

# SilverKnight Wall

Impact Protection for Walls

Built-in Bacteria & Virus eliminating technology



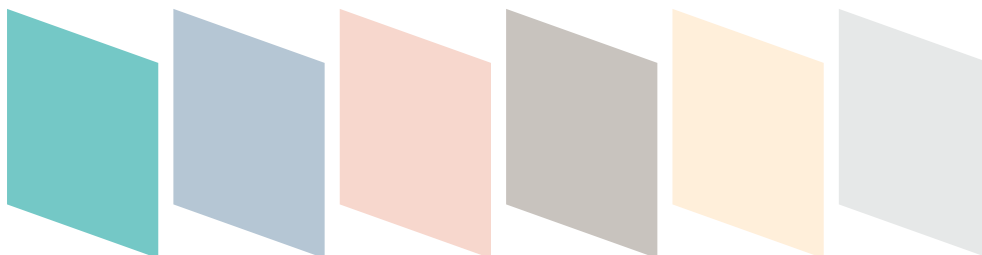
Impact Resistant  
Cleanable  
Hygienic  
Wallcovering

## Introducing SilverKnight Wall

SilverKnight Wall is designed to protect your walls with its impact resistant fiberglass inner layer.

This one of a kind wallcovering utilizes patented silver ion technology to disrupt and eliminate harmful microbials that come in contact with its surface. Including bacteria & viruses.

A perfect companion to Grabo SilverKnight Flooring, creating a floor to ceiling high-performance system.



THICKNESS:  
**1.5 mm**

WEIGHT:  
**32.8 oz per  
lineal yard**

WIDTH:  
**59"**



**SILVER  
KNIGHT**

*Hygienic sheet flooring  
and wall covering*

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## SILVERKNIGHT – FREQUENTLY ASKED QUESTIONS

### **What is the difference between the bacteria/virus eliminating effect of SilverKnight Products versus antibacterial properties of some others?**

SilverKnight eliminates bacteria & viruses. The bacteria elimination technology means that pathogens are destroyed by coming in contact with the surface. Generally, floorings promoting antibacterial properties do not actually destroy pathogens. They prevent the further growth/reproduction of bacteria.

### **Are silver and titanium dioxide harmful?**

No. Both are inert earth minerals. Silver has been used as a natural disinfectant for centuries (from the early making of cutlery, cups and surgical instruments to modern-day advanced technologies). Titanium dioxide is widely used in the textile industry, health & beauty products and also the production of building materials. There is no currently accepted study or report that would prove that these components are harmful for humans.

### **Does SilverKnight adversely affect people?**

No. None of its components contains harmful substances or produces emission.

### **Are the silver and titanium dioxide within SilverKnight released into the environment?**

No. They are molecularly bonded within the wear layer of the flooring. The patented Tech Surface ensures that silver and titanium dioxide are integrated into the surface, without being released.

### **Can bacteria gain resistance towards SilverKnight technology?**

SilverKnight utilizes silver ions to block cell division, destabilize the cell membrane, wall or plasma and interrupt the transport of nutrients. While titanium dioxide catalyzes the oxidation of all organic matter. Thus pathogens cannot gain resistance towards the process.

### **Is SilverKnight tested to be effective against bacteria?**

Yes. Independent Laboratory Testing shows SilverKnight reduces bacteria including MRSA, VRE, ESBL & C Difficil. These tests include the most frequent and dangerous “super bacteria” found within hospital environments. However, silver can destroy over 600 various kinds of bacteria; therefore, the flooring surface efficiency is not limited to only the bacterium strains included in the test. In addition titanium dioxide/TiO<sub>2</sub> oxidizes all organic matters without exception.

### **Is SilverKnight tested to be effective against viruses?**

Yes. Grabo SilverKnight has been tested to show its technology is also efficient against viruses. See Manufacturer’s Declaration.

