



SecuSan –  
The new hygiene standard  
Clinically tested

## The problem

**Excerpt from a press release issued by the German Federal Ministry of Health, 8 July 2011**

**Bundesrat passes legislation amending the German Act on the Prevention of Infection and other laws**

Every year in Germany some 400,000 to 600,000 people pick up an infection in association with medical treatment as an in- or outpatient. It is estimated that they prove fatal in 7,500 - 15,000 cases each year. **Twenty to thirty percent of such nosocomial infections and deaths could have been prevented through closer adherence to the standard principles of hygiene and infection control.** The situation is compounded by the fact that many hospital-acquired infections are caused by pathogens that are drug-resistant, so making them difficult to treat.



SecuSan is an antimicrobial surface for HOPPE door and window handles. Its high level of hygienic safety has been confirmed in independent laboratory and practical tests.

## The solution



### **SecuSan door and window handles**

- immediately combat germs
- have a preventative effect
- are wear-free on a long-term basis

# SecuSan – Responsibility towards society

The issue of "hygiene" has been the subject of public concern for many years and is currently more topical than ever before. With our SecuSan door and window handles we have developed a solution that provides active protection in the very places where it is urgently required. Be it in clinics, schools, industry or leisure facilities – SecuSan handles help to ensure high hygiene standards wherever people are present in large numbers.

As the European market leader in the development, manufacture and marketing of door and window hardware we systematically rely on innovative, future-oriented technology that does more than make life easier: it makes it safer too.

SecuSan is a special surface that immediately suppresses microbial growth on a lasting basis. It is entirely maintenance-free and designed for long-term usage. Its high level of efficacy has been confirmed in independent laboratory and practical tests.

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**Hygiene report on the antimicrobial handles from HOPPE Holding AG**

The order specified that tests be conducted to establish whether SecuSan is sufficient to achieve a surface finish that is necessary in hygienically sensitive areas. The tests were conducted in accordance with the JIS standard Z 2801:2000 and ISO 15843:2003. The test method for hard plastics, films and coatings is specified in the standard and is based on the test for antimicrobial surfaces, for example the "Standardmethoden der DGHM Methods for Testing".

**Field test of SecuSan door and window handles from HOPPE Holding AG**

In tests conducted in accordance with JIS standard Z 2801:2000 and ISO 15843:2003, the antimicrobial finish of SecuSan handles was proven to be effective against bacteria. The result was to be tested by means of an extensive field test. For this purpose, the handles of ward A at Universitätsklinikum Marburg were covered with a newly renovated ward B that was identical in terms of layout and where patients with similar pathologies were treated.

**Certificate**  
regarding the antimicrobial effectiveness of SecuSan door and window handles from HOPPE Holding AG

The effectiveness testing took place on the basis of the standards JIS Z 2801:2000 and ISO 22196:2011 with the strains recommended by the German Society for Hygiene and Microbiology (Deutsche Gesellschaft für Hygiene und Mikrobiologie, DGHM).

<i>Staphylococcus aureus</i>	ATCC 6538
<i>Enterococcus faecium</i>	ATCC 6957
<i>Enterococcus hirae</i>	DSM 8320
<i>Escherichia coli</i>	ATCC 11229
<i>Proteus mirabilis</i>	ATCC 14153
<i>Pseudomonas aeruginosa</i>	ATCC 15442
<i>Candida albicans</i>	ATCC 10231
<i>Aspergillus niger</i>	ATCC 16404

	Reduction log <sub>10</sub>	Reduction %
Gram-positive cocci		
<i>Staphylococcus aureus</i>	4.10	100
<i>Enterococcus faecium</i>	1.84	98.5
<i>Enterococcus hirae</i>	2.51	99.7
Gram-negative enterobacteria		
<i>Escherichia coli</i>	2.75	99.8
<i>Proteus mirabilis</i>	2.34	99.2
Gram-negative non-fermenter		
<i>Pseudomonas aeruginosa</i>	3.46	99.9
Fungi		
<i>Candida albicans</i>	2.70	99.8
<i>Aspergillus niger</i>	1.90	98.7

This certificate expires 3 years after the date of issue.  
Marburg, 5 March 2012  
Prof. Dr. R. Mutters

## The laboratory test

**Requirement:** Based on the JIS (Japanese Industrial Standard) Z 2801:2000 and ISO (International Organization for Standardization) 22196:2011 standards it was tested whether the antimicrobial activity of SecuSan is sufficient to achieve a reduction in bacteria of at least 3 log units (99.9%) in 24 hours on door and window handles as required in hygienically sensitive areas.

