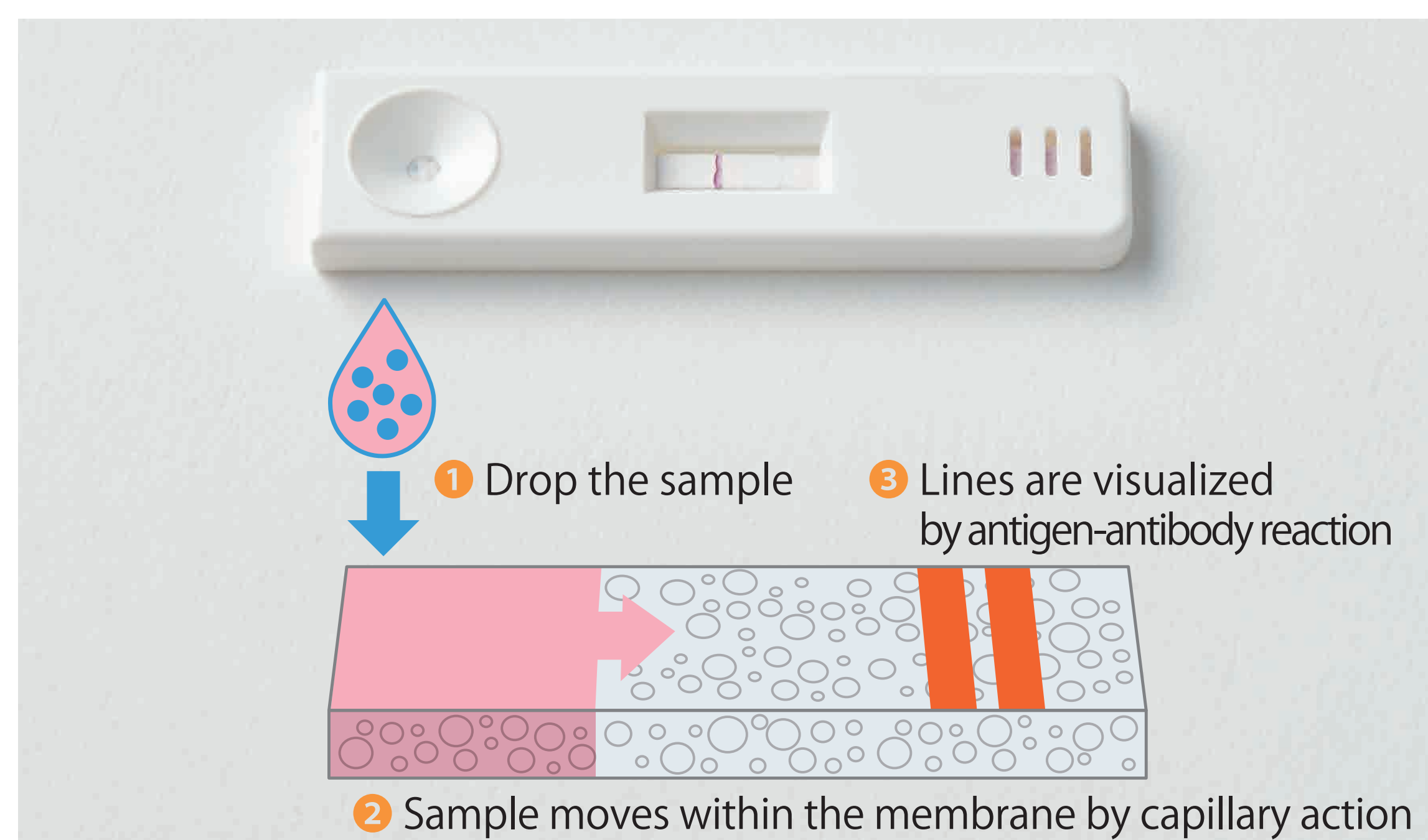


# Nitrocellulose Membrane For immunochromatography

Medical components used in simple test kits that utilize antigen-antibody reactions.

## What's nitrocellulose membrane

It is a porous material mainly made of nitrocellulose, and the sample that is dropped moves through the membrane by capillary action.



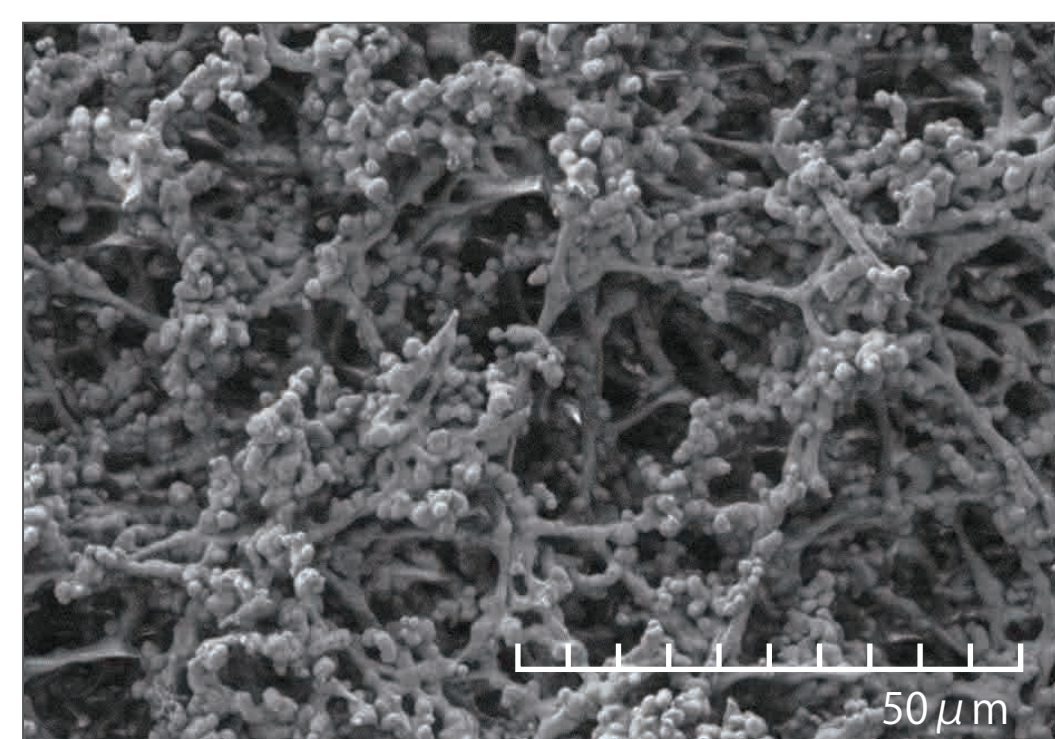
※The diagram above shows a simplified internal structure of the test kit.

