

STAIN RESISTANCE: LIST OF CHEMICALS

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theflooringroup



Result	Effect of the test after cleaning
0	Not sensitive
1	Not very sensitive
2	Low sensitive
3	Sensitive
4	Very sensitive

See method page 6

PRODUCTS /TIME	CONCENTRATION (mol/L)	MIPOLAM TREATED EVERCARE™ / TARALAY TREATED PROTECSOL® 2			TARALAY / WALL TREATED PROTECSOL®			TARASAFE TREATED SPARCLEAN®			GTI		
		5'	2h	24h	5'	2h	24h	5'	2h	24h	5'	2h	24h
CONCENTRATED ACID													
Acetic acid - CH ₃ -COOH	14	0	0	0	0-1d	0-1d	0-1d	1d	1d	2d	0	0	0-1d
Chloric acid - HCl	12	0	0	1c	0	0	2c	0	0	0	0	1c	1c
Citric acid - C ₆ H ₈ O ₇	1	0	0	0	0	0	0	0	0	0	0	0	0
Formic acid H-COOH	22	0	0	0	0	0-1d	1-2d	1-2d	2d	3d	0	0	1-2c/d
Lactic acid - C ₃ H ₆ O ₃	12	0	0	0	0	0	0	0	0	0	0	0	0
Nitric acid - HNO ₃	14	0	1c/d	3c/d	2c/d	2c/d	3c/d	0	2-3c/d	3-4c/d	0	1c	2c/d
Phosphoric acid H ₃ PO ₄	15	0	0	0	0	0	0	0	0	1d	0	0	1c
Perchloric acid HClO ₄	9	0 c/d	0 c/d	2c	0 c/d	0 c/d	3c/d	0 c/d	2c/d	4c/d	0 c/d	1-2c	3-4c
Sulphuric acid - H ₂ SO ₄	19	0	4c	4c	3c/d	4c/d	4c/d	3-4c/d	4c/d	4/cd	2c	4c/d	4c/d
Trichloroacetic acid - CCl ₃ -COOH	15	0	0d	1-2d	1d	2-3d	4d	2-3d	4d	4d	0 d	0 d	2-3c/d
Trifluoroacetic acid - CF ₃ -COOH	13	0	0	0	1d	1d	1d	2-3d	2-3d	3d	0	0	0
DILUTED ACID (N/10)													
Acetic acid - CH ₃ - COOH	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Chloric acid - HCl	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Citric acid - C ₆ H ₈ O ₇	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Formic acid - H-COOH	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Lactic acid - C ₃ H ₆ O ₃	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Nitric acid - HNO ₃	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Perchloric acid - HClO ₄	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Phosphoric acid - H ₃ PO ₄	0,1	0	0	0	0	0	0	0	0	0	0	0	0-1c
Trifluoroacetic acid - CF ₃ -COOH	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Sulphuric acid - H ₂ SO ₄	0,1	0	0	0	0	0	0	0	0	0	0	0	2c/d
Trichloroacetic acid - CCl ₃ -COOH	0,1	0	0	0	0	0	0	0	0	0	0	0	0



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		5'	2h	24h	5'	2h	24h	5'	2h	24h	5'	2h	24h
CONCENTRATED BASE													
Ammonia - NH ₄ OH	10,8	0	0	0	0	0	0	0	0	0	0	0-1c	1c
Caustic soda - NaOH	15	0	0	0	0	1d	3d	0-1d	1d	2d	1c/d	1c/d	2-3c/ d
DILUTED BASE (N/10)													
Ammonia - NH ₄ OH	0,1	0	0	0	0	0	0	0	0	0	0	0	0
Caustic soda - NaOH	0,1	0	0	0	0	0	0	0	0	0	0	1c	2-3c/ d
REACTIVE PRODUCTS													
Silver nitrate - AgNO ₃	1	0	0	0	0	0	2-3c	0	0	0c	0	2c	4c
K-Permanganate - KMnO ₄	5% m/m in water	0-1c	2c	2c	4c	4c	4c	0	1-2c	2-3c	3-4c	4c	4c
SOLVENTS													
Benzyl Acetate	/	0	2d	2d	0	0	1d	0-1d	0-1d	1-2d	0	0	1d
Ethyl Acetate	/	0	1d	1d	0	0	0-1d	0	0	1d	0	0	0
Acetone	/	0	1d	1d	0	0	1d	0-1d	0	1d	0	0	0-1d
Aceto-nitril	/	0	0	0	0	1d	1d	0	1d	1-2d	0	0	0
Dichloromethane	/	0	0	0	1-2d	1-2d	2-3d	1d	1d	1-2d	0	0	0
Tetrachloroethane	/	0	1d	3d	0-1d	3d	3-4d	1d	1d	2-3d	0	1-2d	2d
Dimethyl Sulfoxide - DMSO	/	0	0	0	0	0	0-1d	0-1d	0	1-2d	1d	1-2d	1-2d
Ethyl Ether	/	0	0	0	0	0-1d	0-1d	0	1d	1d	0	0-1d	0-1d
Heptane	/	0	0	0	0	0	0	0	0	0-1d	0	0-1d	0-1d
Hexane	/	0	0	0	0	0	0	0	0	0	0	0	0
Methyl Ethyl Cétone (MEK)	/	1d	1d	1-2d	1d	2d	2d	1-2d	1-2d	1-2d	0-1d	0-1d	0-1d
N-Methyl Pyrrolidone	/	0	4d	4d	1d	4d	4d	4d	4d	4d	3-4d	4d	4d
Tetrachlorethylene / perchloréthylène	/	0	0	0	0	0-1c	0-1c	0-1d	0-1d	1d	0	0-1d	0-1d
Trichlorethylene	/	0	0	0	1d	1-2d	1-2d	1d	1-2d	1-2d	0	0	0
Tetrahydrofurane THF	/	3-4d	4d	4d	3-4d	3-4d	3-4d	3-4d	3-4d	3-4d	4d	4d	4d
Xylene	/	0	0	0	1d	3d	3d	1d	1d	1d	0	0	0

