

## Assembly Aids

Over the last 2 decades of supplying display enhancement windows for electronic information displays, Panel Graphic has engineered products and production sundries to specifically aid production and maintenance of components for this niche display industry.

These helpful items are available to aid customer's production methods ensuring that the quality product supplied by Panel Graphic is maintained all the way through to its final assembly.



## Optiguard Anti-Static Brush (I30).

**Specialist brushes, produced especially for Panel Graphic using only Goats hair and Thunderon.**

These are not your average ESD brushes - these are extremely high quality brushes using the highest quality materials!

**Thunderon** is a conductive fibre material which offers superior performance, providing far greater control of static electricity than carbon coated conductive fibres. It is a very thin / soft fibre manufactured with an extremely conductive coating.

It has good abrasion resistance, does not break easily, and has a strong anti-bacterial performance due to the nature of the surface coating.

Conductive brushes are often used to dissipate charges on electronically charged surfaces and **Thunderon** is very effective at this.

The surface resistivity of Thunderon is  $10^2 \Omega / \text{cm}$ .

Goat's hair is commonly mixed with Thunderon to help slightly stiffen the brush, since Thunderon is so soft when used by itself.

These brushes are specially produced for Panel Graphic and not available elsewhere but we have now decided to offer these to others.

These brushes are ideal for use during component inspection. They remove static charge, without any damage to parts and are ideal for removal of hairs, fibres, and any airborne contamination from surfaces prior to coating, printing and painting while simultaneously helping to prevent re-attachment.

Size:  
250mm total length, (130mm bristle's),  
30mm bristle length.



## Microfibre Cleaning Cloths

Microfibre cloths offer great quality and provide high levels of dust, dirt and grease retention. We use these daily for cleaning high-end optical components within every department at our facility.

The microfibre surface allows us to clean away fingerprints, dirt and dust particles which may adhere to components during any of our processes.

Do not confuse these microfibre cloths for cheaper/lower quality items which can easily mark and scratch material surfaces.

- Remove up to 99.9% of bacteria with just water.
- Machine washable up to 400 times.
- Absorbent & durable
- Available in a pack of 10 or a box of 100.



## Lint Free Microdenier Cleaning Cloths

Microdenier fabrics are made from synthetic yarns, generally bi-component polyester-nylon polymers, or 100% polyester polymers. Many filaments are processed together to form a yarn that will eventually be formed into a fabric. The size of the yarn is defined as the denier.

CERNATA Microdenier cleanroom wipes are manufactured to the highest quality for high level cleaning applications, ideally suited to fragile components such as lenses and micro electronic devices. Microdenier wipers present several advantages in their ability to clean surfaces when dry, consistently apply cleaning solutions to surfaces, and effectively remove microbial contamination from surfaces.

Specifically designed for the cleaning of lens and sensitive surfaces in optical and display industries. Ideal for cleaning scratch sensitive surfaces.

### These properties make microdenier wipers effective for:

- Cleaning nano-sized particles (or nano-particles)
- Removing fingerprints and oils from PC monitors, TV or smart phone screens without leaving behind any streaks
- Applying and removing liquids such as disinfectant and cleaning solutions from surfaces
- Wiping a wet surface dry, unlike most synthetic wipers.
  
- ISO Class 3 Cleanroom Standard
- 4 Edge Laser Cut and Sealed
- Prevents Scratches and Swirl Marks
- No Loss of Fibres
- Machine washable
- Absorbent & durable
- Available in a packs of 150



## 3M™ Adhesive Transfer Tape 468MP

### Product Description

3M™ High Performance Acrylic Adhesive 200MP is a popular choice for graphic attachment and general industrial joining applications. It provides outstanding adhesion to metal and high surface energy plastics. This adhesive provides some initial repositionability for placement accuracy when bonding to plastics. It also performs well after exposure to humidity and hot/cold cycles.

### Product Features

- Up to 400°F short-term heat resistance
- Excellent solvent resistance
- Excellent shear strength to resist slippage and edge lifting

### Application Information

- Long term bonding of graphic nameplates and overlays (“subsurface” printed polycarbonate or polyester) to metal and high surface energy plastics in the aerospace, medical and industrial equipment, automotive, appliance and electronics markets.
- Bonding metal nameplates and rating plates in the aerospace, medical and industrial equipment, automotive, appliance and electronics markets.
- Bonding graphic overlays for membrane switches and for bonding the complete switch to the equipment surface.
- High speed processing of parts in the medical, telecommunications and electronics markets (medical components, durable labels, and exible circuits).
- Lamination to industrial foams for rotary die-cutting of small gaskets for industrial and electronics markets.