## Points

- 1 | Stable supply through domestic production in Japan
- 2 | Shorter lead time compared to products from overseas
- 3 | Can be customized for each customer

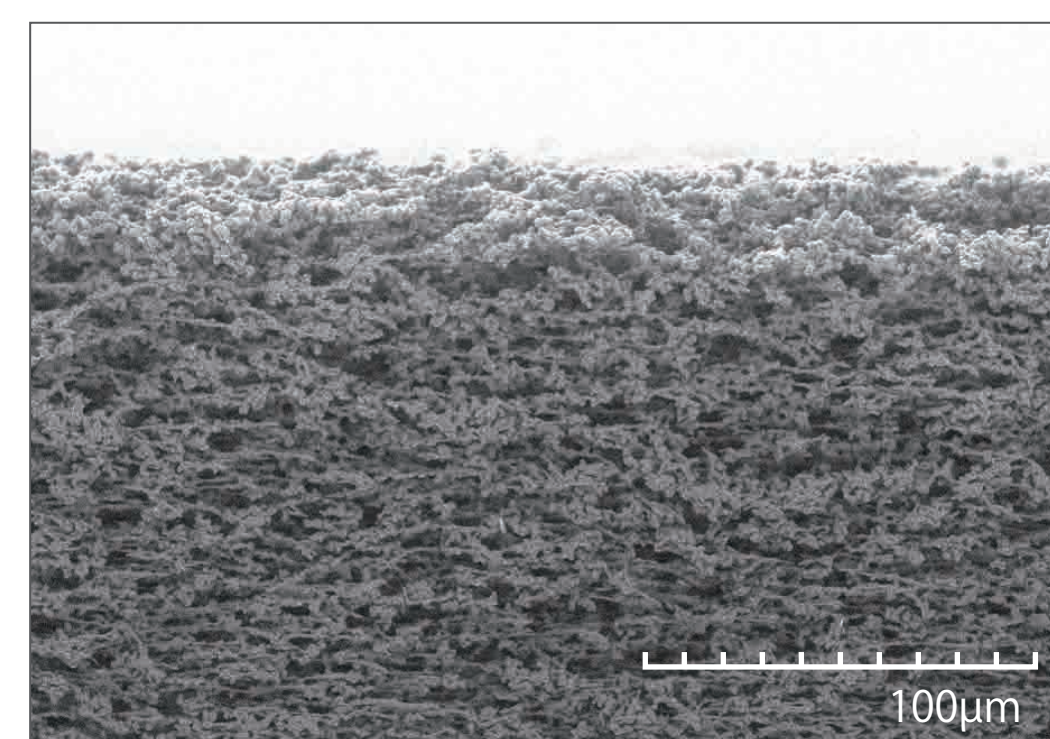
### ■ Special membrane with porous structure

surface



(1000 x)

cross section



(400 x)

water absorption



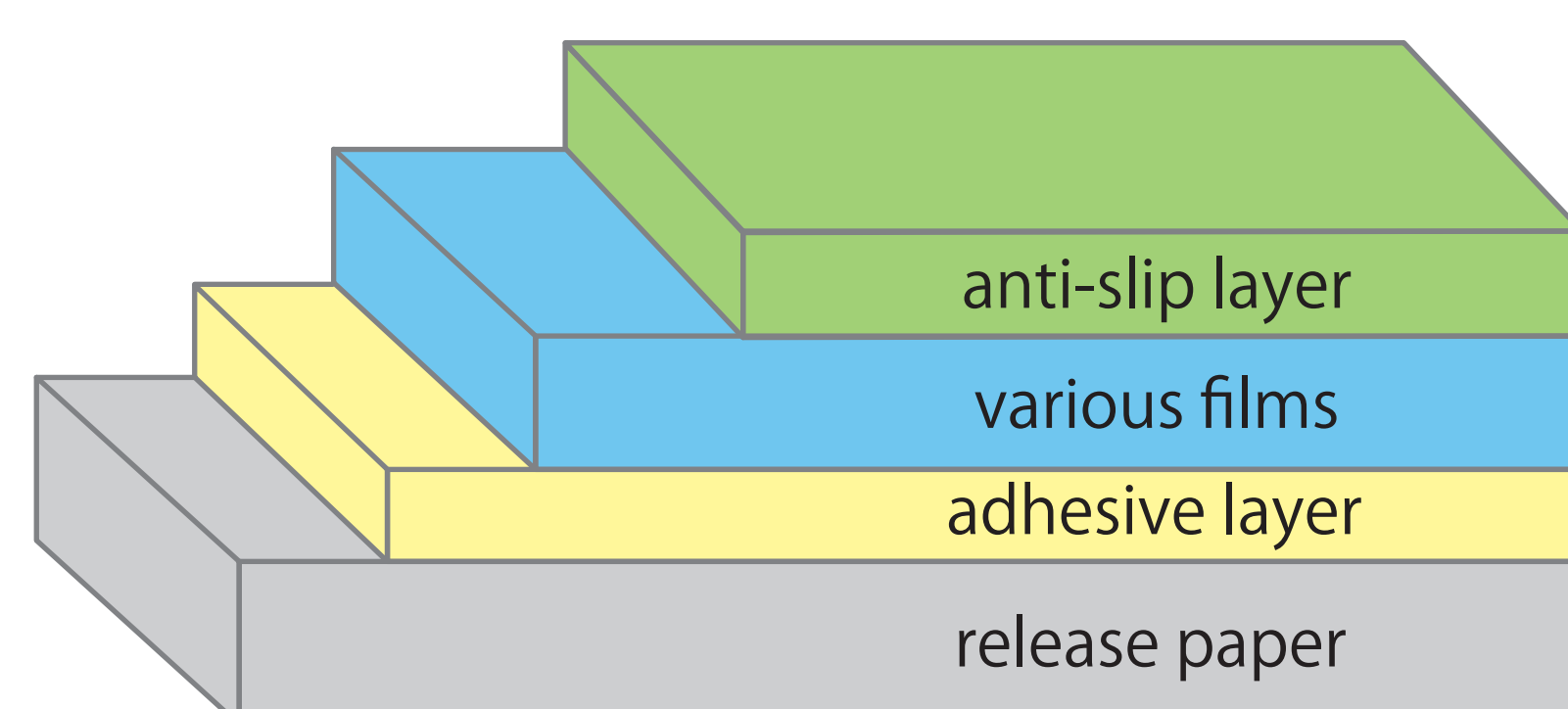
※Electron micrographs were taken at the National Institute for Materials Science (NIMS).



