

One International Co., Ltd.

Company Introduction



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05 ANTI-BACTERIAL COPPER FILM



06 ANTI-BACTERIAL MASK CASE



07 ANTI-BACTERIAL DESK MAT



Company name	One International Co., Ltd.
Brand	SafeLean, BioAir
Head office	510, Gyeonggi Daejin Technopark155, Jajak-ro, Pocheon-si Gyeonggi-do, Korea (Tel: +82-31-534-9141)
Production filed	Interior film, Décor film, Floor film, Transparent film
President	Chun Seang Kim
Home page	www.safelean.co.kr
e-mail	2017@safelean.co.kr
Plant	77 Nasam 2-gil, Yeongjung-myeon, Pocheon-si Gyeonggi-do, Korea



Anti-bacteria PVC sheet manufacturing Company

Corporate Identity





CERTIFICATE OF PATENT

Patent Number 10-1821673

Application Number 10-2017-0080928

Filing Date 2017. 06. 27.

Registration Date 2018. 01. 18.

Title of the Invention
**ANTIBACTERIAL DEEP EMBOSS PATTERNED SHEET, MANUFACTURING METHOD OF THEREOF
AND MANUFACTURING APPARATUS OF THEREOF**

Patentee
ONE INTERNATIONAL.CO.,Ltd(284411-***)**
77, Nasam 2-gil, Yeongjung-myeon, Pocheon-si, Gyeonggi-do, Republic of Korea

Inventor
KIM, CHUN SAENG
902ho, 502dong, 83, Taebong-ro, Soheul-eup, Pocheon-si, Gyeonggi-do, Republic of Korea

This is to certify that, in accordance with the Patent Act,
a patent for the invention has been registered at the Korean
Intellectual Property Office.

2020. 04. 07.

COMMISSIONER,
KOREAN INTELLECTUAL PROPERTY OFFICE

특허청
Korean Intellectual
Property Office

박원주

Check your current
registration with QR code





“ Copper is the oldest metal used by mankind and has been around 10,000 years ago. It is used in human life as a high-quality material with antibacterial and sterilization functions. ”



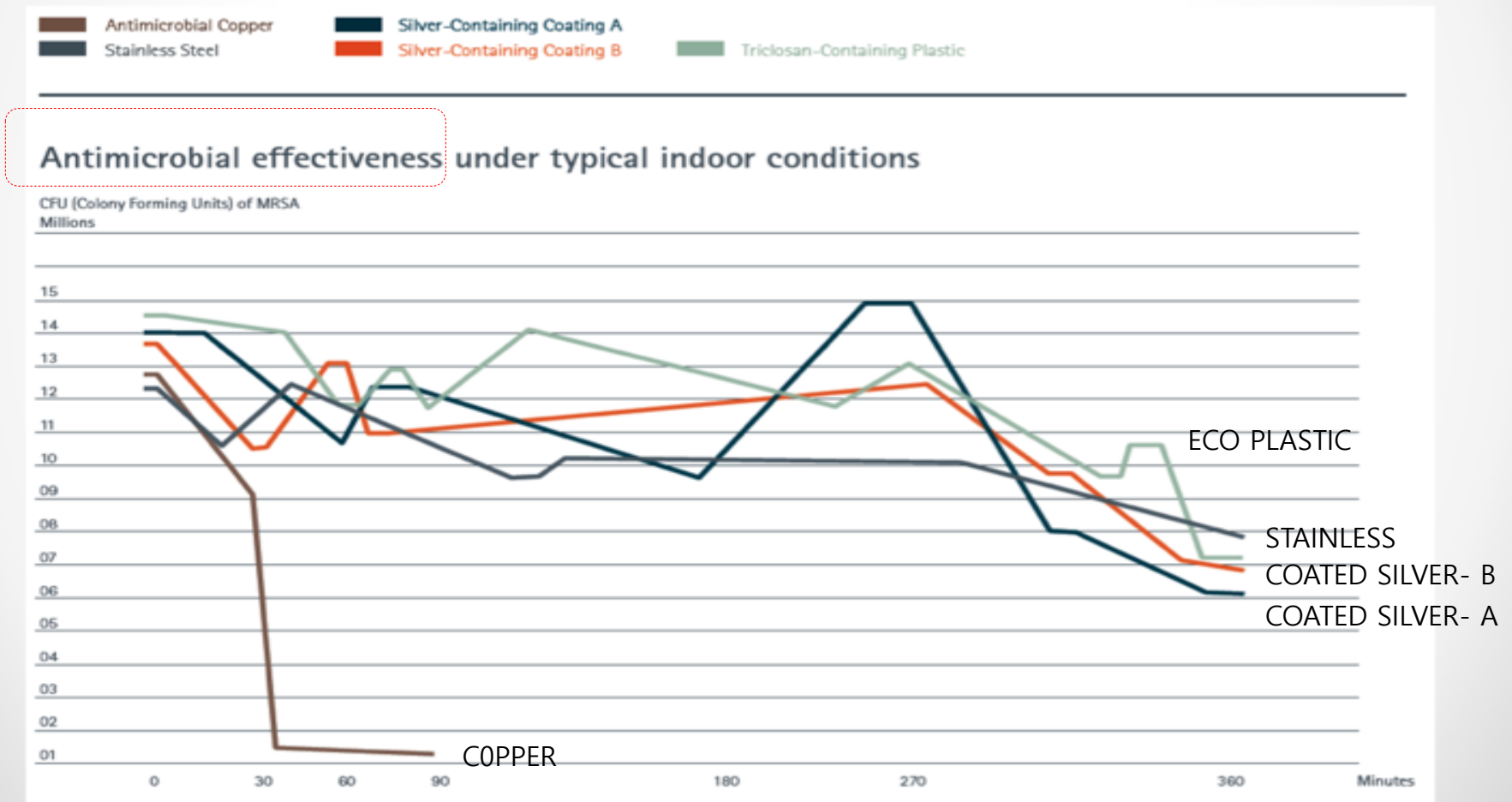
- Egypt (2500 BC) – Used to disinfect wounds, treat eye infections, burns, and disinfect water
- Greece (500 BC) – Used to disinfect wounds and treat ulcers
- France(1800's) – Copper mine workers are immune to cholera
- Finland (1900's) –Copper mine workers show immunity to arthritis
- India (NOW) – Sterilization of E. coli in water with a copper kettle