## High Quality Protection Foils

### Textured application / embossed foil (PTI60)

Textured application film is perfect for use on textured surfaces, this is used daily on our Optiguard Non-Glare range. The textured application foils are perfect for applying to acrylic and Polycarbonate, it can even be used to apply over the top of vinyl's to aid application.

Carrier:	Polypropylene film, Orange peel surface.	
Adhesive:	Acrylic	
Colour:	Clear	
Adhesion (N/cm):	1.10	+/- 10%
Thickness (mm):	0.11	+/- 5%
Roll Size:	610mm x 100m	

### Blue Protection Foil / FM-115

This is the perfect protection film for glossy surfaces such as a clear hard coat or a glass substrates. This film has a low tac which means it easy to apply & remove.

Carrier:	Polyethylene	
Adhesive:	Acrylic	
Colour:	Blue Transparent	
Adhesion (N/cm):	1.10	+/- 10%
Thickness (mm):	0.055	+/- 5%
Roll Size:	356mm x 200m	

### Blue Protection Foil / PF42c

This is a general purpose protection foil, we use this every day and is appropriate for most surfaces. This foil machines well and doesn't leave any residue.

Recommended for protection of sensitive surfaces against dirt and damage during processing, storage and mounting e.g.

- Smooth plastic sheets
- Varnished surfaces, acrylic and synthetic resin varnish
- Aluminium, polished
- High-grade steel, polished.

Carrier:	Polyethylene film.	
Adhesive:	Rubber	
Colour:	Blue Transparent	
Adhesion (N/cm):	1.3	+/- 30%
Thickness (mm):	0.08	
Roll Size:	610mm x 500m	





# QWIK PEEL

## Unique Solutions To Everyday Challenges

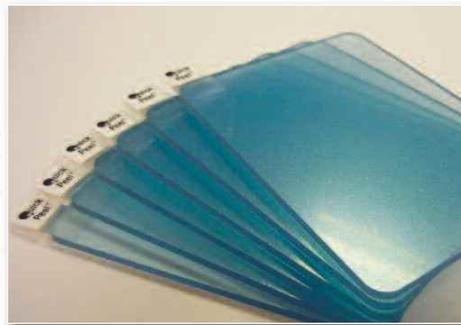
We work closely with our customers and value each and every relationship - holding dear the ethos of continual improvement.

Whilst conducting on-site product surveys with our customers, we found that assembly staff were experiencing difficulty removing protection foils from our components. Repeated attempts to remove protection foil using fingers to pick at the corners and edges resulted in contamination being left on parts. This was also having a negative impact on our customer's production times.

Panel Graphic went away to find a solution and develop our own product to successfully solve the issue. The result was the **Panel Graphic Qwik Peel™** tab.

A handy part-adhesive tab that can be easily attached to the protection foil on any part, allowing for quick and simple foil removal, with no residue, witness marks or finger contamination, leaving the part in perfect condition and ready for assembly.

Once full testing had been completed and all feedback was positive, use of the **Panel Graphic Qwik Peel™** tab was rolled out across all appropriate products manufactured at Panel Graphic and is now used every day in the final stages of our manufacturing processes.



- **Fast film removal**
- **No adhesive transfer**
- **Speeds product assembly**
- **Reduces product handling**



## Height Adjustable Inspection Booths

Panel Graphic has designed and built 2 standard sizes of ergonomic inspection booths to control light levels allowing a standardised inspection environment.

The inspection booths are height adjustable, utilising electronic dual motors via simple push button operation for maximum operator comfort, allowing for standing or seated use to aid efficiency and help eliminate fatigue.

1,000mm wide £2,800 + vat

1800mm wide £3,600 + vat

### Optional extras available (POA):

#### Lockable Castors

Change the position of your desk on a regular basis with 4 lockable casters for easy manoeuvrability.

#### Programmable controller

A programmable height controller with 4 preset heights is available as an upgrade if you'd prefer, rather than the two button up/down controller that comes as standard.