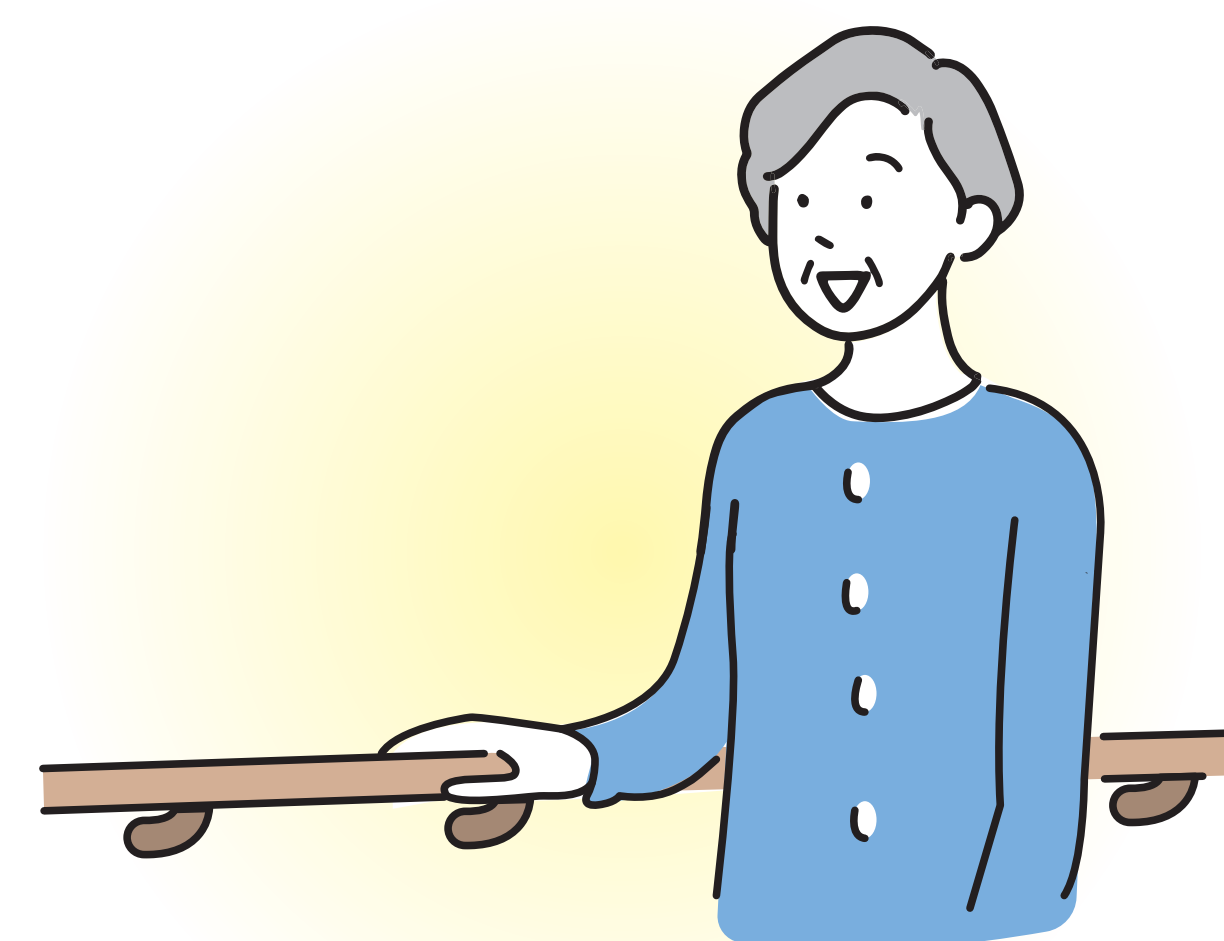
# Soft Feel Tape

Anti-slip tape designed to feel comfortable on bare skin.

## Structure



※The structure is an example and can be changed upon request.



## Features

- 1 **Feel of touch**  
Anti-slip tape with a soft feel that reduces stress on bare skin  
Ideal for anti-slip handrails and floors in nursing care settings, etc.
- 2 **Diverse designs**
  - Adjustable to desired color
  - Texture can be changed
  - The shape of the seat can be freely designed
- 3 **Hygienical**  
Can provide antibacterial, mildew resistant, and antiviral properties  
Even if it gets dirty or damaged, it can be easily replaced, so you can use it cleanly

### 【Mildew resistance test results (in accordance with JIS Z 2911 B)】

	Incubation days			
	7 days later	14 days later	21 days later	28 days later
Development product (mildew resistance)	0	0	1	1
Competitor's product①	4	4	4	4
Competitor's product②	4	4	4	5

evaluation	Bacteria growth condition
0	No bacteria are growing at all
1	Visible under a microscope
2	Growth below 25%
3	Growth of 25% - 50%
4	More than 50% growth
5	Covers the all surface

※Properties are not guaranteed values.

