nikpol

# Motivi Laminate & 38mm Worktops
**MattWood & SuperMatt**

## Resistance to Chemicals - HPL & CPL

A chemical by definition is any substance consisting of matter. This includes solids, liquids and gases. Chemicals can either be a pure substance or a mixture of substances. Under the definition of chemicals we can find food stuff, spices, household chemicals, household cleaners, industrial chemicals, industrial cleaners, laboratory chemicals, disinfectants, sanitizers and antiseptics.

As decorative laminates provides a wide range of applications, the surface resilience against different types of chemicals is tested according to EN 438.2. Nikpol laminates feature a high resistance to different types of chemicals. This document elaborates the different Surfaces Resistance to chemicals on Nikpol following products highlighted on the right hand side.

Before committing to a particular product, we suggest you obtain samples and perform in-situ tests with chemical most likely to be in contact with the product.

**SuperMatt finish:**

Glacier White
Cement Dark
Milano Marrone
Black Coal
Speckled Snow
Galassia White
Calcutta Grey
Cortina Cream
Milano Grigio
Milano Nero
Venice Marmo

**MattWood finish:**

Walnut Noca
Blackwood Oak
Sarato Oak

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## Resistance to Surface Staining

The surface resistance against staining is defined by the EN 438. The test elaborates how the surface is affected by different types of chemicals due to exposure in daily use. The EN 438 defines 3 groups according to the exposure conditions and duration.

**Remarks:**
(1) Rating 5: No change; test area indistinguishable from adjacent surrounding area.
(2) See disinfectants resistance below
(3) Some commercial cleaning agents contain acids and alkalis in concentration stronger than shown in group 3, and can cause surface marking or damage. Any spillage of such materials shall be washed off immediately.
(4) Rating 4: Minor change; test area distinguishable from adjacent surrounding area, only when the light source is mirrored on the test surface and is reflected towards the observer's eye, eg. discoloration, change in gloss and colour.

| Group 1 | | | |
|---|---|---|---|
| Staining Agent | Test Conditions | Contact Time | Surface Performance |
| - Acetone<br>- Other organic solvents<br>- Toothpaste<br>- Hand Cream<br>- Urine<br>- Alcoholic beverages<br>- Natural fruits and vegetable juices<br>- Lemonade and fruit drinks<br>- Meats and sausages<br>- Animal and vegetable fats and oils<br>- Water<br>- Yeast suspension in water<br>- Salt (NaCl) solution<br>- Mustard<br>- Lyes<br>- Soap solution<br>- Cleaning solutions consisting of:<br>*23% Dodecylbenzene Sulfonate<br>*10% Alkyl Aryl Polyglycol ether<br>*67% Water<br>- Commercial disinfectants(2)<br>- Stain or paint removers based on organic solvents<br>- Citric Acid (10% solution) | Apply staining agent at ambient temperature | 16 hours | Rating 5(1) |
| **Group 2** | | | |
| - Coffee (120g of coffee per litre of water)<br>- Black tea (9g of tea per litre of water)<br>- Milk (all types) | Apply staining agent at approx. 80°C | 16 hours | Rating 5(1) |
| - Wine vinegar<br>- Alkaline-based cleaning agent (to 10% concentration with water)<br>- Hydrogen Peroxide (3% solution)<br>- Ammonia (10% solution of commercial concentrate)<br>- Nail varnish<br>- Nail varnish remover<br>- Lipstick<br>- Water colours<br>- Laundry marking ink<br>- Ball point ink | Apply staining agent at ambient temperature | 16 hours | Rating 5(1) |
| **Group 3(3)** | | | |
| - Sodium Hydroxide (25% solution)<br>- Hydrogen Peroxide (30% solution)<br>- Concentrated vinegar (30% Acetic acid)<br>- Bleaching agents and sanitary cleaners containing them<br>- Hydrochloric acid based cleaning agents (≤3% HCl)<br>- Acid based metal cleaners<br>- Mercurochrome (2.7 dibromo, 4 hydroxymercuriflouresein disodium salt)<br>- Carbon black suspension in paraffin oil (shoe polish simulant)<br>- Hair colouring and bleaching agent<br>- Lacquers and adhesives (except fast curing materials)<br>- Amidosulphonic acid descaling agent (<10% solution) | Apply staining agent at ambient temperature | 10 min. | Rating 4(3) |

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# Additional Substances and Reagents Resistance

Additional list of substances and reagents include chemicals that are not listed in the EN 438.

**Remarks:**
(1) Rating 5: No change; test area indistinguishable from adjacent surrounding area.
(2) 10 min duration: in case the exposure will exceed 10 mins - a severe damage to the surface might accrue. The listed chemicals should be wiped with a damp cloth followed by wet cloth and dried.
(3) Rating 4: Minor change; test area distinguishable from adjacent surrounding area, only when the light source is mirrored on the test surface and is reflected towards the observer's eye, e.g. discolouration, change in gloss and colour.
(4) 1 Min: The listed chemicals will lead to surface damage even after a short exposure time.
(5) Rating 1: Strong Change; The structure of the surface being distincly changed and/or discolouration, change in gloss and colour, and/or the surface material being totally or partially delaminated.

| Staining Agent | Test Conditions | Contact Time | Surface Performance |
|---|---|---|---|
| - Activated charcoal<br>- Aluminium Chloride<br>- Aniline<br>- Ascorbic Acid<br>- Asparagine<br>- Barium Chloride<br>- Blood<br>- Butyl Acetate<br>- Calcium Carbonate<br>- Calcium Nitrate<br>- Cyclohexane<br>- Dextrose<br>- Soil<br>- Ethanol<br>- Ether<br>- Galactose<br>- Sugar<br>- Animal feed<br>- Glucose<br>- Glycerine<br>- Glycol (Di Ethylen Glycol)<br>- Hexane<br>- Potassium Carbonate<br>- Casein<br>- Garlic<br>- Table Salt (any type)<br>- Maltose<br>- Lactose<br>- Oleic Acid<br>- Paraffin<br>- Cane Sugar<br>- Soap<br>- Sorbitol<br>- Starch<br>- Clay<br>- Vanillin<br>- Vaseline | Apply staining agent at approx. 80°C | 16 hours | Rating 5(1) |
| - Aniline Dyes<br>- Ammonium Hydrogen Sulphate<br>- Oxalic Acid<br>- Lithium Hydroxide 5%<br>- Sodium Thiosulphate | Apply staining agent at ambient temperature | 10 min.(2) | Rating 4(3) |
| - Nitric Acid 10%<br>- Hydrochloric Acid up to 10%<br>- Sulphuric Acid up to 10%<br>- Solvent base adhexives<br>- Chemically hardening adhesives | Apply staining agent at ambient temperature | ≤ 1 min.(4) | Rating 1(5) |

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