04-2 PRODUCT OVERVIEW

History of antibacterial copper



- The best antibacterial effect of copper



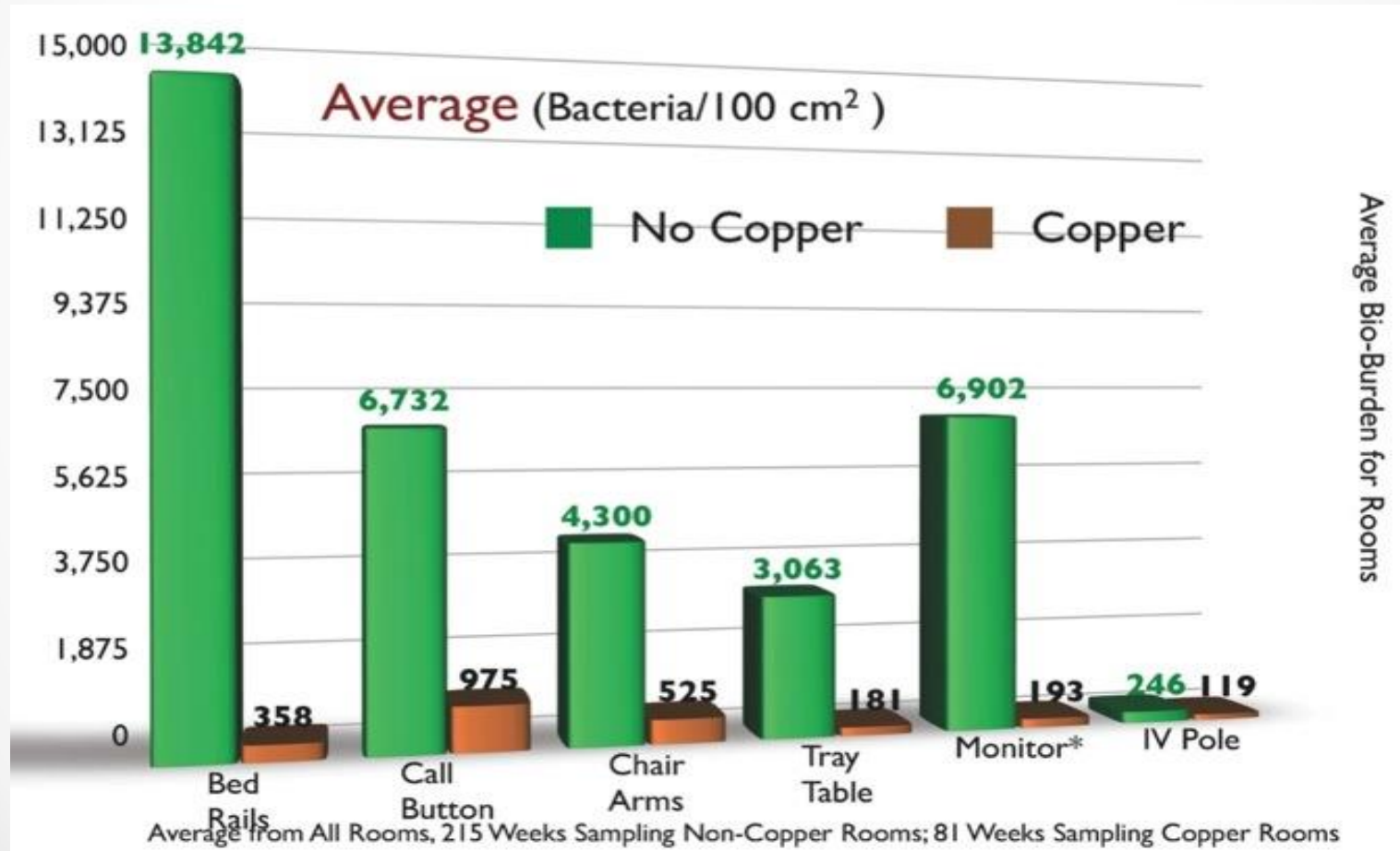
* Source: US EPA, Environmental Protection Agency