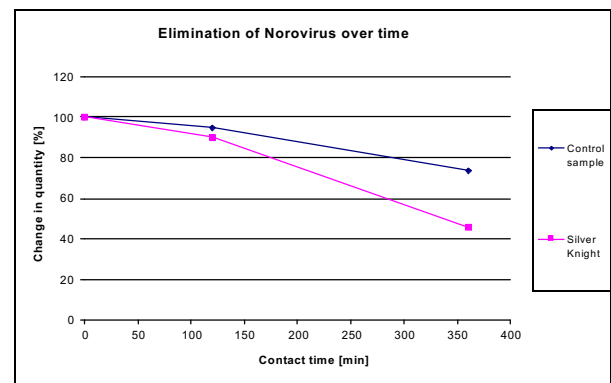
### MANUFACTURER'S DECLARATION

Graboplast, a 115-year-old leading floor manufacturer headquartered in Europe, declares that beyond their bactericidal properties, floor coverings made with GRABO SilverKnight technology are efficient also against viruses.

The proprietary GRABO developed SilverKnight flooring and wallcovering eliminate more than 99% of various bacteria within 8 hours due to their photocatalytic self-disinfecting effects. Their self-disinfecting property is ensured by the unique double-defense system, which is a natural antibiotic, a combination of silver and layer inducing molecular oxidation that can be activated by the effect of light. The virucide effect of the silver nanoparticles against the wide range of viruses is confirmed.<sup>1</sup>

According to the test made by the Institute of Clinical Microbiology and Diagnostics of the University of Szeged, the GRABO SilverKnight technology has proved to be efficient against viruses.

After 120 minutes, there is a significant difference between the virus contamination of the GRABO SilverKnight surface and the control sample. And after six hours, the number of norovirus is reduced by 54% on the GRABO SilverKnight surface.<sup>2</sup>



The virucide disinfectants efficiently remove viruses from the surfaces, however, they remain effective only during the contact time.

Based on the above, it is obvious that the coverings made with GRABO SilverKnight technology actively contribute to protection against viruses in the period between disinfecting cleaning operations.

As soon as capacity of the properly equipped labs allow it, our aim is to test our wall and floor coverings made with Grabo SilverKnight technology for SARS-CoV-2 coronavirus. The above declaration is issued by us on the basis of a customer demand, for customer information purposes.

GRABOPLAST Zrt. Győr, 16/04/2020

<sup>1</sup> „Metal nanoparticles, especially the ones produced with silver or gold, have proven to exhibit virucidal activity against a broad-spectrum of viruses, and surely to reduce viral infectivity of cultured cells. In most cases, a direct interaction between the nanoparticle and the virus surface proteins could be demonstrated or hypothesized.”

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6264685/> . Access [08.04.2020]

<sup>2</sup> Source: Detection of norovirus on various surfaces under natural light – Report, Institute of Clinical Microbiology and Diagnostics, Faculty of Medicine, University of Győr, Albert Szent-Györgyi Health Centre, Szeged, 2010.



### Stain & Chemical Resistance Testing

## TEST REPORT

TEST NUMBER: 134203

<b>CLIENT</b>	Graboplast zRt
<b>TEST METHOD CONDUCTED</b>	ASTM F925-02 24 Hour Standard Test Method for Resistance to Chemicals of Resilient Flooring
<b>DESCRIPTION OF TEST SAMPLE</b>	
<b>IDENTIFICATION</b>	SilverKnight
<b>CONSTRUCTION</b>	Vinyl

### TEST RESULTS

24 HOUR RATINGS			
STAINING AGENT	SURFACE DULLING	SURFACE ATTACK	COLOR CHANGE
5% Acetic Acid	0	0	0
70% Isopropyl Alcohol	0	0	0
Mineral Oil	0	0	0
5% Sodium Hydroxide	0	0	0
5% Hydrochloric Acid	0	0	0
5% Ammonia	0	0	0
Bleach	0	0	0
5% Phenol	0	0	0
Gasoline	0	0	0
Sulfuric Acid	0	0	0
Kerosene	0	0	0
Olive Oil	0	0	0
Blood	0	0	0
Urine	0	0	0
Betadine	0	0	0
Spaghetti Sauce	0	0	0
Crayon	0	0	0
Hair Color	0	0	0
Shoe Polish	0	0	0
Lipstick	0	0	0
Marker	0	0	0
Mustard	0	0	0
Catsup	0	0	0
Food Color	0	0	0

RATING KEY
0 - No change (---)
1 - Slight change
2 - Moderate change
3 - Severe change