

HNW // Hydrophilic Film for Blood Glucose Strip Applications

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Durable, Robust, Extremely Constant Hydrophilic Polyester Film.



COVEME S.p.A

COVEME S.p.A – Bio Medical Division

Engineered PET Film and Special Coated product line

- **Special Film for SBGM Devices (Glucose Test Strips)**

- Major 바이오 센서 업체에 프리미엄내열 (170도 30분 0.2% in MD) 백색 PET Film 공급 중.
- Major 바이오 센서 업체에 친수 필름 공급 중.

- **Special Film for ECG/EKG Sensors**

- Major ECG/EKG Sensor 업체에 내열 (150도 30분 0.3% in MD) 고 표면정력 PET Film 공급



COVEME ENGINEERED PET FILM: HYDROPHILIC PET FILM_HNW

HNW 제품의 구성

• Hydrophilic Coating.

- Single Side Hydrophilic Coating (HNW) / Double Side Hydrophilic Coating (HHNW)
- Contact Angle < 20° (Fibro Systems PGX 2,5uL)
- Spread drop range 46-50 (3uL drop on Courier New o)
- Rohs / Reach (2015) Certified.

• PET Film.

- 색상: Clear PET Film / Hazy PET Film / White PET Film / Black PET Film
- 두께: 일반적으로 100 microns 제품이며, 23microns 부터 500microns까지 대응 가능
- 열 접착 공정 관련, Ready to use 내열 처리 가능.
 - 100 microns Film 기준 150도 30분에 MD 방향 0.3% 이내
 - 100 microns Film 기준 150도 30분에 TD 방향 0.1% 이내

• Customer side friendly processing.

- 고객 사 사양에 맞는 Customized Sheeting Process 가능.
- 인쇄면 구분을 위한 Side Printing 설정 가능.
- 최종 제품 Lot별 각개 포장 가능. (Lot 설정 200 Sheets / 500 Sheets)

COVEME ENGINEERED PET FILM: HYDROPHILIC PET FILM_HNW

HNW 제품의 장점 및 특징

- Non Wobbling (controlled hysteresis).
- 매우 균일한 Contact Angle 및 Spread Drop.
 - 매우 균일한 Fill initiation 및 Fill Speed.
 - 매우 균일한 Circularity 및 Area Spread.
- 매우 견고한 친수코팅.
 - 열에 대하여 견고함.
 - 외부 환경 노출에 대하여 견고함.
 - Ultra Dry Condition에 대하여 견고함.
 - PET Film과 친수 코팅에 대하여 부착력이 매우 견고함.
- Customer side Friendly and Flexibility.
 - Conductive Paste Printable.
 - Direct Logo Printing with Solvent based Paste and UV Paste.
 - Hot Air / Hot Lamination 공정 투입 가능.

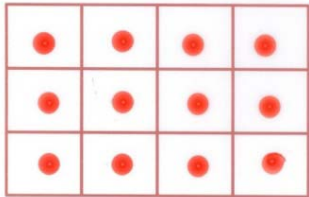
TEST RESULT ON HNW: AT COVEME'S SITE and CUSTOMER'S SITE.

Contact Angle and Spread Drop / Robustness and Durability

- Ageing Test @ COVEME

- 4 weeks @ 45°C – 75% RH

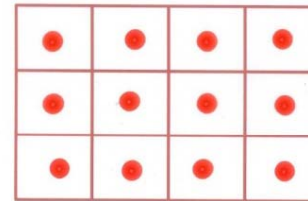
T2



45°C – 75% Relative Humidity

1 week 15/01/2013

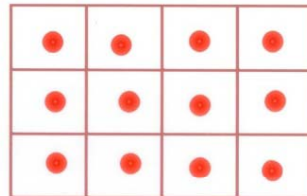
T2



45°C – 75% Relative Humidity

IV week 05/02/2013

T1



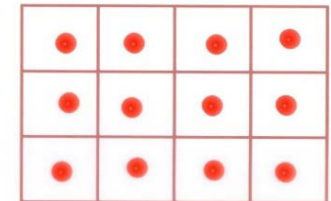
45°C – 75% Relative Humidity

1 week 15/01/2013

45°C – 75% Relative Humidity

IV week 05/02/2013

T1

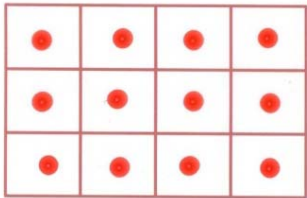


TEST RESULT ON HNW: AT COVEME's SITE and CUSTOMER's SITE.