04-3 PRODUCT OVERVIEW

Hospital test results of antibacterial copper



- 90% reduction of bacteria and pathogens on the surface of copper products





Semi-permanent Antimicrobial Function



Others

Spraying of antimicrobial coating solution

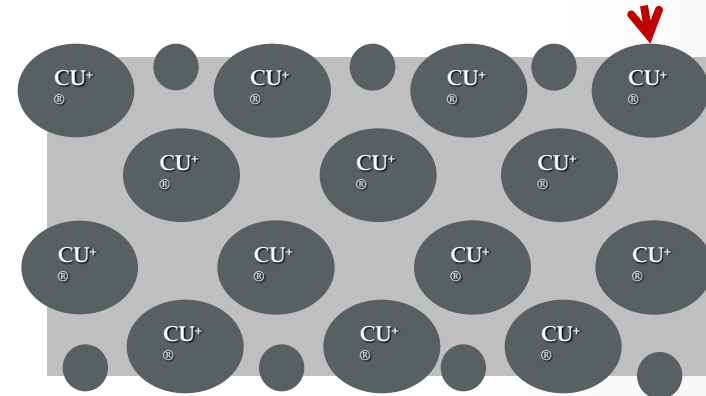


Antimicrobial coating layer

- ✗ General technologies
- ✗ Coating film damaged by life scratches
- ✗ Reduced antimicrobial activity over time

One
International

Antimicrobial copper

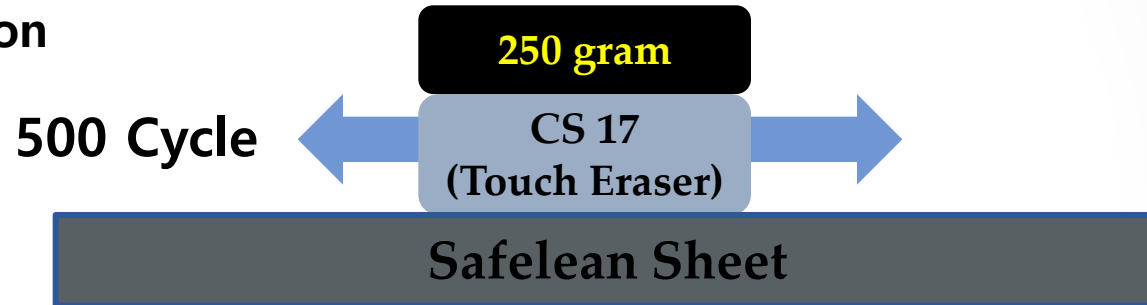


- ➡ Micro-copper powder with antimicrobial action inside and on the surface of tile
- ➡ Semi-permanent antimicrobial function



Long Life Sterilization

1. Abrasion



2. Incubate Bacteria



3. Test Result after 24 hours





SGS

Test Report

No. F690101/LF-CTSAYHA17-11713

Issued Date: 2017. 11. 16

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Results :

