

# Our solutions for Diagnostics

Stokvis Tapes develops, designs and  
creates the best solution for you

-2  
kit







## THE BEST SOLUTIONS FOR DIAGNOSTICS

Stokvis Tapes serves the diagnostic / life science industry as a major converter and supplier of microplate and microfluidic sealing tapes and lidding materials, converted non-migratory, inert pressure sensitive adhesive and heat seal material used for assay-type genomics, polymerase chain reaction (PCR) and high-throughput screening (HTS).

### Why Stokvis?

Stokvis Tapes will help you improve your production process, reduce costs, help you develop new products and sell more.

#### How do we do this?

- Knowledgeable and experienced material and converting specialists within the healthcare market.
- Global reach – local support.
- Quality: ISO 13485 certified production facilities.
- ISO 7 & ISO 8 cleanroom production facilities with bioburden controls.
- Stokvis Tapes is the world's largest independent converter of self-adhesive components.
- Innovative, cost-effective solutions for simple to complex needs.
- Full spectrum of rotary, flatbed and laser die cutting to match your needs.
- Technical support & lab testing.



### Which of YOUR design challenges can we successfully solve together?



**15** Manufacturing  
Sites



**17** Sales Offices



**5** Cleanrooms



**3** Laboratories

## Microplate sealing tapes & lidding materials

A microplate or microtiter plate is a flat plate with multiple "wells" used as small test tubes. The microplate has become a standard tool in analytical research and clinical diagnostic testing laboratories. Typically manufactured from PS and PP, microplates are available in a number of industry-standard sizes, including 24-, 48-, 96-, 384-, 864-, and 1536-well plates. Components such as sealing tapes and lidding materials are used to seal microplates during assay processing, incubation, and storage.

Whether an application requires a single-layer or a laminated construction, Stokvis Tapes has proven competence in identifying the optimal materials and precise thicknesses needed to produce pierceable, leak-proof, durable sealing/lidding materials that perform well in caustic testing environments where, for example, the use of dimethyl sulfoxide and other solvents is standard.

Stokvis Tapes converts a variety of heat-activated and pressure-sensitive foil and film stocks into specialty sealing tapes and lidding materials for microplates using high-speed rotary cutting and other precision manufacturing methods.

## Cover tapes and lidding materials

Stokvis Tapes uses the following types of cover tapes and lidding materials.

### Non-woven

- Breathable
- Pierceable
- Protect cell cultures from contamination
- Good processability

### Aluminium

- Pierceable
- Protection from evaporation and light
- Hydrophobic adhesive resists clouding
- Thermally conductive
- Non-hemolytic
- Non-toxic to mammalian cells

### PP and PET (clear)

- Low autofluorescence
- Low birefringence
- Transparent
- Non-hemolytic
- Non-toxic to mammalian cells
- Good dimensional stability
- Printable



## Pressure-sensitive medical adhesives

Stokvis Tapes uses the following types of pressure-sensitive medical adhesives.

- Acrylic
- Heat-sealable
- Non-tacky to the touch
- Silicone

# POCT diagnostic applications

POCT is medical abbreviation of Point-of-care testing, also known as bedside testing. It's a form of testing which is designed to be used at or near the site where the patient is located. POCT blood glucose is aimed at diabetes patients who need to monitor the value of glucose maybe several times a day. POCT uses portable and low-cost devices which could be operated by doctors and nurses instead of professional laboratory technicians.

### Examples

- Blood glucose monitoring
- Pregnancy testing
- Hemoglobin testing
- Rapid strep testing
- Prothrombin time/international normalized ratio (PT/INR)

Our expertise on selecting and converting for diagnostics also includes important materials like:

- Adhesives for capillary flow diagnostic test strips used in blood glucose, blood coagulation, cholesterol, pregnancy, ovulation and drug-of-abuse testing.
- Hydrophilic films for IVD test strips compatible with multiple reagent systems to help direct, control and accelerate fluid flow.

## Hydrophilic films for POCT applications

Hydrophilic films are specifically designed for POCT applications. Single coated or double coated hydrophilic films are found primarily in test strips and lab-on-a-chip products that require fluid transport on a very small level. A hydrophilic coated film promotes fluid flow, called “wetting”, because of its modified surface energy.

