

## Technical Leaflet

### Resistance of EGGER surfaces to disinfectant

#### Tested EGGER products

The products listed have been tested in accordance with the test standards EN 438-2 (Decorative high pressure laminate panels HPL - Panels based on curable resins (laminates)) and EN 14323 (Wood-based panels - Melamine faced boards for indoor use) for resistance to disinfectants:

- EGGER Eurodekor
- EGGER Compact laminate
- EGGER Laminate
- EGGER PerfectSense lacquered board Premium

EGGER products Eurodekor, Compact laminate and Laminate are characterised by their consistent melamine-resin surface. PerfectSense, on the other hand, is characterised by its lacquer-based surface.

#### Normative properties of the surface

EN 438-3 and EN 14322 set out special requirements regarding the resistance of the surface of EGGER products. The criteria for the resistance of surfaces to various substances is the test for stain resistance. Substances that are widely used in everyday life are investigated into how they affect the surface of EGGER Eurodekor, Compact laminate, Laminate and PerfectSense lacquered board. For the purpose of these tests, these substances are brought into direct contact with the surface. The exposure times and conditions for the contact of each substance with the test specimen are examined. At the end of the respective contact period, the test specimens are washed and checked for permanent surface changes. Please refer to the respective technical data sheets of the EGGER products for the specification of the rating level to be achieved.

#### Rating scale for testing stain resistance according to EN 14323 and EN 438-2

Rating level	Requirement
Rating 5	No visible change.
Rating 4	Minor change. Only visible when the light source is mirrored on the test surface and is reflected towards the observer's eye, e.g. discoloration, change in gloss level and/or color.
Rating 3	Moderate change. Visible in several viewing directions, e.g. discoloration, change in gloss level and/or color.
Rating 2	Significant change. Visible in all viewing directions, e.g. discoloration, change in gloss level and/or color, and/or structure of the surface slightly changed, e.g. crackling, blistering.
Rating 1	Strong change. Surface damage and/or blistering.

## Laboratory test

After defining the most common active substance bases of disinfectants, these were tested according to the specifications of EN 438-2 test method 26 – stain resistance at ambient temperature – with a contact time of **24 hours**. The test objects are the EGGER products previously mentioned on page 1.

The following active substance bases have been tested in this context – see table below for the results:

Active ingredient groups	Common substances of the active ingredient groups	Tested active substance bases	Eurodekor, Laminate, Compact laminate	PerfectSense lacquered board Premium Matt & Gloss
Quaternary compounds	Alkyl(C12-16) dimethylbenzyl ammonium chloride, Quaternary ammonium compound	Alkyl(C12-16) dimethylbenzyl ammonium chloride 100%	Rating 5	Rating 5
Glycol derivatives	Phenoxyethanol, 2-Phenoxyethanol	2-Phenoxyethanol 100%	Rating 5	Rating 5
Alcohol	Ethanol, 2-Propanol, Propan-2-ol, Isopropanol, Isopropyl alcohol	Ethanol 50%	Rating 5	Rating 5
Alcohol	Ethanol, 2-Propanol, Propan-2-ol, Isopropanol, Isopropyl alcohol	Isopropanol 99%	Rating 5	Rating 5
Peroxide compounds	Hydrogen peroxide	Hydrogen peroxide 5%	Rating 5	Rating 5
Aldehyde	Formaldehyde, Glyoxal	Formaldehyde 5%	Rating 5	Rating 5
Aldehyde	Formaldehyde, Glyoxal	Glyoxal 5%	Rating 5	Rating 5
Organic acids	Formic acid, Citric acid	Formic acid 5%	Rating 4	Rating 5
Organic acids	Formic acid, Citric acid	Citric acid 5%	Rating 5	Rating 5
Inorganic acids	Hydrochloric acid	Hydrochloric acid 2%	Rating 3	Rating 5
Chlorine-releasing compounds	Sodium hypochlorite, sodium hypochlorite	Sodium hypochlorite 2.8%	Rating 5	Rating 5

## References

The Association for Applied Hygiene (VAH) provides an overview of common disinfectants and their active substance bases. The disinfectant list of the VAH contains all products listed by the VAH and can be accessed via the following link:

<https://vah-liste.mhp-verlag.de/en/>

For European standards, the ECHA (European Chemicals Agency) is cited. The relevant active substance bases listed in the table can be viewed by selecting the product type filter PT02 via the following link:

<https://echa.europa.eu/information-on-chemicals/biocidal-active-substances>

The Robert Koch Institute has also tested surface disinfectants and published a list of accepted disinfectants:

