

## 26 Resistance to staining

### 26.1 Principle

Test specimens are left in contact with a series of staining agents which are likely to be encountered in everyday use. The time and conditions of contact are specified for each staining agent. At the end of the specified contact period, the specimens are washed and examined for residual surface marks.

If the laminate under test meets specification requirements when tested with each of the five staining agents marked with an asterisk and underlined, then it is deemed to comply with the specification for stain resistance. The other staining agents are included for information only. In the case of a specific complaint, the staining agent in question (selected from Group 1, 2 or 3) shall be used to verify the quality of the laminate. This test method may also be used using other staining agents to cover specific requirements if agreed between supplier and purchaser.

### 26.2 Staining agents

**Table 1 — Staining agents and test conditions**

Staining agent	Test conditions	Contact time
Group 1 * <u>Acetone</u> Other organic solvents Toothpaste Hand cream Urine Alcoholic beverages Natural fruit and vegetable juices Lemonade and fruit drinks Meats and sausages Animal and vegetable fats and oils Water Yeast suspension in water Salt (NaCl) solutions Mustard Lyes, soap solutions Cleaning solution consisting of: - 23 % dodecylbenzene sulfonate - 10 % alkyl aryl polyglycol ether - 67 % water Commercial disinfectants Stain or paint removers based on organic solvents Citric acid (10% solution)	Apply staining agent at ambient temperature	16 h

**Table 4 — Staining agents and test conditions (continued)**

Staining agent	Test conditions	Contact time
Group 2 * <u>Coffee</u> (120 g of coffee per litre of water) Black tea (9 g of tea per litre of water) Milk (all types)	Apply staining agent at approximately 80 °C	16 h

<p>Wine vinegar  Alkaline-based cleaning agents (to 10 % concentration with water)  Hydrogen peroxide (3 % solution)  Ammonia (10 % solution of commercial concentrate)  Nail varnish  Nail varnish remover  Lipstick  Water colours  Laundry marking inks  Ball point inks</p>	<p>Apply staining agent at ambient temperature</p>	<p>16 h</p>
<p>Group 3<sup>a</sup>  * <u>Sodium hydroxide</u> (25 % solution)  * <u>Hydrogen peroxide</u> (30 % solution)  Concentrated vinegar (30 % acetic acid)  Bleaching agents and sanitary cleaners containing them  Hydrochloric acid based cleaning agents (<math>\leq</math> 3 % HCl)  Acid-based metal cleaners  Mercurochrome (2,7-dibromo-4-hydroxymercurifluorescein, disodium salt)  * <u>Shoe polish</u>  Hair colouring and bleaching agents  Iodine  Boric acid  Lacquers and adhesives - (except fast curing materials)  Amidosulfonic acid descaling agents (&lt; 10 % solution)</p>	<p>Apply staining agent at ambient temperature</p>	<p>10 min</p>
<p><sup>a</sup> Some commercial cleaning agents contain acids and alkalis in concentrations stronger than those shown in Group 3, and can cause surface marking or damage. Any spillage of such materials must be washed off immediately.</p>		