichlorethylene, MEK	When using adhesives or varnishes in manufacturing, consultation with the makers is recommended, to discover the cleaning agents best suited for removing soiling which might occur during fabrication.		
11. Dual-constituent varnishes and adhesives, Synthetic resins (e.g. polyurethane resins)	Remove immediately (using water or Organic solvent)		Cleaning is possible only before hardening takes place; Remove at once using water or organic solvent.	No cleaning possible! Residues of condensation adhesives or reagent adhesives can no longer be removed.		
12. Silicone, Sealants, Furniture polish	Rub off dry – use silicone remover		Silicone remover			



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RAUKANTEX PP

Technical information

RAUKANTEX PP

Technical information

1. Materials for edgeband processing

REHAU uses the thermoplastic materials PVC (polyvinyl chloride), ABS (acrylonitrile-butadiene-styrene), PP (Polypropylene) and PMMA (polymethylmethacrylate) in its extensive RAUKANTEX edgeband product range. Thermoplastic materials are polymer materials which can be melted and therefore thermoformed, processed and recycled.

2. PP as an edgeband material

PP (polypropylene) is an ecologically sustainable thermoplastic material with excellent material and processing properties. PP provides outstanding chemical resistance and sustainability like no other edgeband material. Processing is possible without any problems as with the other RAUKANTEX products. In many areas chlorine-free thermoplastics, such as PP, are specified because of their disposal properties.

3. PP material (polypropylene)

Polypropylene is a semi-crystalline material which belongs to the polyolefin group. Its physical properties and high melting point are the result of its semi-crystalline structure. With its very low specific gravity of 0.9 PP is one of the lightest thermoplastics. RAUKANTEX PP formulation also meets category 2 of the PAK and fire protection class B2 to DIN 4102.

Areas of application

The spectrum of applications for RAUKANTEX PP is almost limitless: from the office to the bathroom and kitchen, exhibition stand construction and shop fitting, the living area through to commercial construction. The processing-friendly RAUKANTEX PP formulation affords both smooth continuous processing and easy application to furniture panels with suitable radii. Due to its excellent chemical resistance, the PP material is suitable for laboratory equipment.

RAUKANTEX pure PP edgebands are coated on the reverse with a universal primer which guarantees adhesion of the edgeband to the substrate. This primer allows processing with all suitable hot melt adhesives.

Recycling/disposal

The RAUKANTEX PP edgeband waste can be burned in units approved to do this by taking into account the legal stipulations without any problems. No by-products that are harmful to health are produced if it is burned in the correct way. Even wood based boards with PP edgeband applied can be disposed of easily.

Characteristics/Properties

The properties of the RAUKANTEX PP edgebands fulfil the requirements of the furniture industry. The PP edgeband possesses the following properties:

- Shore hardness D

RAUKANTEX PP edgebands achieve good results with a Shore hardness D of 75 +/- 4 to EN ISO 868.

- Heat resistance / Vicat softening temperature

With a value of > 100 °C to ISO 306 / B50 RAUKANTEX PP edgebands are especially suited for use in the furniture industry. The low shrinkage also has a positive influence on the piece of furniture at high temperatures.

- Abrasion resistance

The surface of RAUKANTEX decorative edgebands in PP is protected against scratches with a UV lacquer, whereby the decorative designs demonstrate excellent scratch and abrasion resistance.

- Chemical resistance

RAUKANTEX PP edgebands are chemically resistant to all household cleaners to DIN 68861 Part 1 and fulfil stress group 1B.

- Light fastness

RAUKANTEX PP edgebands are regularly tested in an accredited laboratory in line with EN ISO 4892-2 regarding light fastness. With a light fastness of ≥ 6 on the blue scale these edgebands are ideally suited for interior application. An analysis of the colour deviation is then carried out along the lines of EN ISO 105-A02 using the grey scale.

- Cleaning

Special plastic cleaners are recommended for cleaning RAUKANTEX PP edgebands. The use of substances containing solvents and alcohol is strongly advised against.

