

Resistance to Staining Reagents

We extensively test all of our products in order to determine how our different flooring products will perform in use — and in particular, how the flooring will react to staining reagents. Owners and specifiers know the types of substances that may potentially stain surfaces in their building. This chart is designed to provide owners and specifiers with accurate information about a wide variety of cleaners, disinfectants, foods, beverages, oils, organic solvent and other substances that may be found in buildings and affect the performance of the floor.

<b>Organic Solvents</b>	<b>Unleashed LVT</b>
Acetone	0
Chloroform	0
Ethyl Acetate	0
Ethyl (Denatured) Alcohol	0
Ethyl Ether	0
Ethylene Glycol (Antifreeze)	0
Formaldehyde - 10%	0
Gasoline	0
Isopropyl Alcohol	0
Kerosene	0
Methyl ethyl ketone (M.E.K.)	0
Mineral Spirits	0
Toluene	0
Trichloroethylene	0
Turpentine	0
Xylene	0
<b>Alkali (Bases)</b>	<b>Unleashed LVT</b>
Ammonium Hydroxide - 30%	0
Potassium Hydroxide - 15%	0
Sodium Hydroxide - 50%	3,R
<b>Acids</b>	<b>Unleashed LVT</b>
Acetic Acid - 28%	0
Acetic Acid - Glacial	0
Hydrochloric - 38%	0
Lactic Acid - 10%	0
Nitric Acid - 15%	0
Phosphoric Acid - 85%	0
Sulfuric Acid - 40%	0
Sulfuric Acid - 10%	0

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<b>Salt Solutions</b>	<b>Unleashed LVT</b>
Calcium Chloride - Sat'd	0
Copper Sulfate - 10%	0
Ferric Chloride - 10%	0
Silver Nitrate - 1%	0
<b>Medical Stains &amp; Reagents</b>	<b>Unleashed LVT</b>
Aniline Blue - 2.5%	0
Auramine Rhodamine	3
Basic Fuchsin	3
Betadine ® Skin Cleanser	2
Betadine ® Solution - 10%	2
Bromcresol Green	2
Carbol Fuchsin	3
Eosin - 1%	2
Gentian Violet - 2%	3
Glutaraldehyde	0
Iodine Tincture	3
Iodine Gram Stain	3
Iodoform - 1%	0
Lugol's Solution	3
Merthiolate Tincture	0
Methylene Blue	3
Picric Acid - 1%	2
Potassium Permanganate - 0.5%	3
Tincture of Benzoin	3,R
Urea Solution	0
Wright's Blood Stain	3
<b>Disinfectants and Cleaners</b>	<b>Unleashed LVT</b>
Bleach - 5.25% sodium hypochlorite	1
Comet Bathroom Cleaner	0
Hydrogen Peroxide	0
Lysol ® Liquid Disinfectant	0

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<b>Food Service</b>	<b>Unleashed LVT</b>
Catsup	0
Coffee - Hot Black	0
Cola Drink	0
French Dressing	0
Mustard	3
Red Food Color	3
Red Wine	0
Soy Sauce	0
Spaghetti Sauce	0
Tea - Hot Black	1
Tomato Paste	0
<b>Office</b>	<b>Unleashed LVT</b>
Ball Pen Ink	3
Carbon Paper Smudge	0
Fountain Pen Ink	0
Lead Pencil	0
Permanent Black Marker	3
Red Crayon	0
Red Tempura Paint	0
<b>Oils</b>	<b>Unleashed LVT</b>
Beef Tallow - Hot	0
Canola Oil	0
Cottonseed Oil	0
Brake Fluid	0
Dextron Transmission Fluid	0
Mineral Oil	0
Olive Oil	0
SAE #10 Oil	0
30 wt. Non-Detergent Oil	0
Used Motor Oil	0

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Miscellaneous	Unleashed LVT
Asphalt Driver Sealer	0
Blue Chalk	0
Black Rit Dye	1
Eye Shadow	0
Hair Color	3
Lipstick	0
Perfume	0
Red Candle Wax	0
Red Nail Polish	3,R
Shoe Polish – Liquid Brown	0
Shoe Polish – Paste Brown	2

Samples were tested as manufactured (no additional surface treatments). All samples were exposed to reagents for 4 hours (uncovered), then cleaned with a neutral commercial cleaner and cotton cloth.

A key for interpreting results is found below. It is important to note that in some cases, residual stain, residues and surface dulling may be further reduced or eliminated with different or more aggressive cleaning procedures and/or cleaning agents other than the common method used for this multi-product comparison. For further details on appropriate cleaning methods and care for specific products, please consult the care and maintenance guidelines for the specific product at [www.armstrongflooring.com](http://www.armstrongflooring.com) or contact Armstrong at 888-276-7876.

- 0 No Stain
- 1 Slight
- 2 Moderate
- 3 Severe
- BI Bleaching
- D Dulling
- G Gloss up
- S Softening
- R Reagent left a residue

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