

# Disinfection of Kaindl Surface Systems Kaindl Info\_EN 12 Status: May 2020 Page 1/4

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

#### Floors

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

#### 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.

<sup>\*</sup> These surfaces have been tested in accordance with ISO 22196 and have been shown to have antibacterial properties.



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



|                         | 1+1 Wofasteril SC<br>super-combination<br>process <sup>2</sup><br>Wofasteril and<br>alcapur | 22 | 60  |   |    |   |     |   |     |   |     | AB | Kesla Pharma |
|-------------------------|---|----|-----|---|----|---|-----|---|-----|---|-----|----|--------------|
|                         | Wofasteril <sup>2</sup>   | 2  | 60  |   |    |   |     |   |     |   |     | Α  | Kesla Pharm  |
|                         | Wofasteril <sup>2</sup>   | 2  | 240 |   |    |   |     |   |     |   |     | AB | Kesla Pharm  |
|                         | Wofasteril<br>combination process<br>Wofasteril and<br>alcapur                              | 26 | 60  |   |    |   |     |   |     |   |     | AB | Kesla Pharm  |
| Phenol or               | Amocid  | 5  | 360 | 1 | 12 | 5 | 240 | 5 | 360 | 5 | 120 | Α  | Lysoform     |
| phenolic<br>derivatives | Helipur   | 6  | 240 |   |    | 6 | 240 | 6 | 360 | 6 | 120 | Α  | B.Brown      |
|                         | m-Kresol soap<br>solution (DAB 6)   | 5  | 240 | 1 | 12 |   |     |   |     |   |     | Α  |              |
|                         | Phenol  | 3  | 120 | 1 | 12 |   |     |   |     |   |     | Α  |              |

<sup>&</sup>lt;sup>1</sup>Insufficiently effective against mycobacteria, especially in the presence of blood during surface disinfection.

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 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 <sub>3</sub>                 | Methylene blue                        | C16H18N3CIS                         |
| Amidosulfonic acid         | NH <sub>2</sub> SO <sub>3</sub> H | Millons reagent                       | OHg <sub>2</sub> NH <sub>2</sub> CI |
| Arsenic acid               | H <sub>3</sub> AsO <sub>4</sub>   | Sodium hydrogen sulfate               | NaHSO <sub>4</sub>                  |
| Iron(II) chloride solution | FeCI <sub>2</sub>                 | Sodium hypochlorite (chlorine liquor) | NaOCI                               |

<sup>&</sup>lt;sup>2</sup>Not suitable for disinfection of areas significantly contaminated with blood or porous surfaces (e.g. raw wood).

<sup>&</sup>lt;sup>3</sup>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



| Iron(III) chloride solution | FeCl <sub>3</sub>                                | Caustic soda over 10%      | NaOH   |
|-----------------------------|--|----------------------------|--|
| Dyes and bleaching agents   |  | Oxalic acid                | C <sub>2</sub> H <sub>2</sub> O <sub>4</sub> |
| Fuchsin solution            | C <sub>19</sub> H <sub>19</sub> N <sub>3</sub> O | Phosphoric acid            | H <sub>3</sub> PO <sub>4</sub>               |
| Iodine solution             | $J_2$  | Picric acid                | $C_6H_2OH(NO_2)_3$                           |
| Potash liquor over 10%      | Koh  | Mercury dichromate         | HgCr <sub>2</sub> O <sub>7</sub>             |
| Potassium chromate          | K <sub>2</sub> CrO <sub>4</sub>                  | Nitric acid                | ENT <sub>3</sub>                             |
| Potassium dichromate        | K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>    | Hydrochloric acid above 1% | Hci  |
| Potassium hydrogen          | KHSO <sub>4</sub>                                | Sulfuric acid              | H <sub>2</sub> SO <sub>4</sub>               |
| sulphate                    |  |                            |  |
| Potassium iodide            | Ki   | Silver nitrate             | $AgNO_3$                                     |
| Potassium permanganate      | KMnO <sub>4</sub>                                | Sublimate solution         | HgCI <sub>2</sub>                            |
| Crystal violet              | $C_{25}H_{30}N_3CI$                              | Ammonium hydrogen          | NH <sub>4</sub> HSO <sub>4</sub>             |
| (Gentiana violet)           |  | sulphate                   |  |
| Lithium hydroxide           | LiOH   | Hydrogen peroxide above    | H <sub>2</sub> O <sub>2</sub>                |
|                             |  | 3%                         |  |

# 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 <sub>2</sub>                                 |
| Chlorine   | Cl <sub>2</sub>                                 |
| Nitrous gases  | NO <sub>x</sub> / N <sub>x</sub> O <sub>y</sub> |
| Smoking acids  |   |
| Hydrogen peroxide approx. 35% evaporating during 24 hours for cleanroom disinfection | H <sub>2</sub> O <sub>2</sub>                   |
| Sulphur dioxide  | SO <sub>2</sub>                                 |