## Properties

	Development product	Competitor's product ①	Competitor's product ②
static friction coefficient	3.0	2.3	1.5
dynamic friction coefficient	2.2	1.5	1.2

load : 20g, speed : 10mm/sec, contactor : tactile contactor

## Durability performance

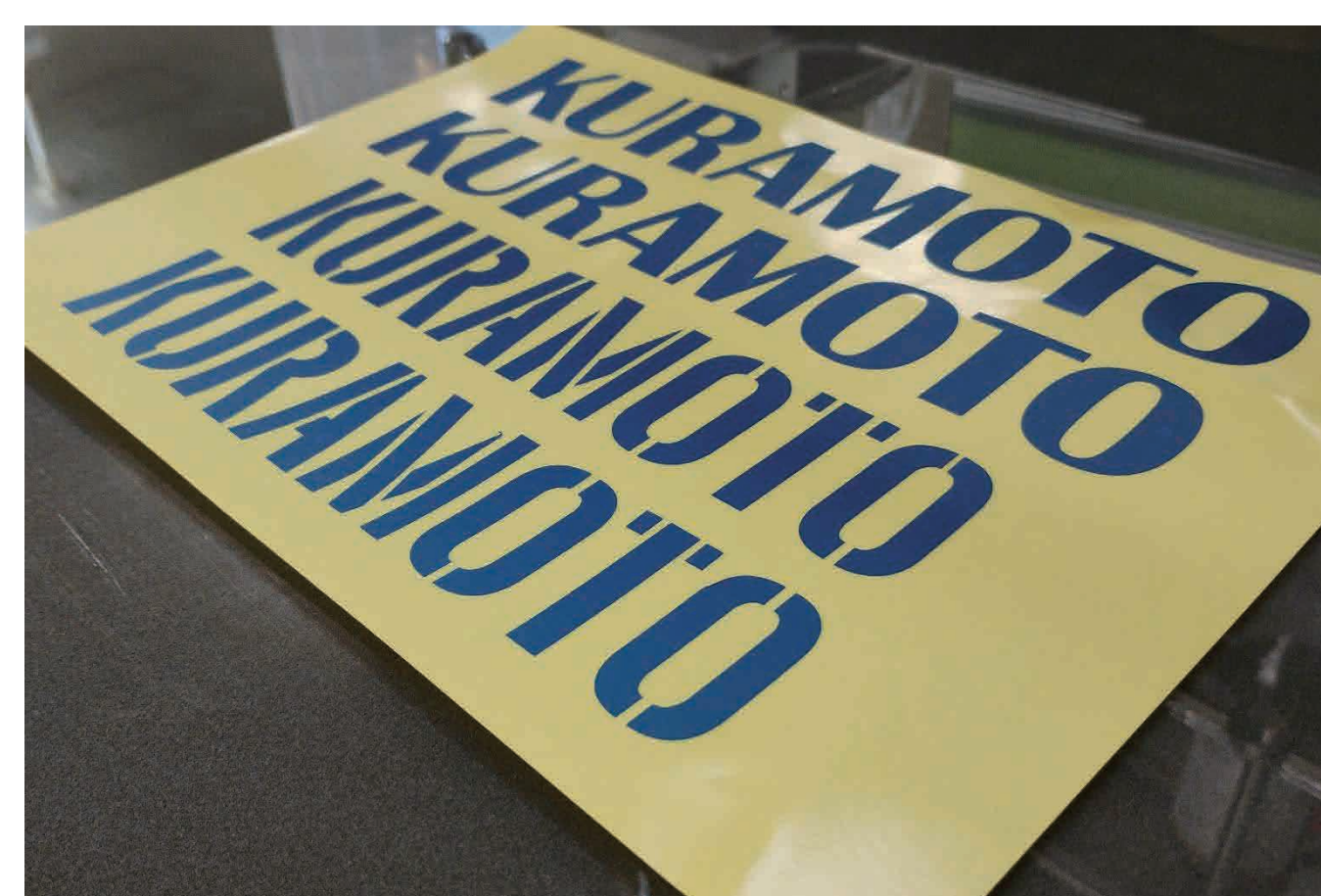
test	conditions	Development product	Competitor's product ①	Competitor's product ②
Cold and heat repeatability	(-10°C × 1h → room temperature × 10min → 60°C × 1h) × 5cyc	○	○	○
High temperature and humidity resistance	50°C, 90RH% × 7days	○	○	○
Hot water resistance	50°C, × 2days	○	○	○
Chemical resistance	Household detergent(alkalinity) × 1h	○	○	○
	Household detergent(neutral) × 1h	○	○	○
	Household detergent(mild acidity) × 1h	○	○	○
	Household detergent(strong alkality) × 1h	○	○	○

○ : No change in appearance    × : change in appearance

※Properties are not guaranteed values.



Since it is a semi-transparent product, the design of the base can be utilized.



