KAINDL BOARDS. FLOORS. IDEAS.

Disinfection of Kaindl Surface Systems

Kaindl products are known to be very easy-to-clean, with extremely hygienic surfaces.

Boards
- Decorative board*
- Worktop*
- Laminate board*
- Laminate composite board*
- Anti-fingerprint Optiboards
- Rocko Wall Tiles

Floors
- Laminate (Natural*-, Classic*- and Easy Touch)
- Wood (Veneer Parquet)
- AQUApro *
- Solid and Solid Pro*

* These surfaces have been tested in accordance with ISO 22196 and have been shown to have antibacterial properties.

Chemical disinfection and stain insensitivity

The surface systems of Kaindl products are tested in accordance with EN 438-2. This standard defines the test conditions and classification specifications for the so-called stain insensitivity.

Spot-forming substances act on the surface at room temperature over a defined period of time. Following that, the substance is removed, and any possible changes to the surface are evaluated.

The following active ingredients of the most common disinfectants mentioned have been tested on the basis of this test method for a duration of 24 hours and proved not to cause any changes to the surface:

- Ethanol 96%
- Isopropyl alcohol 99%
- Formaldehyde 5%
- Hydrogen peroxide 3%
- Sodium hypochlorite 3%
- Alkyldimethylbenzylammonium chloride 2.5%

For the disinfection of Kaindl surface systems, most surface disinfectants are suitable. There are a variety of disinfectants that differ in their chemical composition, the active ingredient contained, and the respective conditions of use.

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It should be noted that the substances have different effects on different microorganisms and viruses. When choosing the disinfectant, it must therefore be taken into account which particular organisms the product is supposed to treat.

The Robert Koch Institute has tested common surface disinfectants and published a list of approved products. These disinfectants do not cause damage to Kaindl surface systems when the dosing and application specifications are complied with. The substances indicated in the list must not remain on the surface for more than 24 hours in a concentrated form. Long-term exposure can cause damage to the surface.

The application times shown in the table refer to the study by the Robert Koch Institute. The examination was carried out taking into account different legal requirements (e.g. area disinfection in the event of an epidemic in accordance with Section 18 of the Infection Protection Act). The actual application times and dilutions to be observed are to be found in the respective product data sheet taking into account the required conditions of use.

Table of disinfectants for surface disinfection tested and approved by the Robert Koch Institute (extract from the Federal Health Gazette 2017 - 60:1274-1297):

Active substance	Name	Surface disinfection (disinfection wipes)		Laundry disinfection (soaking procedure)		Disinfection of excretions 1 part sputum or stool + 2 parts GV or 1part urine + 1part GV						Effec-tive range	Manufacturer or supplier
						Sputum		Stool		Urine			
		Gv	Ewz	Gv	Ewz	Gv	Ewz	Gv	Ewz	Gv	Ewz		
		(%)	(min)	(%)	(min)	(%)	(min)	(%)	(min)	(%)	(min)		
Alcohols	Bacillol AF	Konz.	15									A	Bode Chemie
Biguanide	Incidin PLUS	8	360									A	Ecolab
Chlorine, organic or anorganic substances with active chlorine	Chloramine-T DAB 9	2.5	120	1.5	12	5	240					A^1 B	
	Clorina	2.5	120	1.5	12	5	240					A^1 B	Lysoform
	Trichlorol	3	120	2	12	6	240					A^1 B	Lysoform
Formalde-hyde and/or other aldehydes or derivatives	Aldasan 2000	4	240									AB	Lysoform
	B5	7	240									AB	orochemie
	Budenat Acute D 441	7	240									AB	BUZIL-WERK Wagner
	Desifor Protect	7	240									AB	Dr. SCHNELL Chemie
	Desomed Perfect	7	240									AB	Desomed
	ERVE NOROCID	7	240									AB	ERVE Deutschland
	Formaldehyde solution (DAB 10) (formalin)	3	240	1.5	12							AB	
	hygienic VIRUZID	7	240									AB	Hagleitner Hygiene
	Kohrsolin extra	6	120									AB	Bode Chemie
	Lysoform	5	360	4	12							AB	Lysoform
	Lysoformin	5	360	3	12							AB	Lysoform
	Melsitt	10	240	4	12							AB	B. Braun
	Minutil	6	240	2	12							AB	Ecolab
	Nüscosept	5	240									AB	Dr. Nüsken Chemie
	Optisept	7	240									AB	Dr. Schumacher
	Ultrasol F	5	240	3	12							AB	Dr. Schumacher
Lye	Lime milk							20	360			A^3B	
Per-compounds	Apesin AP 100[2]	4	240									AB	tana-Chemie
	APESIN AP100 Plus[2]	3	240									AB	tana-Chemie
	Dismozon plus[2]	3.6	240									AB	Bode Chemie
	Dismozon plus[2]	3.6	15									B	Bode Chemie
	Dismozon pur[2]	4	60									AB	Bode Chemie
	Incidin active[2]	3	60									AB	Ecolab
	Incidin active[2]	2	60									B	Ecolab
	perform[2]	3	240									AB	Schülke&Mayr
	terralin paa[2]	8	60									AB	Schülke&Mayr
	terralin paa[2]	7	60									B	Schülke&Mayr
	Ultrasol active[2]	3	60									AB	Dr. Schumacher