	PVC	ABS	PP	PMMA
Light fastness In accordance with EN ISO 4892-2	≥ 6	≥ 6	≥ 6	≥ 6
Shrinkage Edgeband 3 mm 1h at 90°C	≤ 1.7 %	≤ 1.7 %	≤ 0.2 %	≤ 1.0 %
Vicat softening point to ISO 306, Method B50	approx. 67°C	approx. 90°C	approx. 100°C	approx. 80°C
Hardness Shore D to DIN 53505	79 ± 4	70 ± 4	75 ± 4	80 ± 3
Chemical resistance to DIN 68861-1	Very good – 1B	Good – 1B	Very good – 1B	Good – 1B*
Thermal conductivity to DIN 52612	0.16 W/km	0.18 W/km	0.41 W/km	0.18 W/km

*Limited resistance against solvents and alcohols.

Storage

If stored properly RAUKANTEX edgebands can be stored for min. 12 months. For edgebands older than 12 months, however, a processing trial should always be carried out prior to series processing.

Recommended storage conditions are:

- Room temperature (ca. 18 °C to 25 °C)
- Dry
- Clean
- No vapours containing solvents
- Protected from light

Standard tolerances

RAUKANTEX pure PP edgebands are subjected to regular quality checks in order to guarantee the high quality of every production run. In addition to this we are constantly working to improve the raw material properties.

The production tolerances for edgebands are defined exactly and are checked throughout every production run.

The corresponding standard tolerances for each material can be found in the respective tolerance sheet. The standard tolerances for RAUKANTEX edgebands can be obtained from your contact person on request or you can find them on the internet.

4. Processing

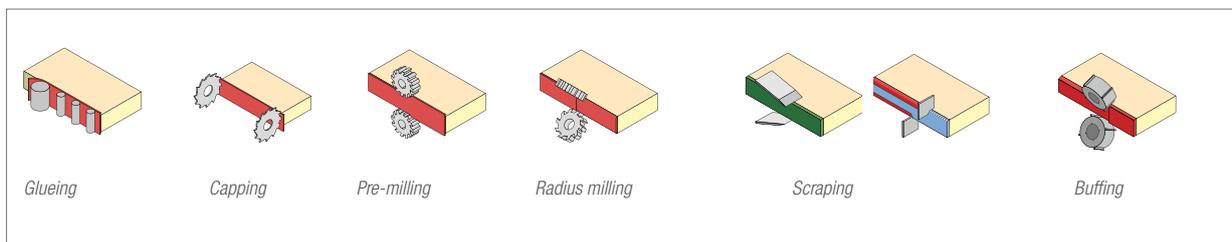
Manual processing

It is possible to process RAUKANTEX PP edgebands manually using edge clamps. Special PVA adhesives, solvent-based adhesives and cartridge adhesives (e.g. Kantol) can be used for gluing by hand. Independent function tests should be carried out in order to determine the suitability of the technical application in each case.

Machine processing

RAUKANTEX PP edgebands can be processed on all edgebanders (straight line edgebander and CNC (processing centres) using a hot melt adhesive. The various processing steps such as gluing, capping, milling, scraping and also reworking with buffing wheels and hot air are possible without any problems.

Process steps of machine processing



To achieve a high-quality and durable edgeband application several important processing parameters have to be considered which depend on the components used (edgeband, glue and boards), the edgebander and the ambient temperature. A processing trial should generally be carried out prior to series processing. The reference values specified by the relevant manufacturer are to be observed.

Adhesive

RAUKANTEX PP edgebands can be processed with all commercially available hot melt adhesives (EVA, PA, APAO and PUR). These highly heat-stable adhesives together with the RAUKANTEX PP edgebands guarantee a secure bond.

For products exposed to high ambient temperatures (e.g. containerised transportation) hot melt adhesives with a high softening temperature are recommended. Due to the high heat resistance of the PP edgebands of approx. 100 °C material softening during general applications does not occur.

During adhesion ensure that the adhesive is applied consistently and that the glue spreading rollers do not extend too far into the line of the board.

The processing temperature of the adhesive varies depending on the type of adhesive. Be aware that the thermostats in melt containers are often inaccurate and the temperature of the applicator roller can vary by up to 30 °C.