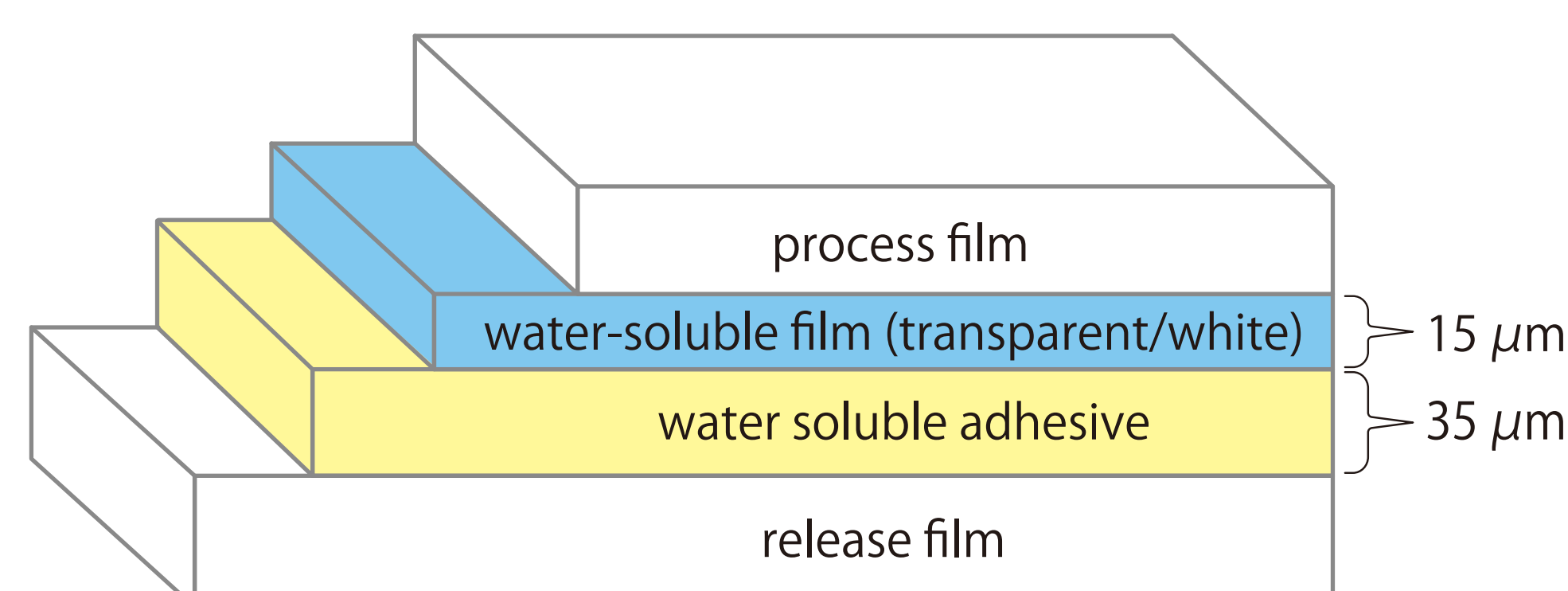
It is also possible to color and shape the anti-slip layer.



# Water-soluble adhesive sheet

This is an adhesive sheet where both the film and the adhesive are soluble in water.

## Structure



## Features

- 1 **Solubility**  
Both the base material and adhesive dissolve in water. Completely soluble even in cold water.
- 2 **Can be colored**  
The base material can be colored white and used for management labels, etc.

## Applications

- As a protective sheet and an application that can be removed using a water washing process.
- Packaging materials and Management label.

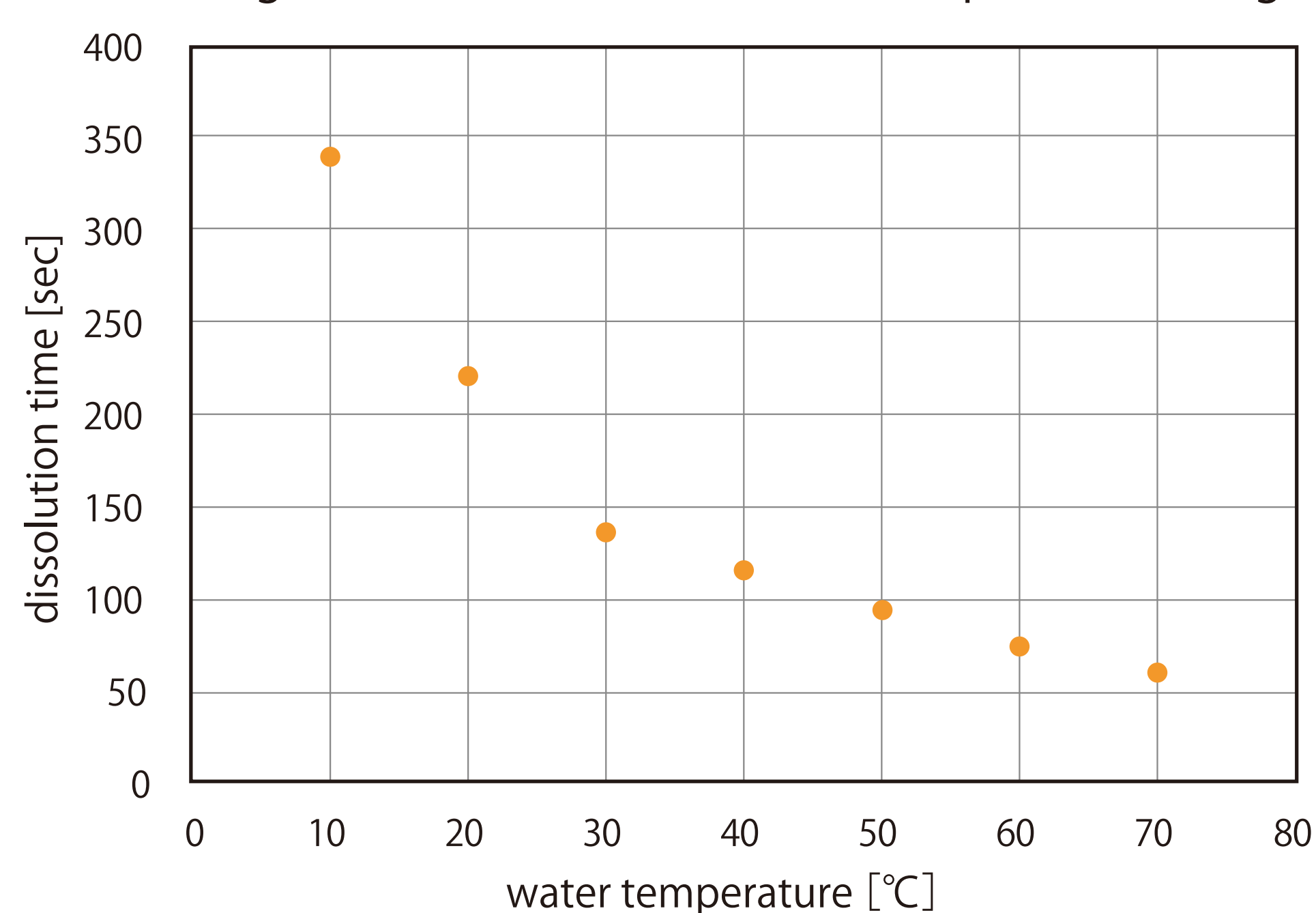
## Properties

Adhesive strength [N/10mm]	2.4 No glue residue
----------------------------	------------------------