Antimicrobial Activity (JIS Z 2801:2010) (μl)						
Test microorganisms	Initial bacteria number (CFU/ml)	Result(s)				
		Bacteria number after 24 hr at 37 °C		Antimicrobial activity		
		Control (CFU/ml)	Sample (CFU/ml)	R	Percentage (%)	
<i>Escherichia coli</i> ATCC 8739	3.3 x 10 ⁶	7.9 x 10 ⁶	1 st	<25	5.5	>99.9%
			2 nd	<25	5.5	>99.9%
			3 rd	<25	5.5	>99.9%
<i>Staphylococcus aureus</i> ATCC 6538	2.8 x 10 ⁶	5.5 x 10 ⁶	1 st	<25	5.3	>99.9%
			2 nd	<25	5.3	>99.9%
			3 rd	<25	5.3	>99.9%
<i>Klebsiella pneumoniae</i> ATCC 4352	3.6 x 10 ⁶	5.3 x 10 ⁶	1 st	<25	6.3	>99.9%
			2 nd	<25	6.3	>99.9%
			3 rd	<25	6.3	>99.9%

<Remark>

1) Sample material: Diatomite

2) Inoculum Concentration:

Escherichia coli : 3.0 x 10⁶ CFU/mL*Staphylococcus aureus* : 2.8 x 10⁶ CFU/mL*Klebsiella pneumoniae* : 3.5 x 10⁶ CFU/mL

3) Method: JIS Z-2801 methods - pour plate method

4) Dilution medium: 1500 nutrient broth (BD)

SGS

Test Report

No. F690101/LF-CTSAYHA17-10049

Issued Date: 2017. 11. 07

Page 2 of 3

Results(#):

Fungal Resistance (ASTM G 21-09)

Test Item	Specification	Test Result (Rate)
		1
Fungal Resistance	ASTM G 21-09	1

Note 1. Rate : 0 = None

1 = Trace of growth (less than 10 %)

2 = Light growth (10 to 30 %)

3 = Medium growth (30 to 60 %)

4 = Heavy growth (60 % to complete coverage)

[Rate1] Anti-fungal
test report



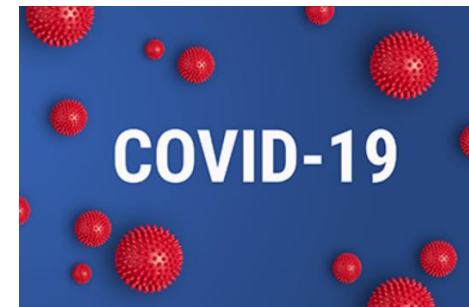
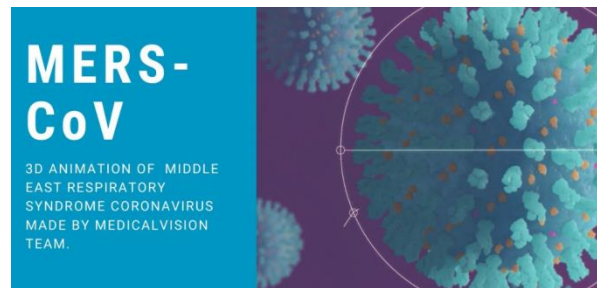
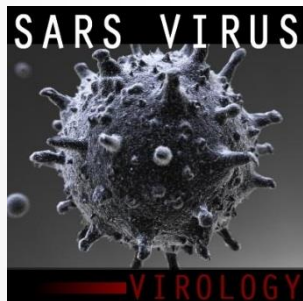
❖ Need for anti-bacterial copper film

▶ Three causes of increased deaths from bacterial infections

Climate warming

Overseas travel

Population aging



- ▷ Increased possibility of virus appearance
- ▷ Shorten the frequency of emergence of variant viruses
- ▷ Continuous use of masks (daily life)



SafeLean Antibacterial Transparent Film is made of PVC film that obtained 99.9% antibacterial as well as antifungal grade 1 test results for Escherichia coli Staphylococcus aureus, and pneumonia.

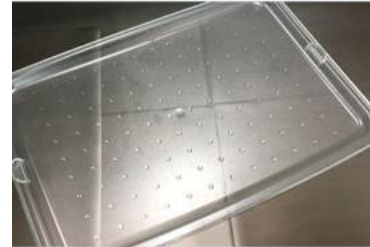
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It is used by attaching it to places where hands often touch, such as desks, tables, handles, and buttons.