- Processing temperature

To achieve the best possible results during edgeband application the boards and edgebands should be processed at a room temperature of > 18 °C otherwise the adhesive sets too quickly. Draughts should also be avoided for this reason.

- Wood humidity

The optimum wood humidity of the board material is between 7 and 10%.

- Processing feed

RAUKANTEX PP edgebands are suitable for the common processing rate of feed both in the commercial as well as industrial sector.

- Adhesive application

To achieve ideal processing the information provided by the adhesive manufacturer should be observed. The adhesive application should be calculated in such a way that small beads of adhesive are pressed out from the edges of the freshly glued edgebands and the voids between the substrate particles are filled. The amount of adhesive in each case depends on the type of board, the substrate density, the edgeband material, the processing feed and the type of adhesive.

Milling

If possible use a 3 to 6 tooth milling tool with a diameter of 70 mm and 12.000 to 18.000 RPM counter to board travel (up-cutting). Inappropriate speeds or blunt tools can damage the edgebands. If a smear effect occurs the speed of the milling tool or the number of teeth should be reduced. The quality of the milled surface (e.g. chatter marks) can be improved by adjusting the feed, speed and number of blades.

Scraping

PP exhibits good quality during scraping, the chip produced by the scraper should be a maximum of 0.1-0.15 mm. To obtain a high-quality surface after scraping, aim for milling finish with as few chatter marks as possible.

Buffing

RAUKANTEX PP edgebands can be buffed to generate a high quality edge radius. Colour deviation (stress whitening) caused during scraping of the edge radius can be eliminated to achieve a consistent finish by using a down-cutting buffing wheel set-up i.e. the wheels rotate with the travel of the board. Additionally, if release and cleaning agents are used during board processing, the buffing wheels will remove any unwanted glue residue.

Processing properties		PVC	ABS	PP	PMMA
Capping		good	good	good	good
Milling direction	Straight line processing	Up-cutting	Up-cutting	Up-cutting	Up-cutting
	Processing centre	Down-cutting/ Up-cutting	Down-cutting/ Up-cutting	Up-cutting	Down-cutting/ Up-cutting
Pre-milling		good	good	good	good
Radius milling		good	good	good	good
Contour milling		good	good	good	good
Scraping		very good	good	good	good
Buffing		very good	good	good	good
Gluing		Standard market hotmelts	Standard market hotmelts	Standard market hotmelts	Standard market hotmelts
Polishability		good	good	average	very good
Stress whitening tendency		low	average	low	low
Processing centre capability		very good	good	very good	demanding

We recommend that the rotating speed of the buffing wheel is reduced by about 50% to 1.400 RPM. Also, the contact pressure of the buffing wheel should not be set too high. This will avoid unnecessary smearing and an excessive build-up of heat. The position of the wheel in both axes should be set at a slight angle to the surface of the edgeband.

Processing with invisible joint technology

RAUKANTEX pro PP edgebands are designed to be processed on edgebanding machines working with CO₂ or diode laser, hot air or NIR processes. Please see special information in the technical information for invisible joint edgebands.