※ Adhesive strength  
Adherent: SUS, Tensile speed: 300mm/min

※ The process film was peeled off and a 25 μm PET adhesive sheet was pasted on the surface of the water-soluble film as a reinforcing material and measured.

【Changes in dissolution time due to temperature changes】



# antibacterial/antimold/antivirus 『ion pure seal』

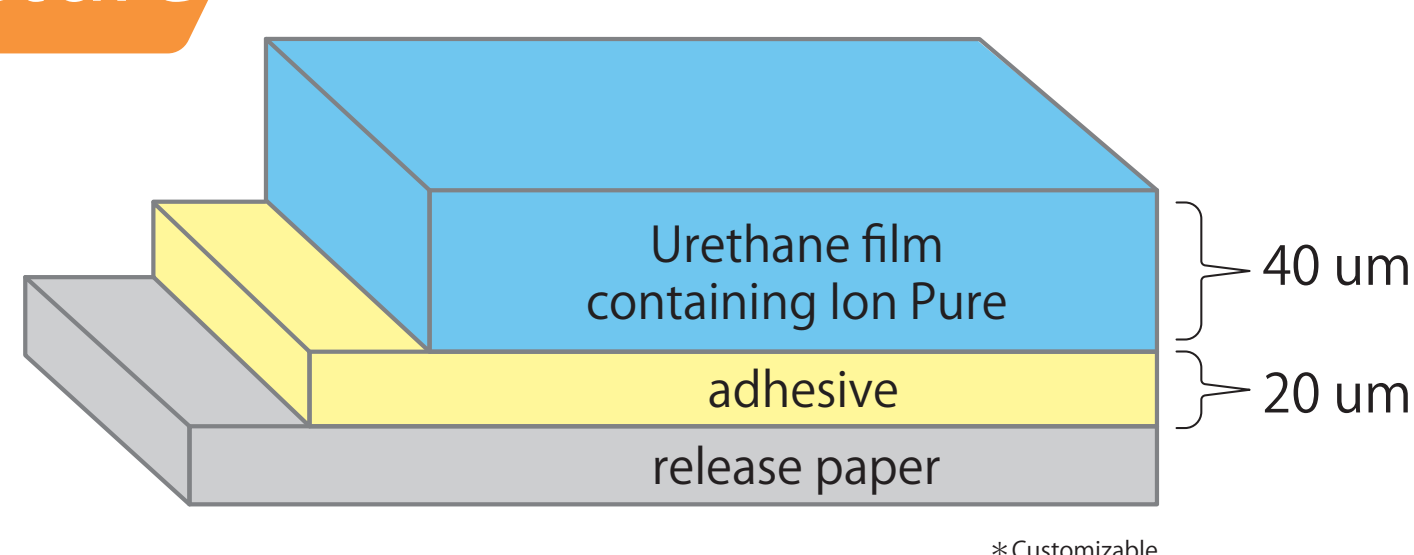


## Features

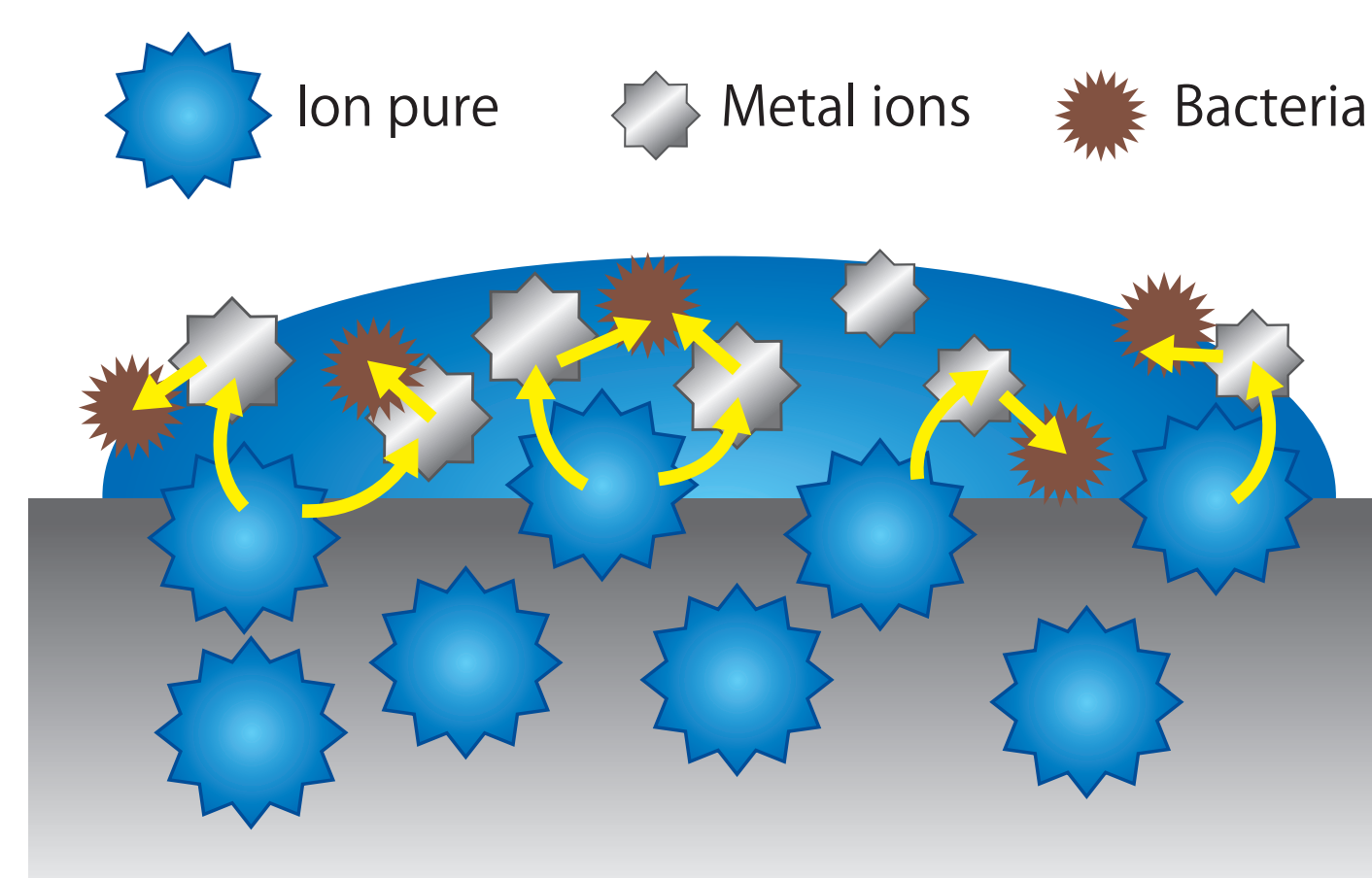
- The industry's only\* antibacterial and antiviral seal that has passed the SIAA weathering test for outdoor use.
- The antibacterial and antiviral agent used is Ion Pure, which has been sold around the world for over 30 years.
- Thanks to silver ions, the number of viruses attached to the film is reduced by more than 99%.
- Since it uses urethane film, it has good followability to curved surfaces.