Contact Angle and Spread Drop / Robustness and Durability

- Ageing Test @ COVEME
 - 4 weeks @ 45°C – 90% RH

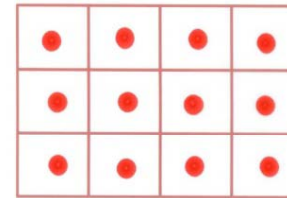
T2



45°C – 75% Relative Humidity

IV week 05/02/2013

T2



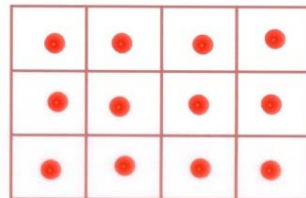
45°C – 90% Relative Humidity

IV week 12/03/2013

T1

45°C – 75% Relative Humidity

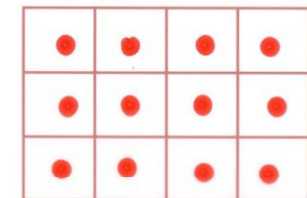
IV week 05/02/2013



45°C – 90% Relative Humidity

IV week 12/03/2013

T1



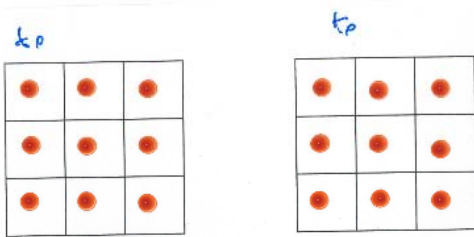
TEST RESULT ON HNW: AT COVEME'S SITE and CUSTOMER'S SITE.