	Problem	Diagnosis of the problem
1	<p>The edgeband can easily be removed by hand.</p> <p>The hot melt adhesive remains on the chipboard (straight line) or on the edgeband (processing centre).</p> <p>It is possible to see the marking made by the adhesive application roller.</p>	<ul style="list-style-type: none"> - Adhesive application not sufficient - Room or edgeband temperature too low - Draughty environment - Hot melt adhesive temperature too low - Processing feed too low - Contact pressure of the pressure roller too low
2	<p>The edgeband can easily be removed by hand.</p> <p>Hot melt adhesive remains on the chipboard (straight line).</p> <p>The hot melt adhesive surface is completely smooth.</p>	<ul style="list-style-type: none"> - Board and/or edgeband is too cold. - Check hot melt adhesive type - Check primer application
3a	<p>Glue joint is not sealed (straight line).</p>	<ul style="list-style-type: none"> - Adhesive too cold - Adhesive application too low - Contact pressure too low - Edgebands have incorrect pre-tensioning - Scoring saw alignment is incorrect - Contact between the adhesive application roller and board - Debris not removed from board cross-section
3b	<p>Glue joint is not sealed (processing centre).</p>	<ul style="list-style-type: none"> - Contact pressure too low - Curvature of the edgeband too high Measure/Proposal: Application of external heat - Check hot melt adhesive type (insufficient heat adhesion) - Edgeband pre-tensioning is incorrect - Adhesive does not set in good time Measure/Proposal: Reduce the adhesive temperature
4	<p>The glued edgeband does not show sufficient adhesion at the start.</p>	<ul style="list-style-type: none"> - Adhesive application roller is not positioned correctly - Increase the amount of adhesive
5	<p>Milling lines are visible.</p>	<ul style="list-style-type: none"> - Feed too high - Number of blades too low - Speed too low Measure/Proposal: Rework with scraper and buffing station
6	<p>Edgeband splits during the milling process.</p>	<ul style="list-style-type: none"> - Edgeband vibrates during the milling process - Adhesion insufficient - Edgeband projection too large Measure/Proposal: Check adhesion parameters Measure/Proposal: Check adhesive type
7	<p>Stress whitening of the edgeband in the milled area, principally after scraping.</p>	<ul style="list-style-type: none"> - Chip of the scraper too thick - Scraper set up incorrectly Measure/Proposal: Blunting of the scrapers edge Measure/Proposal: Rework with buffing station
8	<p>Stress whitening occurs during processing centre processing.</p>	<ul style="list-style-type: none"> - Micro-cracks occur in the radius area due to processing temperature being too cold Measure/Proposal: Application of external heat in the radius area Measure/Proposal: Use of larger radiuses or thinner edgebands

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Protection against virus and bacteria (Covid-19)

With the global spread of Covid-19, hygiene measures and bacteria control have never been more important. This guide offers recommendations on how to clean and disinfect Gabriel fabrics to reduce the risk of infection and minimise the spread of the virus.

How to handle contaminated furniture

If you are concerned about potential contamination of furniture with Covid-19, please follow the recommendations below:

- Always comply with local government guidelines
- Do not use the furniture for at least 48 hours and/or disinfect the fabric

Do not use the furniture

Research indicates that the virus that causes Covid-19 is viable on surfaces for up to 48 hours in a normal and dry indoor environment. The exact life span of the coronavirus on surfaces is, however, still a matter of debate, and local authorities provide different answers. Consequently, we advise you to check and follow local government guidelines in your country, state or region.

Disinfect the furniture

Gabriel offers the following recommendations on how to clean contaminated furniture fabrics and how to prevent virus and bacteria.



Polyester fabrics

Disinfect Gabriel polyester fabrics with ethanol to effectively destroy virus and bacteria.

Clean and wash Gabriel polyester fabrics with soap and water.

To eliminate virus and bacteria, the majority of Gabriel polyester fabrics are washable at 74 Celsius.

Wool fabrics

In case of contamination, furniture upholstered with Gabriel wool fabrics should preferably be left unused for a minimum of 48 hours. If this is not an option, Gabriel wool fabrics can be disinfected with ethanol.

Disinfecting wool fabrics with ethanol will, however, strip the wool of lanolin and may cause colour changes and reduce the lifetime of the fabric. Consequently, this method should only be applied if there are no other alternatives.

Please note, that the above recommendations are not health authority guidelines.

Gabriel®



Antibacterial agents

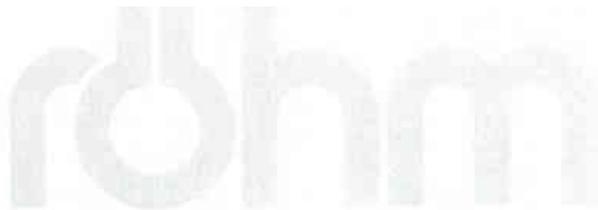
Authorities including the Danish health authorities SSI - Statens Serum Institut - advice against fabrics treated with antibacterial agents, as the use of antibacterial agents may lead to an increase in the occurrence of multi-resistant bacteria.

At Gabriel we are committed to protecting the environment and the health and safety of consumers, and consequently we do not recommend standard antibacterial and anti-viral agents for upholstery fabrics. The effects of the agents are uncertain, and they are likely to offer no more than a false sense of security.