\*Based on our research as of September 2023.

## Structure



## Mechanism of Ion Pure



Ion Pure is a 100% glass powder. When it comes into contact with moisture in the air, it dissolves very slightly and releases metal ions little by little. Its metal ions are thought to inhibit the growth of bacteria, viruses, and mold.

## Paste verification for 180 days



The stickers are light blue and transparent and do not interfere with the design. Maintains transparency even after 6 months of outdoor use.

## Antibacterial, antimold, antiviral performance

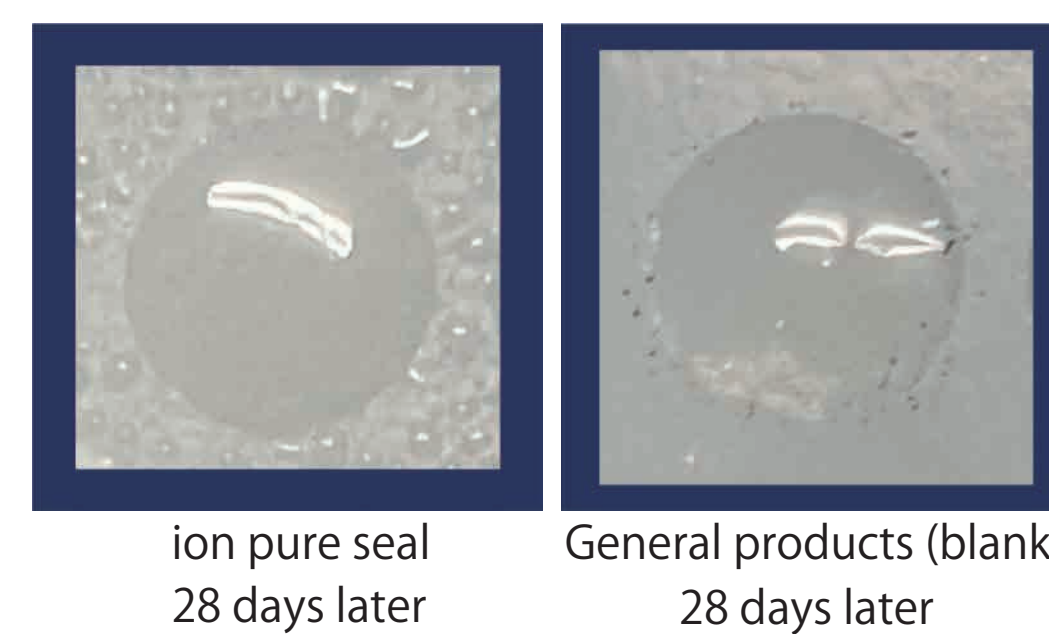
### 【Testing agency】

Ishizuka Glass Co., Ltd. Antibacterial Testing Laboratory (Antibacterial/Antimold Testing)

Japan Textile Products Quality and Technology Center (Antivirus test)