Contact Angle and Spread Drop / Robustness and Durability

• Lo Temp - Ageing Test @ COVEME

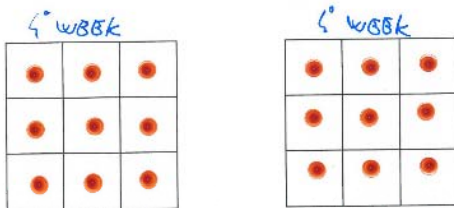
- 4 weeks @ -15°C – Various % RH

Week 0 - April 1, 2015



Coveme Internal Test # 96 - Drop Measure 48

Week 4 - April 29, 2015



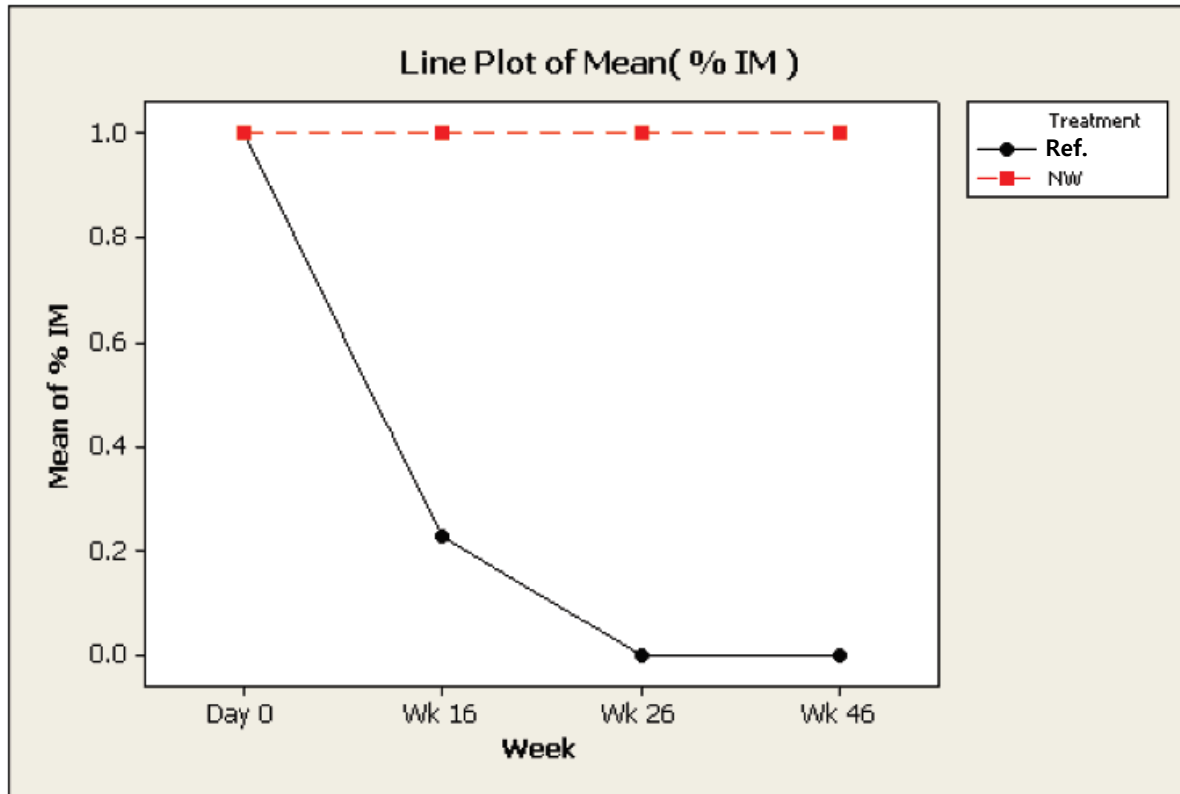
Coveme Internal Test # 96 - Drop Measure 48

Week	Contact angle		
0	10.6	11.2	11.7
1	12.2	12.0	12.2
2	10.9	11.1	11.1
3	12.2	12.6	11.1
4	10.4	10.6	11.3

TEST RESULT ON HNW: AT COVEME'S SITE and CUSTOMER'S SITE.