In addition, the antibacterial and anti-viral agents contain hazardous substances such as for example silver ions with adverse environmental impacts. Silver ions are washed out, end up in waste water treatment plants and eventually contaminate the environment. Moreover, antibacterial treatments have a negative impact on the health and safety of work environments.

For further information

For further information on how to clean and disinfect Gabriel furniture fabrics, please visit our website or contact our department QEP-Master (quality, environment and safety).



KUNSTSTOFFE

Chemical behaviour
in general use

Chemisches Verhalten
im allgemeinen Gebrauch

plexiglas gs
plexiglas xt

	resistant	limited resistant	not resistant		resistant	limited resistant	not resistant		resistant	limited resistant	not resistant
Anstrichmittel u. dgl.				Cyclohexan	X			Phosphor, weiß			X
Acrylglas-Farben und Lacke		X		Diäcetonalkohol		X		Phosphorsäure, bis 50 %	X		X
Ölfarben, rein	X			Diamylphthalat		X		Phosphortrichlorid	X		X
Nitrolacke			X	Dioethylenglykol	X			Pikrinsäure, 1 % in Wasser	X		
Verdüner, allgemein			X	Diäthylphthalat			X	2-Propanol		X	
aromatenfreie Benzine	X			Dioxan			X	Propylen	X		
Antistatkmittel				Eisen-II-chlorid	X			Pyridin			X
HB 155	X			Eisen-III-chlorid	X			Quecksilber	X		
antistatischer				Eisenvitriol	X			Salpetersäure, bis 40 %	X		
KUNSTSTOFFREINIGER				Ethanol, bis 30 %		X		Salpetersäure, über 40 %			X
und Pfleger	X			Ethanol, konzentriert			X	Salzsäure	X		
technische Bäder				Ethylacetat			X	Schwefel	X		
fotochemische Bäder	X			Ethylbromid			X	Schwefeldioxid, flüssig			X
galvanochemische Bäder	X			Ethylbutyrat			X	Schwefelkohlenstoff			X
Baustoffe und Bauten-				Ethylenbromid		X	X	Schwefelsäure, bis 30 %	X		
Schutzmittel				Essigsäure, bis 25 %		X	X	Schweflige Säure, bis 5 %	X		
Heißbitumen		X		Essigsäure, konzentriert				Schweflige Säure, konzentriert		X	
Kaltbitumen			X	Fluorwasser, bis 20 %	X			Seifenlauge	X		
Gips	X			Glycerin	X			Silbernitrat	X		
Mennige	X			Glykol	X			Siliciumtetrachlorid			X
Mörtel	X			Harnsäure, bis 20 %	X			Soda	X		
Zement	X			Heptan	X			Spiritus			X
Chemikalien,				Hexan	X			Stearinsäure	X		
Lösemittel usw.				Jod, metallisch	X			Sulfurychlorid	X		
a) allgemein				Kallaug	X			Terpentinöl	X		
Aceton			X	Kaliumbichromat	X			Terpentinersatz	X		
Akkumulatoren säure	X			Kaliumcarbonat	X			Tetrachlorkohlenstoff			X
Alaun	X			Kaliumchlorid	X			Thionylchlorid			X
Aluminiumchlorid	X			Kaliumcyanid	X			Toluol			X
Aluminiumoxalat	X			Kaliumnitrat	X			Triethylamin	X		
Aluminiumsulfat	X			Kaliumpermanganat	X			Trichloressigsäure			X
Ameisensäure, bis 2 %	X			Kalkmilch	X			Wasserstoffperoxid, bis 30 %	X		
Ameisensäure, bis 40 %		X		Kresol			X	Weinsäure, bis 50 %	X		
Ammoniaklösung 25 %	X			Kupfersulfat	X			Xylol			X
Ammoniumsulfat	X			Mangansulfat	X			Zinksulfat, fest	X		
Amylacetat			X	Magnesiumchlorid	X			Zinksulfat, wäbrig	X		
Anilin			X	Magnesiumsulfat	X			Zinn-II-chlorid	X		
Arsen	X			Methylethylketon			X	Zitronensäure, bis 20 %	X		
Arsensäure	X			Methanol, bis 30 %		X		b) Markenerzeugnisse			
Äther			X	Methanol, konzentriert			X	®CLOPHEN T 55, A 60	X		
Benzaldehyd			X	Milchsäure, bis 20 %	X			®DEKALIN			X
Benzin, rein	X			Milchsäurebutylester			X	®FRIGEN A 12 (CF ₂ Cl ₂)			X
Benzol			X	Monobromnaphthalin	X			®GLYBAL A			X
Brom			X	Natriumbisulfid	X			®PALATINOL K	X		
1-Butanol			X	Natriumcarbonat	X			®PALATINOL O, BB neu		X	
Buttersäure, bis 5 %	X			Natriumchlorat	X			®SANGAJOL	X		
Calciumchlorid	X			Natriumchlorid	X			®TERAPIN	X		
Calciumhypochlorit	X			Natriumhypochlorit	X			®TETRALIN			X
Chlor, flüssig			X	Natriumsulfat	X			Desinfektionsmittel			
Chlorethyläther			X	Natriumsulfid	X			a) allgemein			
Chlorkohlenwasserstoffe			X	Natronlauge 30 %	X			Chlorkalk-Brei	X		
Chlorphenol			X	Nickelsulfat	X			Jodtinktur, 5 %			X
Chlorwasser	X			Oxalsäure	X			Karbonsäure			X
Chromsäure	X			Perchloräthylen	X			Lugolische Lösung	X		
				Petroläther	X						
				Petroläur	X						
				Phenole		X					