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		5'	2h	24h	5'	2h	24h	5'	2h	24h	5'	2h	24h

ALCOHOLS

Amylic alcohol	/	0	2c	2c	2c	4c	4c	1c	3c	4c	0	1c	2c
Amylic alcohol - Pentanol	/	0	0	0	0	0	0	0	0	0	0	0	1d
Butylic alcohol - Butanol	/	0	0	0	0	0-1d	0-1d	0	1d	1d	0	0-1d	0-1d
Ethylic alcohol - Ethanol	/	0	0	0	0	0	0	0	1d	1d	0	0-1d	0-1d
Isopropyl Alcohol - Isopropanol	/	0	0	0	0	0	0	0	0	0	0	0	0-1d
Methylic Alcool - Methanol	/	0	0	0	0	0	0	0	0	0	0	0	0
2-Methyl 2,4 - Pentanediol	/	0	0	0	0	0	0	0	0	0	0	0	0

PHARMACEUTICALS PRODUCTS

Iodised alcohol	/	0	2c	2c	2c	4c	4c	1c	3c	4c	0	1c	2c
Amidon *	/	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Betadine	/	0	0	0-1c	0-1c	2-3c	3-4c	0	0	1-2c	1c	3c	4c/d
Coomassie Brilliant Blue Composition	0.1 g of Coomassie Blue + 18.2 mL of water + 18.2 mL of ethanol + 3.6 mL of AAg	0	0	0	2c/d	3c	3c	0	1c	1-2c	1c	3-4c	3-4c
Methylene Blue	/	0	0	0	4c	4c	4c	3c	4c	4c	2c	4c	4c
Chloroform = Trihalomethane	/	0	0-1d	0-1d	2d	2-3d	3d	1d	2d	2d	1d	0-1d	1d
Crystal violet	4% m/m in water	0	0	0	2-3c	4c	4c	0	1-2c	4c	3-4c	4c	4c
Oxygenated Water = Hydrogen Peroxyde	/	0	0	0	0	0	0	0	0	0	0	0	0
Eosin aqueous phase	/	0	0	0	1c	4c	4c	1c	2-3c	3-4c	2c	2c	3-4c
Formaldehyde = Formalin (Liquid phase)	/	0	0	0	0	0	0	0	0	0	0	0	0
Potassium Iodide *	10% m/m in water	0	0	0	0	0	0-1c	0	0	0	0	0	0-1c
Safranin (aqueous phase)	1% m/m in water	0	0	0	0-1c	2c	4c	0-1c	1c	1c	2c	3-4c	4c
Safranin (solvent borne)	1% m/m in ethanol	0	0	0	4c	4c	4c	4c	4c	4c	4c	4c	4c
Solution de Milian (violet)	/	0	0	0	0	4c	4c	0-1c	1c	4c	4c	4c	4c
Crystal violet (alcohol phase)	2% m/m in ethanol	0	0	1c	4c	4c	4c	4c	4c	4c	4c	4c	4c

COSMETIC PRODUCTS

Cream foundation	Affinitone, Maybeline	0	0	0	0	0	0	0 c	0-1c	0-1c	1c	1c	1c
Lipstick	/	0	0	0	0	0	0-1c	0-1c	0-1c	1c	3c	3c	4c
Hair dye	90 black, Saint Algue	0	0-1c	0-1c	3-4c	4c	4c	0	4c	4c	2-3c	4c	4c

* Warning!: Yellowing of floorcovering on a long term in the lack of natural light and in case of insufficient detergent process.