<https://www.rki.de/DE/Content/Infekt/Krankenhaushygiene/Desinfektionsmittel>

Especially for the US market we refer to the disinfectant recommendation of the EPA. A list of these disinfectants can be found under the following link: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

## Procedure

Based on the active substance bases tested by EGGER, it can be determined whether a specific disinfectant is suitable for use on EGGER surfaces or not. The ingredients of a disinfectant are listed on the label. Otherwise the information can be found in the technical data sheet or safety data sheet of the manufacturer. If the disinfectant contains one of the active substance bases tested on the EGGER products, it can be used for surface disinfection. The respective change of the disinfectant in combination with the specific EGGER product is displayed in the table above.

## Guidance on disinfectants

- The manufacturer's instructions for the dosage and application of the disinfectant must be strictly adhered to.
- To ensure that the surface is not affected, special attention must be paid to the concentration, exposure time and application temperature of the chemicals used.
- Observe the specified protective measures and rules of conduct.
- Dispose of disinfectant-soaked wipes immediately after use.
- The use of disinfectants is only carried out in connection with EGGER melamine-resin surfaces and lacquer-based surfaces as surface disinfectants.
- Excessively long dwell times of high moisture can damage the entire area from the panel surface to the edge. This may result in swelling of the EGGER product.
- The use of disinfectants with other detergents or chemicals have not been tested by EGGER.
- During the period of use, EGGER product surfaces must be cleaned regularly. Please refer to our technical data sheet "Cleaning and use recommendations".

The large number of available disinfectants with various ingredients, effects and application recommendations, makes it impossible to issue general approval for the use of disinfectants on EGGER surfaces. For the above reasons and in order to exclude interactions of the main active substances in combination with other ingredients of disinfectants, we recommend testing the disinfectant in advance on a non-visible area of the EGGER surface. Only this approach guarantees the process or the permanence of the material in the desired application.

In the appendix you will find examples of disinfectants tested by EGGER, which are recommended for surface disinfection in compliance with the specified concentration and application time.

## Appendix

The following disinfectants have been tested by EGGER according to the specifications of EN 438-2 test method 26 – stain resistance at ambient temperature with a contact time of 24 hours for Eurodekor and Compact laminate and 16 hours for Laminate and PerfectSense lacquered board.

The unit of the test results is "grade". In addition, in the results column you will find the test results of EGGER products with melamine surfaces named "Eurodekor", "Compact laminate" and "Laminate" and the results of lacquer-based surfaces named "PerfectSense Premium Matt & Gloss". The exact definition of the rating grade can be found in the rating scale for testing stain resistance according to EN 438-2 and EN 14323 mentioned on page 1.

Manufacturer	Product	Concentration	Contact time *	Test result			
				Eurodekor	Compact laminate	Laminate	PerfectSense Premium Matt & Gloss/ Topmat!
Antiseptica	Acryfan (ready to use solution)	-	16/24 hrs			5	
Antiseptica	Biguad d-S for surface disinfection and cleaning	1%	16/24 hrs		5	5	
Antiseptica	Biguad d-S for surface disinfection and cleaning	2%	16/24 hrs	5			
Antiseptica	Biguad d Liquid Big Spray (ready to use solution)	-	16/24 hrs	5		5	
Antiseptica	Descocid-N	2%	16/24 hrs	5	5	5	5 / 5
Antiseptica	Descogen Liquid	3%	16/24 hrs	4		4	
Antiseptica	Descogen Liquid r.f.u	-	16/24 hrs			4	
Antiseptica	Descogen-F (granulate) Oxygenon-S	1.5%	16/24 hrs	5	5	5	
Antiseptica	Biguad d-S for surface disinfection and cleaning	2%	16/24 hrs			5	
Antiseptica	Combi surface disinfection Antiseptica Combi Surface	4%	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Hexaquart Plus lemon scent	2%	16/24 hrs	5	5	5	
B. BRAUN	Hexaquart-S with spruce needle scent	3%	16/24 hrs	5	5	5	
B. BRAUN	Hexaquart Forte (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Hexaquart Plus	2%	16/24 hrs	5		5	
B. BRAUN	Meliseptol (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Meliseptol Foam pure	-	16/24 hrs	5	5	5	
B. BRAUN	Meliseptol Rapid (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Promanum Pure (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Soft a-Man (Softalind) Visco Rub (ready to use solution)	-	16/24 hrs	5	5	5	
B. BRAUN	Soft a-Man (Softalind) Pure (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
B. BRAUN	Softasept-N dyed / undyed (ready to use solution)	-	16/24 hrs		5	5	
PAUL HARTMANN AG Bode Chemie GmbH	Dismozon PUR	4%	16/24 hrs	5		5	
PAUL HARTMANN AG Bode Chemie GmbH	Microbac Forte	2.5%	16/24 hrs	5		5	
PAUL HARTMANN AG Bode Chemie GmbH	Kohrsolin	33x concentrated	16/24 hrs	4			
PAUL HARTMANN AG Bode Chemie GmbH	Kohrsolin Extra	6%	16/24 hrs			5	