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	resistant	limited resistant	not resistant		resistant	limited resistant	not resistant		resistant	limited resistant	not resistant
Spiritus			X	Isolierband	X			Sodawasser	X		
Sublimat	X			*PATTEX-Spezialleim		X		Spiritus			X
Wasserstoffperoxyd, bis 40 %	X			*PERBUNAN	X			Terpentinöl	X		
Wasserstoffperoxyd, üb. 40 %		X		*PLEXIT	X	X		Terpentinersatz	X		
b) Markenerzeugnisse				*PLEXISOL-Kleber	X	X		Tetrachlorkohlenstoff			X
*ÄTHROL, bis 5 %		X		*PLEXTOL-Kleber	X			Tri			X
*BAKTOLAN, bis 5 %	X			Polyurethan-Dichtmassen		X		b) Markenerzeugnisse			
*BAKTOLAN, konzentriert	X		X	Silikonkautschuk		X		*AJAX	X		
*CHINOSOL, bis 1 %	X			Thiokolkautschuk			X	*BFK-Reiniger	X		
*CHLORAMIN, Brei			X	(ein- und zweikomponentig)			X	*BOLIMENT		X	
*CHLORAMIN, Lösung	X			Körper- und Schönheitspflege				*BÖTTCHERIN	X		
*ELMOCID GAMMA, bis 2 %	X			*DIPLONA-Haaröl	X			*BURMAT	X		
*LYSOFORM			X	Gesichtstonik	X			*BURNUS	X		
*MEFAROL, bis 1 %	X			Glyzerin	X			*CILLIT-GRÜN	X		
*MERCCKOJOD, bis 1 %	X			Haarfestiger (*PRIMAWELL)	X			*DOR	X		
*MERFEN	X			Kampfer			X	*DOSYL	X		
*PERHYDROL	X			Meerwasser	X			*DOSYLAN	X		
*PERODIN	X			Moorwasser	X			*FAKO-Poliermittel	X		
*SAGROTAN, bis 2 %	X			Nagellacke			X	*FAKO-Polierpaste	X		
*SAGROTAN, bis 5 %		X		Nagellackentferner			X	*FEWA	X		
*VALVANOL, bis 2 %		X		*POLYCOLOR	X			*FRAPPIN	X		
*ZEPHIROL, bis 5 %	X			Salben	X			*FÜLLBOX	X		
Düngemittel				Seifen	X			antistatischer			
*NITROPHOSKA,				Sprays		X		KUNSTSTOFFREINIGER			
verschiedene Typen	X			Kunststoffe				und Pfleger	X		
Fette, Öle, Wachse				Gummi	X			*LAVAPLEX	X		
mineralische	X			Gummi, weichmacherhaltig			X	*NULL-NÜLL	X		
pflanzliche	X			Polyamid	X			*PERSIL	X		
tierische	X			Polyethylen	X			*PLEXIKLAR	X		
Silikonöl		X		PVC	X			*PRIL	X		
Gase und Dämpfe				PVC, weichmacherhaltig			X	*REI	X		
Abgase, fluorwasserstoffhaltig	X			Schaumstoffe	X			*SEIFIX	X		
Abgase, salzsäurehaltig	X			Schaumstoffe,			X	*SIDOLIN			X
Abgase, schwefelsäurehaltig	X			weichmacherhaltig			X	*SPECTROL			X
Ammoniak	X			Lebensmittel und Gewürze				*SPÜLI	X		
Bromdämpfe, trocken		X		Anis, Lorbeer, Muskat	X			*WC-00	X		
Chlordämpfe, trocken		X		Bienenhonig, rein	X			c) Reiniger für Rohrleitungen			