Consistency of Fill initiation and Fill Speed

- Fill Test @ Customer's site
 - 46 weeks @ 45°C – 75% RH
 - NW = HNW

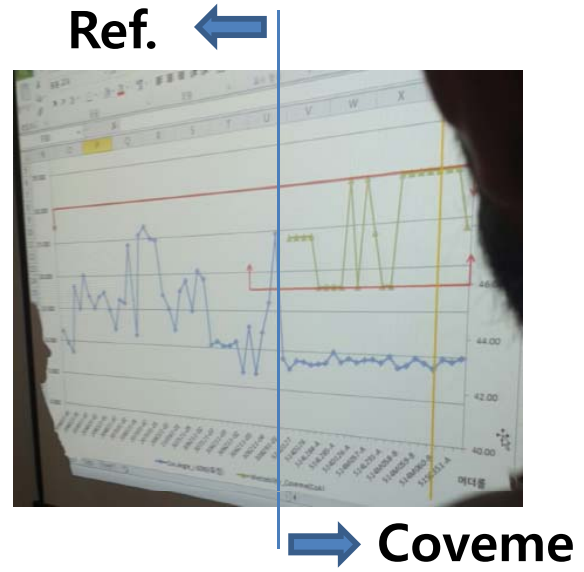
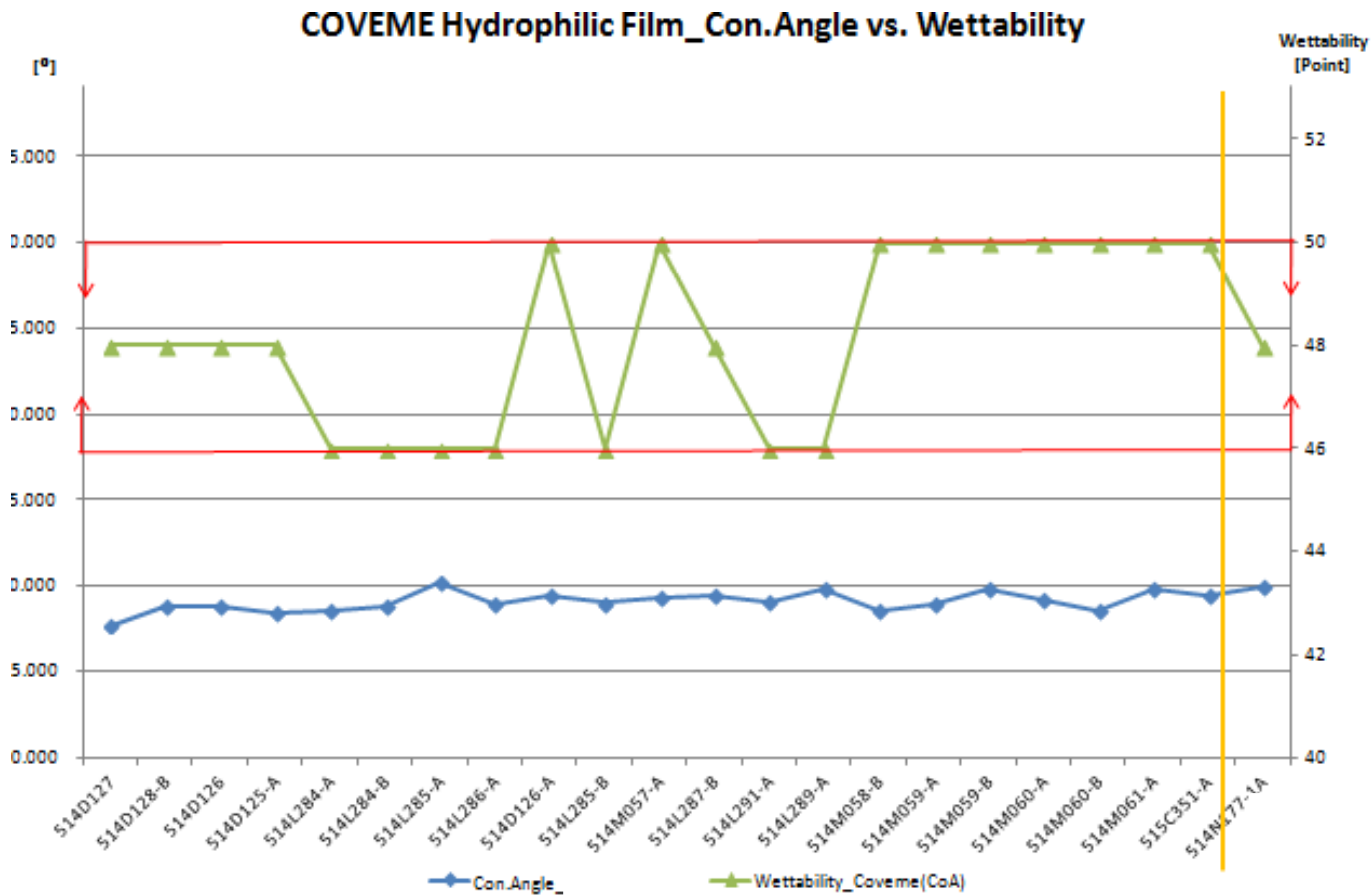


Treatment	Mean % Im
Ref.	30.0
NW	100.0

TEST RESULT ON HNW: AT COVEME'S SITE and CUSTOMER'S SITE.

Consistency of contact angle and Spread Drop according to supplied Lots.

- Actual Supplies



PEJA KOREA Co., Ltd.

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- Industrial coating/printing and Dryer
- Wall covering / Label / Graphic / Printed Electronics / Electronics
- Bio Medical

Our Products

R2R Rotary Screen Printing System
R2R Screens
Flat Bed Screens (Non-Woven Nickel Mesh)
Hybrid Stencil

Water Based Ink
UV Ink

Non-Woven Substrate
Heat Stabilized Engineered PET Film
Heat Stabilized PET Film based Metal Laminate
Engineered PET Film for Biomedical

Industrial coating/Printing System
Industrial Drum/Rotary Dryer
Industrial Foam Mixer



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