Manufacturer	Product	Concentration	Contact time*	Test result			
				Eurodekor	Compact laminate	Laminate	PerfectSense Premium Matt & Gloss/ Topmat®
PAUL HARTMANN AG Bode Chemie GmbH	Kohrsolin FF	3%	16/24 hrs			5	
PAUL HARTMANN AG Bode Chemie GmbH	Bacillof AF	100%	16/24 hrs			5	
Qearsept	AFwipes (ready to use wipes)	-	16/24 hrs	5			
Dr. Schuhmacher	Biguanid surface-N	concentrate	16/24 hrs	5			
Dr. Schuhmacher	Qearsept	13x concentrated	16/24 hrs	5			
Dr. Schuhmacher	Qearsept wipes (ready to use wipes)	-	16/24 hrs	5		5	
Dr. Schuhmacher	Optisept	7%	16/24 hrs			5	
Dr. Schuhmacher	Optisept	4%	16/24 hrs	5			
Dr. Schuhmacher	Descosept (ready to use solution)	-	16/24 hrs	4			
Dr. Schuhmacher	Descosept PUR (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
Dr. Schuhmacher	Optisal-N	0.125%	16/24 hrs	5		5	
Dr. Schuhmacher	Perfektan-TB	25x concentrated	16/24 hrs	5			
Dr. Schuhmacher	Ultrasol Active	1%	16/24 hrs	5	5	5	
Dr. Schuhmacher	Ultrasol-F	5%	16/24 hrs	5			
Dreiturm	Hexawol	7.5%	16/24 hrs	5	5	5	5 / 5
Dreiturm	Hexawol Fix (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
Dr. Nüsken	Nüscosept	0.5%	16/24 hrs	5			
Dr. Nüsken	Nüscosept Clin	1%	16/24 hrs	5		5	
Dr. Nüsken	Nüscosept Foam (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
Dr. Nüsken	Nüscosept Forte	2%	16/24 hrs	5	5	5	5 / 5
Dr. Nüsken	Nüscosept OF	1%	16/24 hrs	5		5	
Dr. Nüsken	Nüscosept Rapid (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
ECOLAB	Incidin Active	3%	16/24 hrs	5	5	5	5 / 5
ECOLAB	Incidin Foam (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
ECOLAB	Incidin Liquid (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
ECOLAB	Incidin OxyFoam-S (red) (ready to use solution)	-	16/24 hrs	5	5	3	5 / 5
ECOLAB	Incidin PLUS	8%	16/24 hrs	5	5	5	5 / 5
ECOLAB	Incidin Pro	4%	16/24 hrs	5	5	5	5 / 5