Using a removable adhesive, there is no foreign matter left on the skin.



❖ Use of anti-bacteria copper film



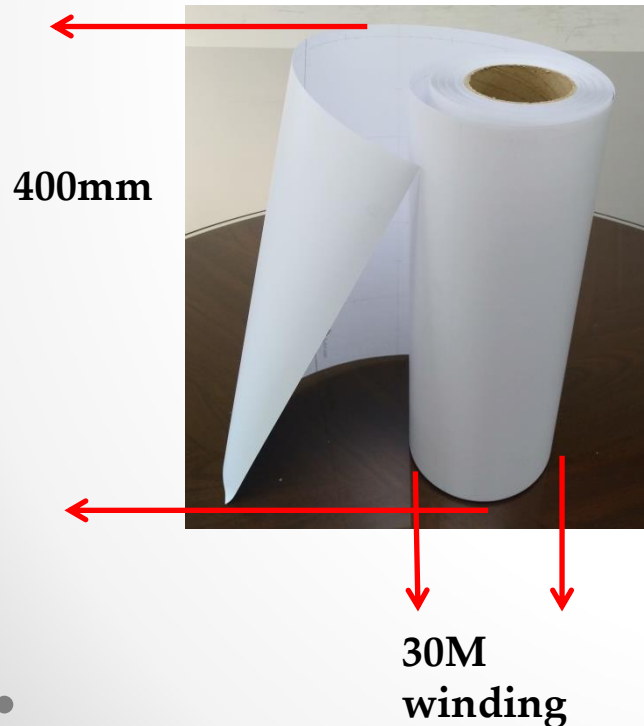
- Elevator, handrail, table, desk, etc.
- Chest of drawers, refrigerator shelves and dressing tables, etc.
- Door number key, back of cell phone, etc.
- Attached to other necessary places to use
- No adhesive remains when removed





❖ Anti-bacteria copper film specification

- ✓ 400mm*30M winding (PVC)
- ✓ Weight: 5kg
- ✓ Use of removal adhesive





SafeLean Antibacterial Mask Case is made of a PVC film that obtained 99.9% antibacterial as well as antifungal grade 1 test results for Escherichia coli, Staphylococcus aureus, and pneumonia.

It is an antibacterial mask case that can store the mask more safely

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It's too wasteful to use it once and throw it away!!

Anywhere when you put it off

Do not let go ~

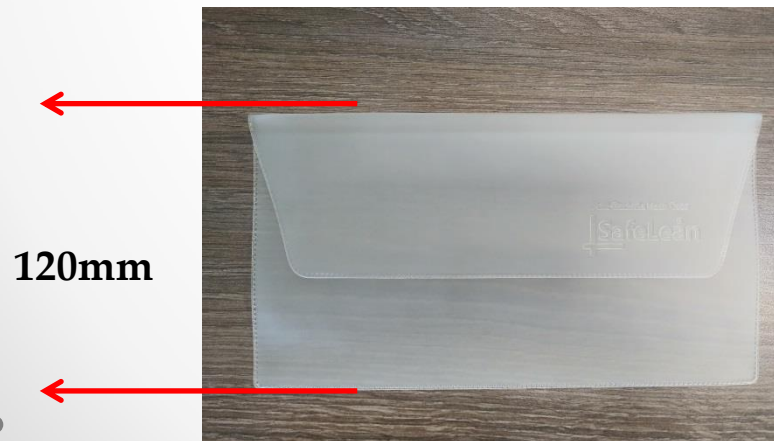
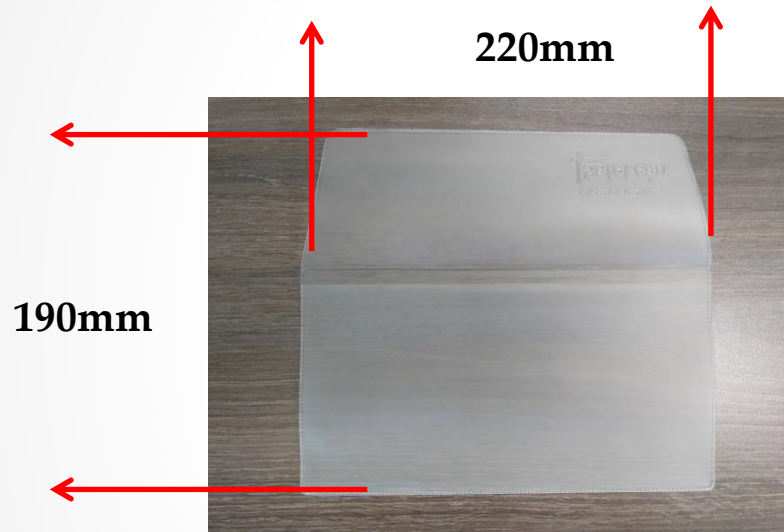
In the Safelean antibacterial mask case

Put it in for a while.