**Procedure:** A thin layer of the test bacteria specified by the German Society of Hygiene and Microbiology (DGHM) was applied to a Petri dish and incubated for 24 hours.

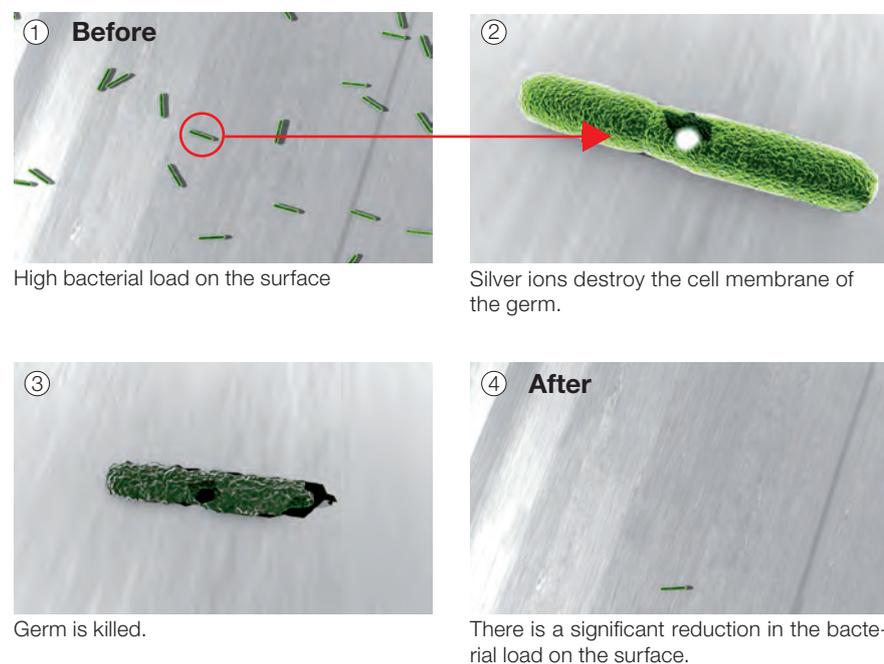
**Evaluation:** SecuSan showed a significant bactericidal effect with all test bacteria. The effect was especially marked in the case of *Staphylococcus aureus* (including MRSA) and *Pseudomonas aeruginosa*.

## Antimicrobial effectiveness

SecuSan surfaces contain silver ions which are embedded in a carrier system of ceramic glass. They form an active part of this material and prevent the growth of germs such as bacteria, algae and fungi.

The silver ions destroy the cell membrane of the germ. This stops respiration and nutrition of the cells, so preventing cell division. Independent tests have proved that SecuSan reduces microbial growth by more than 99%.

The SecuSan surface remains effective even when cleaned at regular intervals.



Did you realise that using a door handle is like shaking hands with thousands of strangers?

### Development of antimicrobial effect over time

**Requirement:** Based on the JIS Z 2801:2000 and ISO 22196:2011 standards testing investigated the elimination of test bacteria on the SecuSan surface over time.

**Procedure:** Reference strains of *Staphylococcus aureus* and *Escherichia coli* K 12 were used here as the test bacteria. A reduction factor of 60% was achieved after 5 minutes for *Escherichia coli*, while the reduction factor was 50% after 30 minutes for *Staphylococcus aureus*.

**Evaluation:** The reduction values observed represent a very good result. A high level of hygienic safety is ensured by SecuSan door and window handles.

## Tested in daily clinical practice

### The practical test

The mean bacterial load was recorded in two wards of identical construction and containing comparable patients at Universitätsklinikum Marburg and subjected to analysis in the course of a two-week clinical field trial.

**The result:** SecuSan achieved an impressive result, not just during laboratory testing but also in daily clinical practice. A direct comparison was made between wipe disinfection of conventional door handles and no disinfection of SecuSan door handles. SecuSan's high level of antimicrobial effectiveness was certified by the institute, in particular as regards its effect over time.



### Excerpt from the comment of Prof. Dr Reinier Mutters, Head of Hospital Hygiene department at Philipps University Marburg

In tests conducted in accordance with the JIS Z 2801:2000 and ISO 22196:2011 standards, the antimicrobial finish of door handles [with] SecuSan proved to be effective against the test bacteria specified [by the German Society of Hygiene and Microbiology (DGHM)]. This result was to be tested by means of an extensive field test.

For this purpose, the entire hospital ward A at Universitätsklinikum Marburg was fitted with these handles as part of an overall refurbishment of the ward. The hypothesis of the efficacy was to be tested in a field test based on a comparison with a newly renovated ward B that was identical in terms of construction and where patients with similar pathologies were treated.