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		5'	2h	24h	5'	2h	24h	5'	2h	24h	5'	2h	24h
FOOD PRODUCT													
Butter	/	0	0	0	0	0	0	0	0	0	0	0	0
Coca-Cola	/	0	0	0	0	0	0	0	0	0	0	0	0
Beer	Ottweiler Pils	0	0	0	0	0	0	0	0	0	0	0	0
Concentrated Lemon	Silicia	0	0	0	0	0	0	0	0	0	0	0	
Olive oil	Puget	0	0	0	0	0	0	0	0	0	0	0	0
Milk	Régilait, concentrated milk	0	0	0	0	0	1d	0	0	0-1d	0	0	1c/d
Mustard	Amora	0	0	0	0	0	0-1c	0	0	0-1c	0	0	1-2c
Ketchup	Amora	0	0	0	0	0	0	0	0	0	0-1c	0-1c	1c
Concentrated Tomato	Victoria	0	0	0	0	0	1c	0	0-1c	1c	0-1c	2-3c	3c
Fruit sirup	Teisseire 0% sugar	0	0	0	0	0	1d	0	0	1c	0	0	0
Coffee	/	0	0	0	0	0	1c	0	0	0	0	1c	1-2c
Thea	/	0	0	0	0	0	0	0	0	0	0	0	0
Wine vinegar	7% acidity-rate	0	0	0	0	0	0	0	0	0	0	0	0
Red Wine	Côtes du Rhône	0	0	0	0	0	0	0	0	0	0	0 c	0
DOMESTIC PRODUCT													
Shoe Shine	/	0	0	0	0	0	1-2c	0	0	0-1c	0	1c	2c/d
Bleach - Sodium Hypochlorite	/	0	0 c	0	0	1-2c	3c	0	0	1-2c	0-1c	0-1c	0-1c
Ballpoint pen	blue, Niceday	0	1-2c	2c	0	1c	1c	1c	1c	0-1c	2c	2c	3-4c
Onyx	black, Niceday	0	0	0	2-3c	2-3c	4c	3c	3-4c	3-4c	4c	4c	4c
CLEANING PRODUCT													
Cif - multi usage cleaner	/	0	0	0	0	0	0	0	0	0	0	0	0
Mir - multi usage cleaner	/	0	0	0	0	0	0	0	0	0	0	0	0
Atout Vert	/	0	0	0	0	0	0	0	0	0	0	1c	2c/d
Alcal sols	/	0	0	0	0	0	0	0	0	0-1d	0	0	0
Metamat	/	0	0	0	0	0	0	0	0	0	0	0	0
Novabiotis - éco solvants	/	0	0	0	0	0-1d	0-1d	0-1d	1-2d	2d	0	0	1d
HYDROALCOHOLIC GEL													
Sterilium Gel	/	0	0	0	0	0	0	0	0	0	0	0	0
Anios gel 85NPC	/	0	0	0	0	0	0	0	0	0	0	0	0
Nexcar	/	0	0	0	0	0	0	0	0	0	0	0	0
Purell	/	0	0	0	0	0	0	0	0	0	0	0	0
Stoko Pro Gel	/	0	0	0	0	0	0	0	0	0	0	0	0
Keno Sept-G	/	0	0	0	0	0	0	0	0	0	0	0	0

Expression of results

RESULT	EFFECT OF THE TEST AFTER CLEANING
0	Not sensitive
1	Not very sensitive
2	Low sensitive
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For a better appreciation of the result, the result from 1 to 4 is completed with another indicator c (like colouration) or d (like deterioration):

- The **c** indicator is linked to the aesthetical aspect of the flooring
- The **d** indicator is the factor which directly influences the maintenance conditions of the flooring.

Reminder: cleaning of Iodised alcohol stains

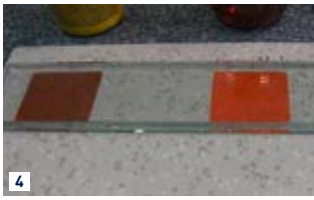
1. immediate action: soak up with a cloth
2. later action: apply an impregnated cloth with a mix made of 75% bleach and 25% non-coloured ethylic alcohol to the stain for several hours. Repeat action if necessary.

WARNING:

- the preparation must be done with protection (gloves, glasses) and in small quantity: < 1l
- pour the alcohol in the bleach carefully, because of calories emission, it must not be prepared in a closed bottle.

RESISTANCE TO STAINING

The test consists in measuring the resistance of the floorcovering to chemical products to which it can be exposed during its usage. These different chemical products (liquid or solid) are applied on a sample during a precise period (5min, 2 hours or 24 hours). After cleaning, the change of aspect is noted (colouration, deterioration etc...). The test is based on the EN 423 norm.

N°	OPERATION	METHOD	ILLUSTRATION
1	Preparation of samples	1. Cut a A4 sample. 2. Cut a 4x4cm piece of absorbing paper for every test with a liquid product.	
2	Application of the staining liquids	1. For every tested liquid product, apply a piece of absorbing paper on the sample. 2. Mark with a marker pen the space corresponding to every products used. 3. Soak the clothe with 10 droplets of liquid product. 4. Apply a strip of glass on the textile squares soaked with products.	  
3	Time of contact	1. Leave the product in contact with the surface of the flooring for 2hours*.	
4	Cleaning	1. Remove and clean the glass strip with ethanol. 2. Remove and throw away the absorbing paper squares. 3. Take off with a spatula the remaining solid products. 4. Clean the stains with a cloth impregnated with ethanol until a colouration appears on the cloth. 5. Evaluate the resistance to staining of the flooring for every tested product.	  

* Remark: If it is a 5 min test, the protocol is different.
The product is directly in contact with the flooring (without absorbing paper and glass strip)