

Resistance to Staining Reagents

Rigid Core Flooring
Empower™

We extensively test all our products in order to determine how our different flooring products will perform in use — and, 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.

Organic Solvents	Result
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 (MEK)	0
Mineral Spirits	0
Toluene	0
Trichloroethylene (TCE)	0
Turpentine	0
Xylene	0
Alkali (Bases)	
Ammonium Hydroxide - 30%	0
Potassium Hydroxide - 15%	1
Sodium Hydroxide - 50%	1
Acids	
Acetic Acid - 28%	0
Acetic Acid - Glacial	0
Hydrochloric Acid - 38%	0
Lactic Acid - 10%	0
Nitric Acid - 15%	1
Phosphoric Acid - 85%	0
Sulfuric Acid - 40%	0
Sulfuric Acid - 10%	1

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

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Food Service	
Catsup	0
Coffee - Hot Black	0
Cola Drink	0
French Dressing	0
Mustard	0
Red Food Color	1
Red Wine	0
Soy Sauce	0
Spaghetti Sauce	0
Tea - Hot Black	0
Tomato Paste	0
Office	
Ball Pen Ink	2
Carbon Paper Smudge	0
Fountain Pen Ink	0
Lead Pencil	0
Permanent Black Marker	2
Red Crayon	1
Red Tempura Paint	0
Oils	
Beef Tallow - Hot	0
Canola Oil	0
Cottonseed Oil	0
Brake Fluid	0
Dexron 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	
Asphalt Driveway Sealer	0
Blue Chalk	0
Black Rit® Dye	0
Eye Shadow	0
Hair Color	1
Lipstick	1
Perfume	0
Red Candle Wax (Melted)	0
Red Nail Polish	3,R
Shoe Polish – Liquid Brown	0
Shoe Polish – Paste Brown	1

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 or contact Armstrong at 888-276-7876.

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