06-2 ANTI-BACTERIAL MASK CASE



- ❖ Basic sample of antibacterial mask case
(antibacterial both inside and outside)





❖ Antibacterial mask case packaging





SafeLean Antibacterial Desk Mat is made of a PVC film that obtained 99.9% antibacterial as well as antifungal grade 1 test results for Escherichia coli, Staphylococcus aureus, and pneumonia.

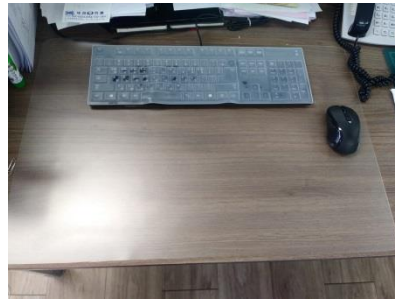
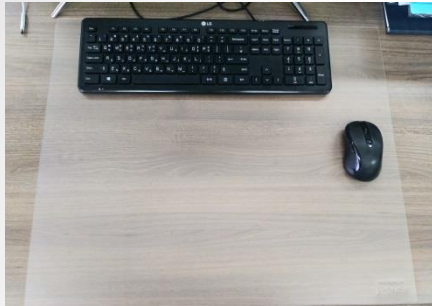
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Five heavy metals, TVOC suitability, and Toluene and Formaldehyde non-detection make it safe to use.

**In the Safelean antibacterial desk mat is
so safe to use!**



❖ Use of anti-bacterial desk mat



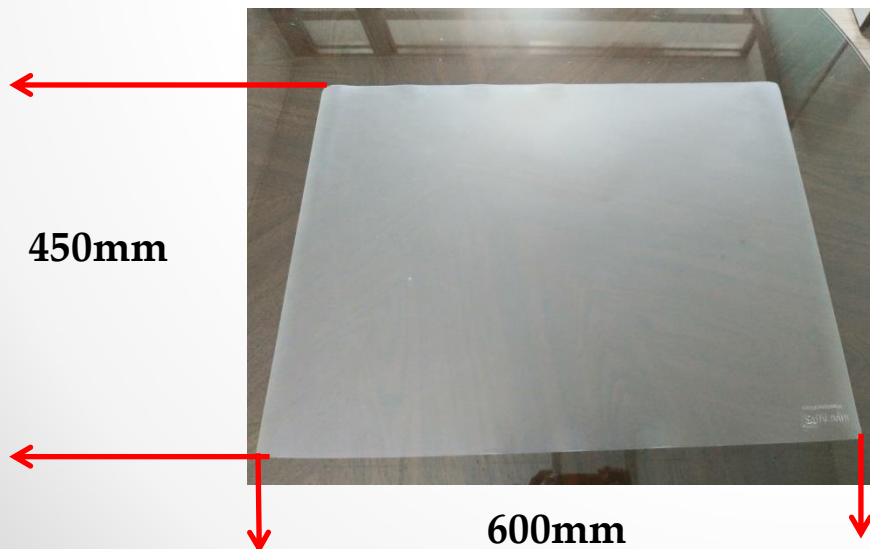
- ▷ Student desks, tables, dressing tables, etc.
- ▷ Office desk, conference table, etc.
- ▷ Fits well to the desk surface and feels soft (non-slip)
- ▷ Embossed pattern applied and mouse pad used
- ▷ Transparent to express the color of the desk





❖ Antibacterial desk mat specifications

- Width*length: 600mm*450mm
- Thickness: 1mm
- Weight: 310g
- Material: Polyvinyl chloride (PVC)
- Transparent mat with a soft texture



Other Product Line up

“

Category Extension of Anti-Bacteria

”

**SafeLean
Technology**

Floor Sheet (PVC)



Interior Sheet (PVC)



Interior Film (PVC)



■ Various Anti-bacteria product application market

➤ Living space and furniture where bacteria and viruses can multiply



Thank you!

