

STAIN RESISTANCE: LIST OF CHEMICALS





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
Hydrochloric 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
Hydrochloric 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

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



c = discolouration
 0c – no sensitivity to discolouration
 1c – very slight risk of discolouration
 2c – slight risk of discolouration
 3c – likely to discolour
 4c – high degree of discolouration
d = possible damage to the surface of the product

See method page 6



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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
Methyl cyanide	/	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 Ketone (MEK)	/	1d	1d	1-2d	1d	2d	2d	1-2d	1-2d	1-2d	0-1d	0-1d	0-1d
N-Methyl Pyrolidone	/	0	4d	4d	1d	4d	4d	4d	4d	4d	3-4d	4d	4d
Tetrachlorethylene	/	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													
Amyl alcohol	/	0	2c	2c	2c	4c	4c	1c	3c	4c	0	1c	2c
Amyl alcohol - Pentanol	/	0	0	0	0	0	0	0	0	0	0	0	1d
Butyl alcohol - Butanol	/	0	0	0	0	0-1d	0-1d	0	1d	1d	0	0-1d	0-1d
Ethyl 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
Methyl alcohol - Methanol	/	0	0	0	0	0	0	0	0	0	0	0	0
Hexylene glycol/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
Starch *	/	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 Peroxide	/	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
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	0c	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 PRODUCTS													
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	/	0	0	0	0	0	0	0	0	0	0	0	0
Olive oil	/	0	0	0	0	0	0	0	0	0	0	0	0
Milk	Regular, concentrated milk	0	0	0	0	0	1d	0	0	0-1d	0	0	1c/d
Mustard	/	0	0	0	0	0	0-1c	0	0	0-1c	0	0	1-2c
Sauce	/	0	0	0	0	0	0	0	0	0	0-1c	0-1c	1c
Concentrated tomato	/	0	0	0	0	0	1c	0	0-1c	1c	0-1c	2-3c	3c
Fruit syrup	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
Tea	/	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 PRODUCTS													
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/black ink	0	1-2c	2c	0	1c	1c	1c	1c	0-1c	2c	2c	3-4c
WATER AND ETHANOL GEL													
Ethanol based hand disinfectant	/	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
Resuable cold packs (Nexcar)	/	0	0	0	0	0	0	0	0	0	0	0	0
Antiseptic hand gel (Purell)	/	0	0	0	0	0	0	0	0	0	0	0	0
Isopropanol, digluconate chlorohexidine	/	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
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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 iodized alcohol stains
 1. If possible immediately soak up with a cloth
 2. As soon as practicable clean with your regular floor cleaner

For persistent stains: It's important that you first try these methods on a non-conspicuous area of your product to assess the impact of the cleaning solution on the product PRIOR to using it on the stained area.

- Use a cloth impregnated with Sodium Hypochlorite (Bleach) to wipe the stained area. If further cleaning required soak in Sodium Hypochlorite (remember to test this on an inconspicuous area of your product first).
- If stain persists contact your Gerflor representative for guidance on your specific situation.

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/EN ISO 26987 norm**.

N°	OPERATION	METHOD	ILLUSTRATION
1	Preparation of samples	<ol style="list-style-type: none"> Cut a A4 sample. Cut a 4 x 4cm piece of absorbing paper for every test with a liquid product. 	
2	Application of the staining liquids	<ol style="list-style-type: none"> For every tested liquid product, apply a piece of absorbing paper on the sample. Mark with a marker pen the space corresponding to every products used. Soak the clothe with 10 droplets of liquid product. Apply a strip of glass on the textile squares soaked with products. 	  
3	Time of contact	<ol style="list-style-type: none"> Leave the product in contact with the surface of the flooring for 2hours*. 	
4	Cleaning	<ol style="list-style-type: none"> Remove and clean the glass strip with ethanol. Remove and throw away the absorbing paper squares. Take off with a spatula the remaining solid products. Clean the stains with a cloth impregnated with ethanol until a colouration appears on the cloth. 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)