

SCHOTT CONTURAN® – proven resistance

For medical applications

Digital imaging has long been indispensable in modern medicine. Equally indispensable are clear displays to enable correct diagnoses even in difficult light conditions. This is where CONTURAN® comes in. While normal display screens have approx. 8 % reflection, CONTURAN® stays below 1 % to give unimpeded views of examination results.

Capable of meeting maximum hygiene needs

To provide optimum viewing of content over the long term, display glass in the medical sector also needs to cope with daily cleaning by a multitude of chemical agents.

CONTURAN® benefits here from continuous development and the sol-gel dip coating developed by SCHOTT. CONTURAN® has been specially adapted to the needs of medical technology so that it can easily withstand regular and intensive cleaning by most cleaning agents.

Even aggressive cleaning agents* used to meet the highest of hygiene standards cannot damage the anti-reflective layer.

First choice in the medical sector

The key factor in CONTURAN®'s mechanical and chemical stability is a special manufacturing procedure using the sol-gel dipping process.

High-quality base glass is dipped in different metal oxide solutions that apply just nanometer-thick optical layers. The layers are then burned in ("hard coating") at extremely high temperatures (450°C to 500°C). The result is an anti-reflective coating with maximum chemical and mechanical stability.

Proven cleaning durability

To demonstrate stability in medical environments, CONTURAN® has been tested against a wide range of disinfectants and detergents. More than 30 test media were used in a standard test complying to UB MED MFR 890/009. The robust anti-reflective layer in CONTURAN® successfully passed the test.

Top scores in other disciplines

CONTURAN® also excels in conventional tests which subject surface resistance to high stresses. Such tests include the CASS (copper chloride acetic acid salt spray test) and NSS (neutral salt spray test) for corrosion protection.

CONTURAN® also achieves top scores in mechanical stress tests. The pencil hardness test achieved class 9H, a significantly higher score than so far gained by anti-reflective surfaces.

*non-abrasive



Overview of benefits

- Reduction of residual reflection by more than 90 %
- High light transmission (> 98 %) and increased contrast
- High abrasion resistance and chemical resistance to extend service life and provide easy cleaning
- Non-visible and color-neutral for perfect viewing
- Available on different base substrates
- Available in single-sided and double-sided anti-reflective versions
- Available with the SCHOTT DARO easy clean coating



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CONTURAN® put to the test

The test was carried out by the materials testing center in Karlsruhe in accordance with the UB MED guideline MFR 890/009 which subjected CONTURAN® to intensive resistance testing.

The test applied standard, medical-sector cleaning agents containing various classes of active ingredients and then examined their impact on CONTURAN® over several hours. The surfaces and their appearance were assessed and evaluated.

Based on this test, we provide recommendations on the majority of the substances tested:



Test results

Class of chemical agent	Specific test medium	Result
Alcohol	Incidur-Spray (undiluted), Ethanol (96 % Vol.), Mykrozid liquid (undiluted), Meliseptol rapid (undiluted), Isopropyl (70 %)	✓
Aldehyde	Melsitt (10 % Vol.), Lysoformin (2 % Vol.), Aldasan 2000 (4 % Vol.), Kohrsolin (0.5 % Vol.), Dismozon (0.5 %)	✓
Peroxide compounds	Perform (3 %), Hydrogen Peroxide (3 %)	✓
Pyridine derivative	Spray Activ (undiluted)	✓
Benzine	Benzine / Petroleum ether (undiluted)	✓
Dish liquid	Regular dish liquid (1 %)	✓
Organic acids	Bio-AntiBact med	✓
Limewater	–	✓
Alkylamine	Incidin Plus (8.0 % Vol.)	✓
Quaternary compounds	Mykrozid sensitive liquid (undiluted), Morning Mist (1:64 diluted), Terralin protect (2.0 % Vol.), Microbac® Tissues (direct)	✓
	Taski Sprint DS 5001 (0.5 % Vol.), Sulfanios Fraicheur Citron (0.25 % Vol.)	○
Chlorine derivatives	Sodium hypochlorite (bleach; 10 %)	✓
	Terralin (0.5 % Vol.)	○
Antiseptic agent	Chlorhexidin (0.5 %) in Isopropyl (70 %)	○
Ammonia	Ammonia hydroxide solution (1.65 % Vol.)	○

✓ = safe to use

○ = residues may accumulate on the surface

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