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	1+1 Wofasteril SC super-combination process[2] Wofasteril and alcapur	2 2	60									AB	Kesla Pharma
	Wofasteril[2]	2	60									A	Kesla Pharm
	Wofasteril[2]	2	240									AB	Kesla Pharm
	Wofasteril combination process Wofasteril and alcapur	2 6	60									AB	Kesla Pharm
Phenol or phenolic derivatives	Amocid	5	360	1	12	5	240	5	360	5	120	A	Lysoform
	Helipur	6	240			6	240	6	360	6	120	A	B.Brown
	m-Kresol soap solution (DAB 6)	5	240	1	12							A	
	Phenol	3	120	1	12							A	

[1]*Insufficiently effective against mycobacteria, especially in the presence of blood during surface disinfection.*
[2]*Not suitable for disinfection of areas significantly contaminated with blood or porous surfaces (e.g. raw wood).*
[3]*Useless in the case of tuberculosis; preparation of lime milk: 1 part of cleared lime (calcium hydroxide) + 3 parts water*
***GV** dilution for use; **EEZ** soaking time*

Effective range A: suitable for the killing of vegetative bacteria including mycobacteria as well as fungi including fungal spores.
Effective range B: suitable for inactivation of viruses, corresponds to the definition of "viricidal" - effective against enveloped and not enveloped viruses; further effective ranges for virus inactivation: "limited viricidal effect" – effective against enveloped viruses, "limited viricidal effect PLUS" – effective against enveloped viruses as well as additionally against adeno-, noro- and rotaviruses.

Especially for the US-American market we allow further disinfectants. You can find a list of these agents under:

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

The specified soaking times must not be exceeded. The manufacturer's dosing specifications must be complied with.

Important:

- The manufacturer's specifications for the dosage and use of the disinfectant must be adhered to.
- In order not to affect the surface, particular attention must be given to the concentration, the application time and the application temperature of the chemicals used.
- Observe the specified protection measures and rules of conduct.
- Dispose of wipes soaked with disinfectant immediately after use.
- Kaindl surfaces may only be disinfected with slightly damp cloth. The surface must be wiped off completely and evenly.

Attention: no resistance to the following substances

Any contact with the substances listed below must be avoided, as they cause damage to the surfaces even when applied for a very short period of action.

No chemical resistance

Substance	Chemical formula	Substance	Chemical formula
Aluminum chloride	$AICl_3$	Methylene blue	$C_{16}H_{18}N_3CIS$
Amidosulfonic acid	NH_2SO_3H	Millons reagent	OHg_2NH_2CI
Arsenic acid	H_3AsO_4	Sodium hydrogen sulfate	$NaHSO_4$
Iron(II) chloride solution	$FeCI_2$	Sodium hypochlorite (chlorine liquor)	NaOCI

Iron(III) chloride solution	$FeCl_3$	Caustic soda over 10%	NaOH
Dyes and bleaching agents		Oxalic acid	$C_2H_2O_4$
Fuchsin solution	$C_{19}H_{19}N_3O$	Phosphoric acid	H_3PO_4
Iodine solution	J_2	Picric acid	$C_6H_2OH(NO_2)_3$
Potash liquor over 10%	Koh	Mercury dichromate	$HgCr_2O_7$
Potassium chromate	K_2CrO_4	Nitric acid	ENT_3
Potassium dichromate	$K_2Cr_2O_7$	Hydrochloric acid above 1%	Hci
Potassium hydrogen sulphate	$KHSO_4$	Sulfuric acid	H_2SO_4
Potassium iodide	Ki	Silver nitrate	$AgNO_3$
Potassium permanganate	$KMnO_4$	Sublimate solution	$HgCI_2$
Crystal violet (Gentiana violet)	$C_{25}H_{30}N_3CI$	Ammonium hydrogen sulphate	NH_4HSO_4
Lithium hydroxide	LiOH	Hydrogen peroxide above 3%	H_2O_2

Aggressive gases

The exposure of the following aggressive gases will worsen the appearance of the surface, but the functionality will not usually be affected.

Aggressive gases

Substance	**Chemical formula**
Bromine	Br_2
Chlorine	Cl_2
Nitrous gases	NO_x / N_xO_y
Smoking acids	
Hydrogen peroxide approx. 35% evaporating during 24 hours for cleanroom disinfection	H_2O_2
Sulphur dioxide	SO_2

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