### Overall features of hydrophilic films

- Transparent
- In vitro hemocompatibility
- Low autofluorescence
- Dimensionally stable
- Non-toxic to mammalian cells
- No significant outgassing <400°C
- Anti-fogging properties



Hydrophilic films	Type	Features
	Double Coated Hydrophilic film	Fast/stable transport of blood; 2 sided hydrophilicity
	Single Coated Hydrophilic film	Backside with special coating; Visual observation; Stable hydrophilicity
	Single Coated Hydrophilic film with mask film	Stable hydrophilicity; Process robustness; Printable backside
	Single Coated Surfactant-free Hydrophilic film	Low extractables; Non-fluorescing; Biocompatibility

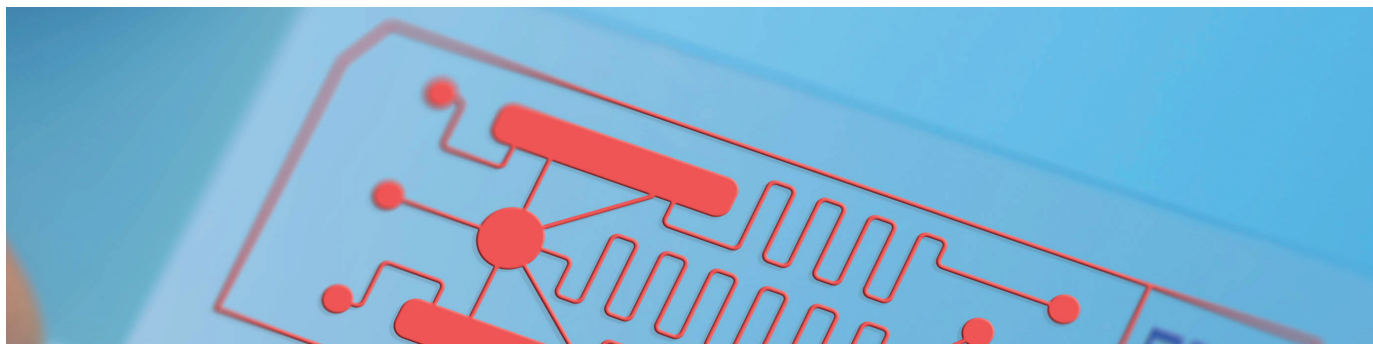


## PCR amplification

PCR assays are fundamental to many of the procedures used in genetic testing and research, including analysis of DNA samples and identification of infectious agents. Our expertise in converted specialty adhesive systems for the diagnostic/microfluidic market also include materials for sealing and capping cartridges used in polymerase chain reaction (PCR) amplification, high-throughput screening (HTS), compound storage and related processes.

Our specialists will be happy to assist you in the selection and precision converting of film and foil materials featuring the unique and demanding performance characteristics critical to this application area, such as:

- Low autofluorescence
- High optical clarity
- Chemically inert extractables



## Microfluidic devices

Microfluidic devices are extremely important to the medical industry for research and testing of patient samples. The foundation for many microfluidic devices begins with tape configurations that are designed to protect samples, transport fluids and assist in sample detection. Understanding and choosing the right component materials and the accompanying manufacturing methods are very important when designing a microfluidic device.



### Adhesives for capillary flow diagnostics

Stokvis Tapes uses the following types of adhesives for capillary flow diagnostics.

#### Limited interactivity, precision cut pressure sensitive self-adhesive acrylic

- Low tack
- Good peel strength over time
- Clean cutting

#### Limited interactivity, pressure sensitive self-adhesive acrylic

- Good initial tack
- Bonds to a variety of surfaces

#### Delayed tack, pressure sensitive self-adhesive silicone

- Delayed tack
- Easy to handle and repositionable
- Good peel strength over time

#### High performance pressure sensitive self-adhesive silicone

- Good initial tack
- Good peel adhesion to low and high surface energy materials
- Low chemical interaction



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05/09/2023

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