

Systemceram GmbH + Co KG
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Official Materials Testing Facility Glass and Ceramics

- Ceramic raw materials
- Silicate ceramic materials
- Oxidic and non-oxidic materials
- Fireproof building materials
- Thermophysical analysis
- Chemical analysis
- Mineral und microstructural analysis
- Technical heat and procedural analysis

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Test Report KP 74 I 06 dated 09.05.2005 **Resistance to Chemicals of Glazed Laboratory Tabletops** **made from Fine Chemico-Technical Stoneware**

Test procedure:

3 test specimen each with the glazes Polar – Lago/Blue – and Alu measuring 50 x 100 mm were immersed in the reagents in a 20 mm beaker, covered with a watch glass and left for 24 hrs.

Following the test period, the test specimen were taken out, the chemicals were removed with a sponge and warm water and/or acetone and/or methanol, dried at 110°C and assessed.

Assessment:

The assessment classes were:

1. Removable with warm water – no staining.
 2. Removable with acetone / methanol – no obvious staining, no change of function or reduction in quality.
 3. Surface obviously impaired – reduction in function and quality.
- The results are shown in the following tables.

Test Facility Manager
Prof. Dr. G. Klein

Tester
Dipl. Ing. (FH) J. Müller

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The following chemicals were assigned to Assessment Class I – removable with warm water:

- Acetic anhydrid
- Acetone
- Acetonitrile
- Acedrin orange
- Alizarin dihydrate complex
- Formic acid (99 %)
- Ammonium hydroxide (28 %)
- Amyl acetate
- Aniline blue (water-soluble)
- Benzene
- Benzin
- Butyl alcohol
- Chloroform
- Chromium (IV) oxide (60%)
- Dichloroacetic acid
- Dichloromethane
- Dioxane
- Iron dichloride (10 o/%)
- Eosin B
- Acetic acid (99 %)
- Ethanol
- Ethyl acetate
- Etylene glycol
- Ethyl ester
- Formaldehyde
- Furfural
- Iodine solution (0,1 N)
- Iodine tincture
- Potassium iodide (10 %)
- Potassium permanganate (10 %)
- Carbolie fuchsin (10 %)
- Carmine
- Congo red
- Cresol
- Crystal violet
- Blue vitriol (10 %)
- Methanol
- Methylene blue (10 %)
- Methyl ethyl ketone
- Methyl isobutyl ketone

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- Monochlorobenzene
- Naphtalene
- Sodium chloride (10 %)
- Sodium hydroxide (10 %)
- Sodium hydroxide (20 %)
- Sodium hydroxide (40 %)
- Sodium hypochloride (13 %)
- n-butyl acetate
- n-hexane
- Perchloric acid (60 %)
- Phenol
- Phosphoric acid (85 %)
- Safranine
- Nitric acid (10 %)
- Nitric acid (20 %)
- Nitric acid (30 %)
- Nitric acid (65 %)
- Nitric acid (70 %)

- 50 % Nitric acid (65 %)
- 50 % Hydrochloric acid (37 %)

- Hydrochloric acid (10 %)
- Sulphuric acid (10 %)
- Sulphuric acid (25 %)
- Sulphuric acid (33 %)
- Sulphuric acid (77 %)
- Sulphuric acid (85 %)
- Sulphuric acid (96 - 98 %)

- 50 % Sulphuric acid (77 %)
- 50 % Nitric acid (70 %)

- 50 % Sulphuric acid (85 %)
- 50 % Nitric acid (70 %)

- Silver nitrate (1 %)
- Sudan III
- Tetrachloromethane
- Tetrahydrofuran
- Toluol
- Trichlorethylene
- Hydrogen peroxide
- Xylol
- Zinc chloride

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The following chemicals were assigned to Assessment Class II – removable with acetone / methanol:

- Fuchsine
- Giemsa dye
- Malachite green oxalate
- Methylene blue
- Methyl violet 2 B

The following chemical was assigned to Assessment Class III – surface obviously impaired:

- Hydrofluoric acid (48 %)

All data given correspond to our latest knowledge and are intended to supply information on products and their possible applications.

The data are therefore not to be construed as a guarantee of specific product features or a product's suitability for specific application purposes.

Test results vary from colour to colour.

In case of doubt, the performance of specific tests for concrete applications is recommended.