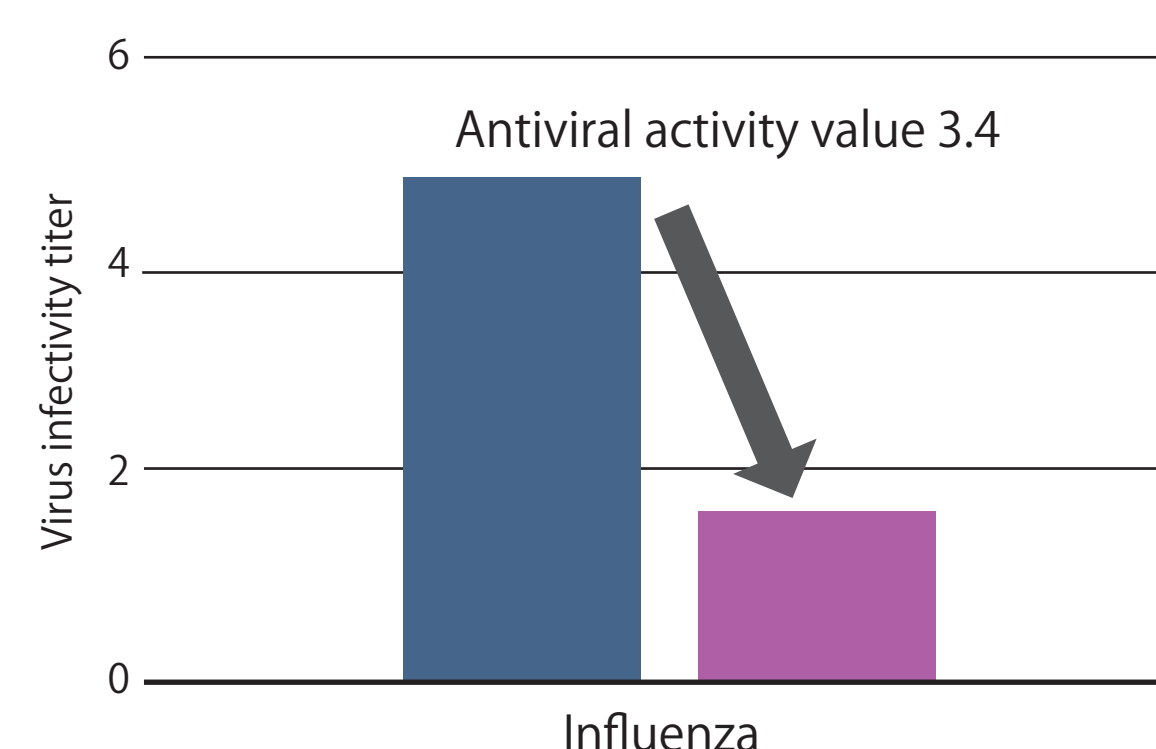
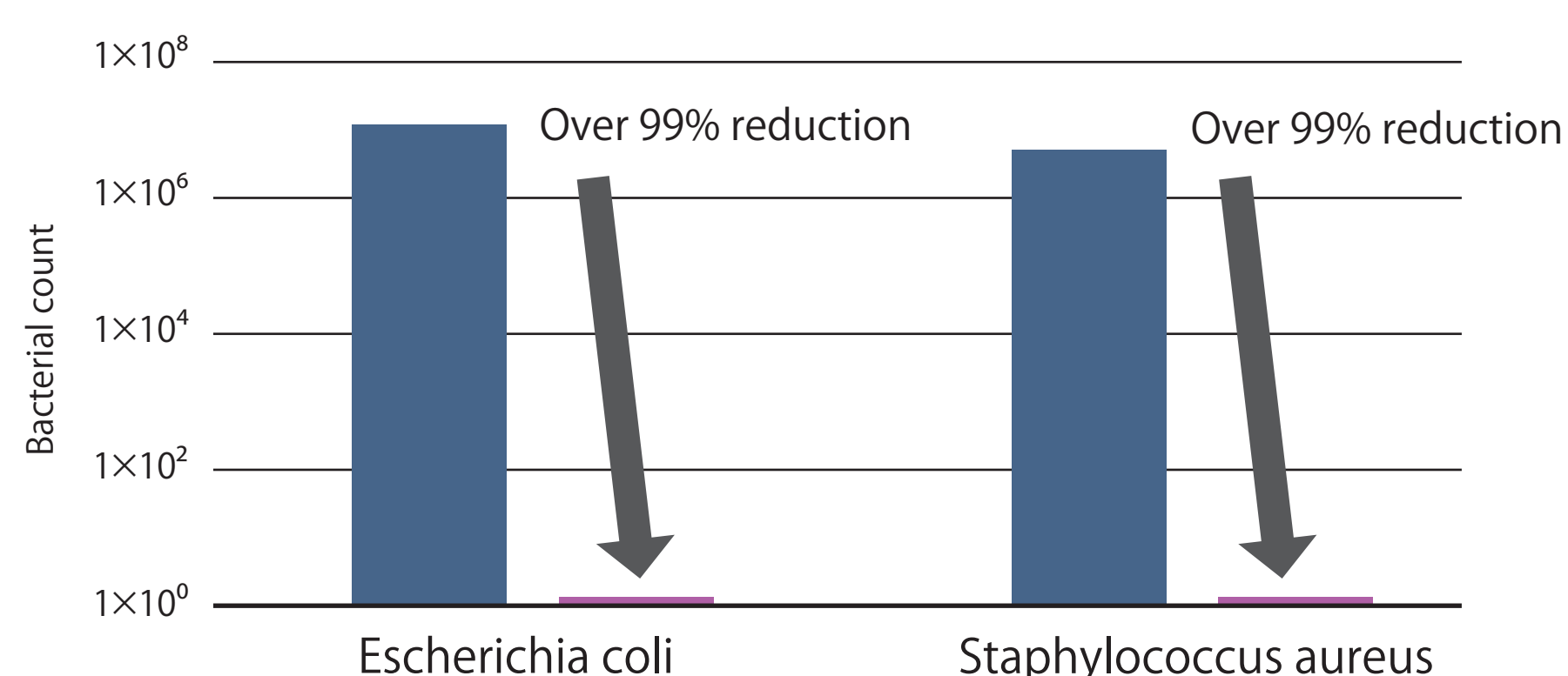
### 【Test method】 JIS Z 2801, JIS Z 2911 A, ISO2170

※These are test results and are not guaranteed values.



Film		Antibacterial test results (activity value)		Antiviral test results (activity value)
		Escherichia coli	Staphylococcus aureus	With envelope
For outdoor	Water resistant <sup>2</sup>	7.0	6.5	3.4
	Lightfastness <sup>2</sup>	5.4	6.0	≥4.4

Aspergillus niger	7 days	14 days	21 days	28 days
General products (blank)	Mold area is less than 25%	Mold area is 25% or more	Mold area is 25% or more	Mold area is 25% or more
Ion pure seal	No mold growth observed	No mold growth observed	No mold growth observed	No mold growth observed



Seller: Ishizuka Glass Co., Ltd.

Manufacturer: Kuramoto Sangyo Co., Ltd.