



# Unitex® squeegees printing for the long run

## Unitex® Ulon HP Electronic screen printing

Unitex® Ulon HP squeegee range provides optimum performance for the most demanding screen print applications.

It is manufactured from NDI (Naphthalene Diisocyanate) polyurethane technology, which provides the highest level of chemical and abrasion resistance. Unitex® Ulon HP is widely recognized as the best squeegee for use with solvent and UV based inks.

### Benefits:

- Market leading wear and tear resistance – ideal for printing thick and thin films, as well as minimizing the use of expensive conductive inks \*
- Precision edge – exceptional quality, especially for printing ultra-thin lines
- Resistant to solvents used in modern conductive and non-conductive ink systems - long accurate print runs
- Made from Vulkollan® which is one of the most innovative and technically advanced elastomers in the world – compatible with a wide range of ink systems for electronic applications
- Manufactured to +/- 2.5° Shore A hardness tolerances – reducing setup times
- Production is carefully controlled within our ISO 9001 accredited Quality Management System – consistent squeegee quality ensures longer print runs, less downtime and fewer rejects
- Trelleborg expertise - high performance, long squeegee life and outstanding value

**Unitex® Ulon HP can offer up to a 43% cost saving on ink usage**



### Durometer/Color Coding:

Tolerance: +/- 2.5° Shore A

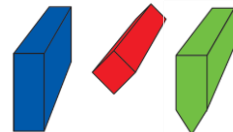
PU500/3-4 65-70° RED	PU500/4 70-75° GREEN	PU500/8 75-80° BLUE	PU500/9 80-85° BROWN
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**Softer Squeegee**  
More ink, thick film

**Harder Squeegee**  
Less ink, finer track spacing

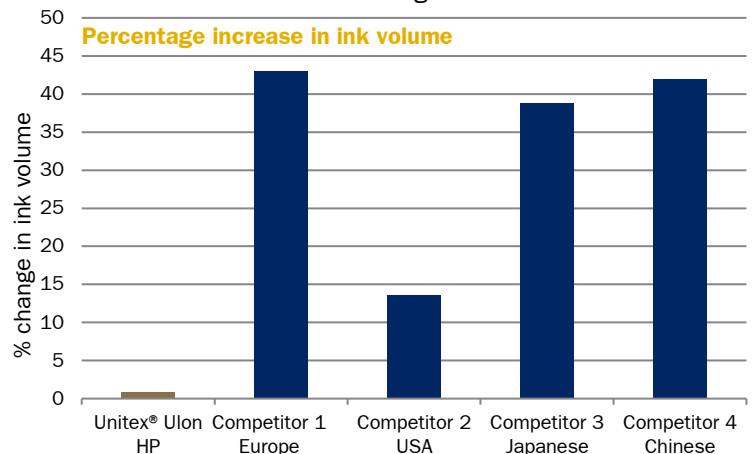
### Profile:

- Plain
- Diamond
- Custom shapes



### \* Accelerated Squeegee Wear Test

70-80 Shore A Hardness - Single Durometer



Squeegee prints measured before and after 50 print passes on silicon carbide abrasive - 2500 grit (8.4 µm).

Independent test by the Welsh Centre for Printing and Coatings - report available on request

# Electronic screen printing

Unitex® Ulon HP is used in many electronic screen printing applications, especially in high end consumer touch panel devices such as mobile phones and tablets. Other applications include:

- Flexible circuits for membrane touch switches and graphic overlays
- Biosensors and electrocardiogram electrodes
- Contactless smart cards and RFID labels
- Electroluminescent lamps
- Rigid and flexible printed circuit boards and potentiometers
- PV (Photovoltaic) / solar wafers
- Insulators, batteries and heating elements

### Typical Conductive & Non-Conductive Ink Systems:

- Silver
- Gold
- Carbon
- Dielectric

### Technical Recommendations:

- Unitex® Ulon HP squeegee is ideal for multi-layer printing where tight registration control and printing accuracy is essential
- For fine track spacing and deposits in 20µm to 30µm range use Unitex® Ulon HP 500/4 (70-75° Shore A harness) and 500/8 (75-80° Shore A hardness)
- For fine track spacing and deposits 50µm + use Unitex® Ulon HP 500/3 (65-70° Shore A hardness)
- Used with inks, pastes and resins
- Fully RoHS compliant
- Unitex® Ulon HP is OEM on many of today's screen printing machines



### Case Study

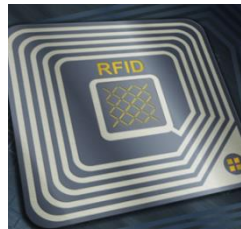
USA based company that manufactures miniaturized electronic components and print the multi-layer components with gold based conductive inks.

#### Objectives:

The company wanted to reduce the level of rejects and increase print runs to improve output. After testing numerous squeegees, Unitex® Ulon HP performed the best.

#### Outcome:

- Excellent quality - zero rejects
- Improved print quality and accuracy
- Extended print runs
- Significant reduction in ink, downtime and wastage



#### Comments from the Technical Manager:

'We are highly delighted with Unitex® Ulon HP. Prior to changing we didn't realise the importance of using a quality squeegee. However, our reject rates have been eliminated, which was critical with using gold based inks. We have also seen a significant increase in print output. It really has been a win-win situation.'

#### Contact Us

Trelleborg Applied Technologies delivers innovative and reliable solutions that maximize business performance to meet your needs. Our dedicated and highly skilled staff are always on hand to provide seamless process support from initial idea, through to delivery and beyond.

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### Technical Data:

Dimensions	Plain Section	Tolerance
Length	Up to 3750mm (147")	+/- 10mm
Width	15 - 50mm (0.6 - 2")	+/- 0.5mm
	50 - 100mm (2 - 4")	+/- 1mm
	100 - 610mm (4 - 24")	+/- 5mm
Thickness	Up to 12.5mm	+/- 0.4mm
Type	Hardness	Tolerance
Unitex® Ulon HP	60° - 95° Sh A in 5° Increments	+/- 2.5° Shore A

Available in different profiles, hardnesses and sizes on request.

