

UniSart CN 140 Unbacked



Description

UniSart CN 140 Unbacked is a non-supported cellulose nitrate membrane, specifically optimized for rapid lateral immunochromatographic tests. The pore structure of the membrane yields controlled and fast lateral wicking of samples and reagents.

Applications

Lateral flow tests are still sustaining a strong growth in all IVD markets including women fertility testing, cardiac markers, drugs of abuse, infectious diseases and many others. Developed in a one step strip format, they allow for the rapid detection of an analyte through the powerful and sensitive immunoreaction. The **UniSart CN 140 Unbacked** is designed to be the ideal solid phase for all these assays either in the direct sandwich or competitive format.

High protein binding

Cellulose nitrate membrane exhibit high non-specific binding of proteins due to the unique surface properties of the material. Through its highly porous, sponge-like 3-D structure, the **UniSart CN 140 Unbacked** membrane has a high specific surface area leading to outstanding protein binding capacity per membrane area. This in turn will provide the basis for high signal intensity and sharp test and control lines.

Superior wettability

Although cellulose nitrate polymers are naturally hydrophobic, UniSart CN 140 membranes are treated with an anionic surfactant to have superior wettability.

Smooth surface

The **UniSart CN 140 Unbacked** membrane is formed by an air casting process, where solvents are evaporated from cellulosic polymer solutions. Because of the inherent asymmetry of this process an unbacked membrane always has two slightly different sides (the air side and the belt side). On the **UniSart CN 140 Unbacked**, the belt side is very smooth and defect-free. This allows for fast and sharp dispensing of the test and control lines which results in a clear signal reading at the end of the assay.

Specifications and characteristics

Membrane

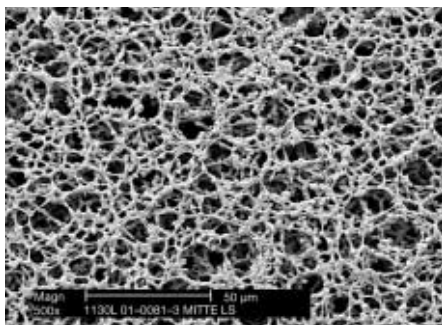
Material	cellulose nitrate polymers
Thickness specification	120–160 [µm]
Capillary speed specification	≥52 [mm/5 min]*
Surfactant	anionic (sulfonate)
Protein binding	≈30 [µg IgG/cm ²]

Packaging

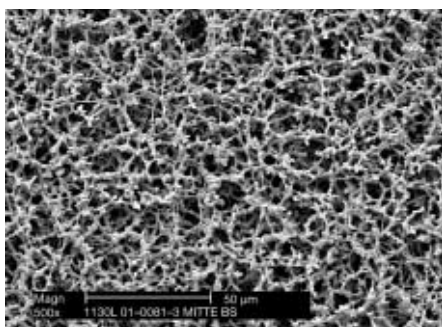
Roll core	76.8 [mm] ± 3" (inner diameter)
Core	plastic material
Standard membrane width**	20, 25 and 270 [mm]
Standard membrane length**	50 [m]

Membrane wound with yellow interleaving papers

* corresponds to ≈140 [s/40 mm]
 ** custom dimensions are available upon request



1.1. Air side CN 140 Unbacked (SEM @ 500x; bar = 50 µm)



1.2. Belt side CN 140 Unbacked (SEM @ 500x; bar = 50 µm)

High performance lateral flow membrane

Consistency

Sartorius stands by its consistency from roll to roll and lot to lot, simply because consistency is the most important parameter for IVD manufacturers. Since the first production of membrane in the world started at Sartorius in 1929, we have developed a unique know-how. Today, a new plant in Germany along with a patented membrane casting process and stringent quality control ensure that all **UniSart CN 140 Unbacked** membrane you receive will always be within specifications.

Quality

A certificate of Quality is delivered with every new batch of membrane. On the certificate you will find the mean value of the capillary speed and thickness of the complete batch from which the slit rolls originate. The variance inside this precise lot will also be given. A label on each membrane slit roll allows for precise tracking.

Ordering information

Product number

1UN14AR050020	UniSart CN140 Unbacked roll, 20 [mm] wide and 50 [m] long
1UN14AR050025	UniSart CN140 Unbacked roll, 25 [mm] wide and 50 [m] long
11301-----118TD	UniSart CN 140 Unbacked roll, 270 [mm] wide and 60 [m] long
1UN14AS25020001	UniSart CN140 Unbacked, two sheets, 250 × 200 [mm]

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