Kohlendioxid	X			Fleisch, Fisch	X			und Behälter			
Kohlenmonoxid	X			Kochsalz	X			*GALGONIT D, DA, S	X		
Leuchtgas	X			Marinaden	X			*NEOMOSCAN M, -M-Pulver	X		
Methan	X			Neiken			X	*NIROKLAR GR-Flüssig	X		
Ozon	X			Pfeffer, Zimt, Zwiebeln	X			*NIROKLAR GR-Pulver	X		
Sauerstoff	X			Speiseeis	X			*P3	X		
Schwefeldioxid (trocken)	X			Reinigungsmittel				*P3-Grundreiniger		X	
Schwefelwasserstoff	X			a) allgemein				*P3-dix	X		
Stickstoffdioxid	X			Alkohol, bis 30 %		X		Schädlingsbekämpfungsmittel			
Stickstoffmonoxid	X			Alkohol, konzentriert			X	Sprays (direkt aufgesprüht)			X
Getränke u. ä.				Benzin, rein	X			Sprays (in der Umgebung)		X	
Bier, Wein	X			Benzingemisch,				wäßrige Lösungen von			
Fruchtsaft, Milch, Kaffee	X			aromatenhaltig			X	Schädlingsbekämpfungsmitteln			
Schokolade	X			Bleichwasser	X			*NEXION-Stallspritzmittel	X		
Kamillenextrakt	X			Fleckenwasser			X	RABOND-Stallspritzmittel	X		
Speiseessig	X			Laugen, siehe				Schutzüberzüge (ablösbar)			
Spirituosen, bis 30 %		X		unter Chemikalien			X	DIEGEL-Flüssigfolie 23922	X		
Wasser, Mineralwasser	X			Perchloräthylen				KOPPERSCHMIDT-			
Klebstoffe u. Dichtungsmittel				Petroläther	X			Abdeckpaste	X		
Acrylat-Dichtmassen			X	Petroleum	X			*SPRAYLAT		X	
Alieskleber		X		Salmiakgeist	X			Sonstiges			
Dichtungsstreifen u. Kittbänder				Säuren, siehe unter				Urin	X		
*[EGO-FERM, TEROSTAT 81/86]	X			Chemikalien							
				Seifenwasser	X						

(Prüftemperatur 23 °C, vgl. nebenstehende Bemerkung)

* - registriertes Warenzeichen

Die folgenden Angaben gelten für die Sorten PLEXIGLAS GS 201, 215, 218, 221, 222, 224, 231, 233, 237, 240, 245 und 2458 sowie für PLEXIGLAS XT, wobei die extrudierten Materialien von Lösungsmitteln schneller angegriffen werden. Bei höheren Ansprüchen an die chemische Beständigkeit wird auf die Sorten PLEXIGLAS GS 209 und auf *PLEXIDUR T verwiesen. Die Angaben beziehen sich auf 23 °C Prüftemperatur und spannungslosen Einbau. Das Verhalten in der Praxis hängt weitgehend von der Gebrauchstemperatur ab. In Zweifelsfällen wird empfohlen, bei uns anzufragen, ob die chemische Beständigkeit für bestimmte Verwendungen ausreicht.



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