**Test set-up and execution:** Over a period of 2 weeks, quantitative, microbiological contact samples were taken from ward A in accordance with DIN 10113-3. During the testing period, the door handles on this ward were no longer disinfected.

In parallel, samples were taken from comparative ward B. On this ward, the standard metal handles were wiped every day with disinfectant as usual.

**Evaluation:** The antimicrobial properties of SecuSan door handles from HOPPE Holding AG fitted on the ward proved effective in the field test. The material's good level of effectiveness that had already been verified in laboratory tests was also confirmed in practice.

The results show that fitting hospital areas with antimicrobially active SecuSan door handles is sensible in terms of preventing the spread of infection. From a hygienic stand point, SecuSan can be recommended, as the system delivers sustainable improvement to hygienic safety in hospitals.

# SecuSan product overview

## Amsterdam Series

## Rotterdam Series

Materials and finishes:

**F1-2-S** - Aluminium silver matt -  
**SecuSan**

**F69-S** - Stainless steel matt -  
**SecuSan**



## Marseille Series

## Paris Series

Materials and finishes:

**F1-2-S** - Aluminium silver matt -  
**SecuSan**

**F69-S** - Stainless steel matt -  
**SecuSan**



## Stockholm Series

## Karlstad Series

Materials and finishes:

**F1-2-S** - Aluminium silver matt -  
**SecuSan**

**F69-S** - Stainless steel matt -  
**SecuSan**



The above series satisfy the requirements of DIN EN 1906, category of use: grades 3 and 4 as well as the RAL-RG 607/9 regulations and are especially characterised by their long service life when fitted in public buildings. All handle sets for commercial applications are also available as panic- and fire-resistant versions. Additionally, the sets on rose with eschutcheon come as backplate/escutcheon security sets, too.

### Simple to replace during renovations

It is fast and easy to refit entire buildings so they guarantee this new hygiene standard.

### HOPPE Operational Guarantee

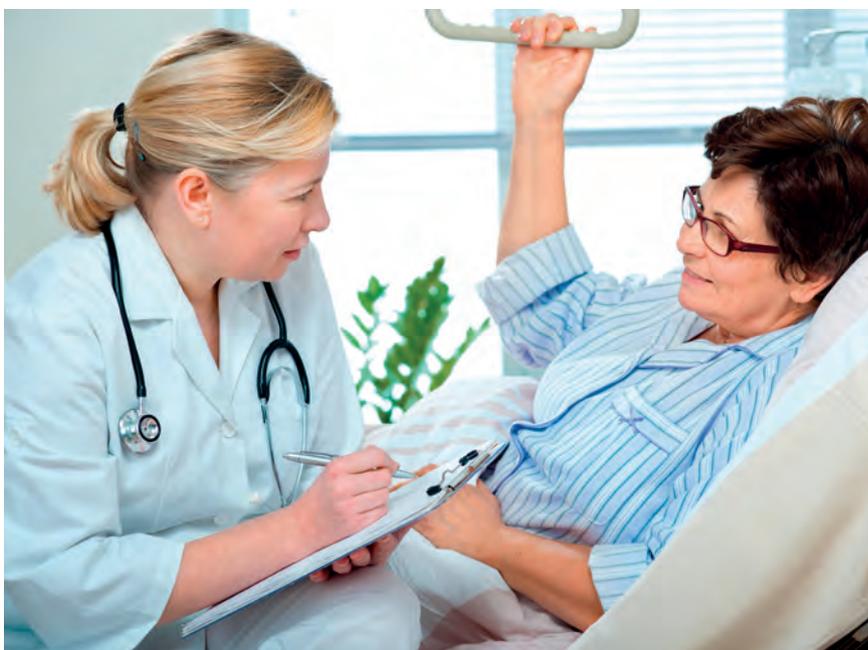
With the **10-year operational guarantee**, HOPPE extends way beyond the statutory 2 years of European regulations.

For further information about the HOPPE Operational Guarantee see [www.hoppe.com](http://www.hoppe.com).



SecuSan is highly effective due to the fast action of its antimicrobial properties. Hardware with this surface is thus especially suitable for use in medical and nursing facilities, e.g. in **hospitals, medical centres, pharmacies, care homes, nurseries, schools, institutes** or **public buildings**. Wherever hygiene protection needs to act fast while remaining highly cost-effective and environmentally considerate.

Their hygienic and functional properties ensure that SecuSan handles are suitable for a wide range of **industrial applications** as well as for use in the **hospitality sector**: areas where they satisfy the high requirements in terms of hygiene control.



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