Manufacturer	Product	Concentration	Contact time*	Test result			
				Eurodekor	Compact laminate	Laminate	PerfectSense Premium Matt & Gloss/ Topmat!
ECOLAB	Incidin Rapid	2%	16/24 hrs	5	5	5	5 / 5
ECOLAB	Sani-Goth Active (ready to use wipes)	-	16/24 hrs	5		5	
Fresenius Kali	Ultrasol-F	5%	16/24 hrs			5	
Hagl eitner Hygiene	hygienicDES Forte (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
Hagl eitner Hygiene	hygienicDES PERFECT	2%	16/24 hrs	5		5	
Hagl eitner Hygiene	hygienic3000	7.5%	16/24 hrs	5	5	5	5 / 5
Hagl eitner Hygiene	hygienicDES 2GO	0.5%	16/24 hrs	5	5	5	5 / 5
Hagl eitner Hygiene	hygienicPLUS (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5
Hagl eitner Hygiene	wcDISINFECT (ready to use solution)	-	16/24 hrs	5	5	4	5 / 5
Henkel AG	SIDOL K�chenkraft (ready to use solution)	-	16/24 hrs	5	5		
Johannes Kiehl KG	Blutoxol	7.5%	16/24 hrs		4	4	5 / 5
Johannes Kiehl KG	Desinet Compact concentrate	2%	16/24 hrs		5	5	5 / 5
Johannes Kiehl KG	Desisan concentrate	6%	16/24 hrs		5	5	5 / 5
Johannes Kiehl KG	RapiDes (ready to use solution)	-	16/24 hrs		5	5	5 / 5
Kesla Hygiene AG	Wofasept-FL (ready to use solution)	-	16/24 hrs	5			
Kesla Hygiene AG	Wofasept	50x concentrated	16/24 hrs	5			
Kesla Hygiene AG	Wofasteril	400x concentrated	16/24 hrs	1			
Kesla Hygiene AG	Wofasteril	5%	16/24 hrs	4			
Lysoform Dr. Hans Rosemann GmbH	Trichlorol	5%	16/24 hrs	5			
Lysoform Dr. Hans Rosemann GmbH	Aidesan 2000	10x concentrated	16/24 hrs	5			
Lysoform Dr. Hans Rosemann GmbH	Fugaten (ready to use solution)	-	16/24 hrs	5			
Lysoform Dr. Hans Rosemann GmbH	Lysoformin	16x concentrated	16/24 hrs	5			
Lysoform Dr. Hans Rosemann GmbH	Lysoformin 2000	13x concentrated	16/24 hrs	5			
Lysoform Dr. Hans Rosemann GmbH	Lysoformin Rapid	2%	16/24 hrs	5	5	5	5 / 5
Lysoform Dr. Hans Rosemann GmbH	Lysoformin Special	0.75%	16/24 hrs	5	5	5	5 / 5
Omnident	Omnizid (ready to use solution)	-	16/24 hrs		5	5	5 / 5

Manufacturer	Product	Concentration	Contact time*	Test result			
				Eurodekor	Compact laminate	Laminate	PerfectSense Premium Matt & Gloss/ Topmat®
Sanosil Service GmbH	Sanosil (ready to use solution)	-	16/24 hrs	4			
Schülke & Mayr	AcrylDes (ready to use solution)	-	16/24 hrs	5		5	
Schülke & Mayr	Pursept	100%	16/24 hrs			5	
Schülke & Mayr	Pursept-FD	7%	16/24 hrs	5			
Schülke & Mayr	Pursept-FD	100%	16/24 hrs	5			
Schülke & Mayr	Pursept-AXpress (ready to use solution)	-	16/24 hrs	5	5	5	
Schülke & Mayr	Pursept-AF	6%	16/24 hrs	5	5	5	
Schülke & Mayr	Antiflect Extra	2.5%	16/24 hrs		5	5	
Schülke & Mayr	Antiflect Extra	2%	16/24 hrs	5			
Schülke & Mayr	Mikrozi d-HFLiquid (ready to use solution)	-	16/24 hrs	5		5	
Schülke & Mayr	Mikrozi d (ready to use solution)	-	16/24 hrs	5		5	
Schülke & Mayr	Mikrozi d-PVAwipes (ready to use wipes)	-	16/24 hrs	5	5	5	
Schülke & Mayr	Perform	3%	16/24 hrs	5		5	
Schülke & Mayr	Perform	0.5%	16/24 hrs	4		5	
Schülke & Mayr	Terralin Protect	50%	16/24 hrs	4		5	
Schülke & Mayr	Terralin Protect	0.5%	16/24 hrs	5		5	
Schülke & Mayr	TPH Protect	2%	16/24 hrs			5	
Servi Canto	Acrilim (ready to use solution)	-	16/24 hrs		5	5	5 / 5
Suma	Suma BACD10	1%	16/24 hrs	5	5	5	
Suma	Suma MULTI D2	1%	16/24 hrs	5	5	5	
Tana Chemie GmbH	Apesin Rapid	concentrate	16/24 hrs	5			
Tana Chemie GmbH	Apesin Rapid (ready to use solution)	-	16/24 hrs	5			
Tana Chemie GmbH	Apesin AP 100 Plus	3%	16/24 hrs	4	5	3	4 / 5
Tana Chemie GmbH	Apesin multi QUICK&EASY (ready to use solution)	-	16/24 hrs	5	5	5	5 / 5

Provisional note:

This technical data sheet has been carefully drawn up to the best of our knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or its suitability for specific applications. It is based on practical experience, our own tests and corresponds to our present state of knowledge. We accept no liability for any mistakes, errors in standards, or printing errors. In addition, technical modifications may result from the continuous development of EGGGER products, as well as from changes to standards and public law documents. Therefore, the content of these processing instructions cannot serve as instructions for use, nor as a legally binding basis.

