

# TissuePatch<sup>TM</sup> 3

the rapid barrier



The Synthetic Self-Adhesive  
Surgical Sealant Film

TissuePatch™3 has a fused multi-laminate structure containing patented reactive polymers for chemical bonding to tissue surface, and a non-adhesive backing material for ease of handling and prevention of post-surgical adhesions. The patch remains in position until largely absorbed in 50 days.

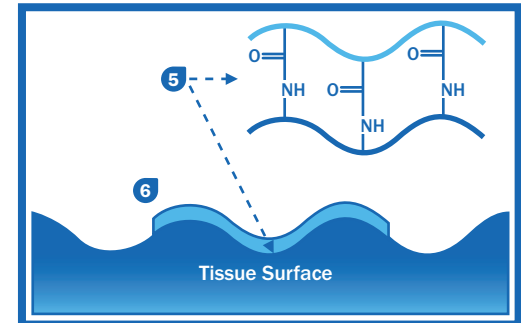
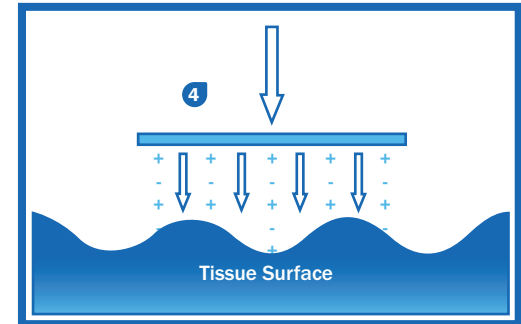
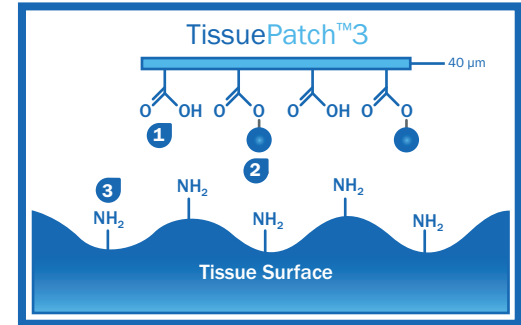
## Mode of Action

TissuePatch™3 : The chemistry

- 1 Carboxylic acid groups provide initial “tack” via electrostatic interactions
- 2 Functionalised carboxylic acid groups on contact surface
- 3 Tissue surface rich in protein groups containing amine and other nucleophilic functionalities

TissuePatch™3 : Ready to use and easy to apply

- 4 Moderate pressure is applied for several seconds allowing contact adhesive to hold TissuePatch™3 onto tissue surface.
- 5 Amide bonds form rapidly between TissuePatch™3 and the tissue surface
- 6 The patch is strongly adhered within 30 seconds and is flush to the surface to seal the wound



TissuePatch™3 is ready to Apply  
It Adheres,  
It Seals,  
It's Absorbed



TissuePatch™3 represents a significant advance in Surgical Sealant Technology

- Ready to use multi-laminate film with an adhesive and barrier surface
- Simply swab site, apply with TP3 logo facing and press to surface anatomy
- Clings, bonds and seals within 30 seconds
- Prevents leaks, withstands dynamic stresses, with limited swelling as it hydrates
- Stays where applied and remains intact until largely absorbed in 50 days

TissuePatch™3 is a thin (0.04mm) multi-laminate film, comprising alternate layers of poly(lactide-co-glycolide) and Tissuemed's proprietary self adhesive "terpolymer". TissuePatch™3 contains Methylene Blue labelling as an aid to correct orientation.

Once TissuePatch™3 has been applied, it forms a strong and highly elastic seal and physical barrier to air blood and other fluid leakage.

The patch remains in position supporting natural healing while it slowly degrades until largely absorbed in 50 days.

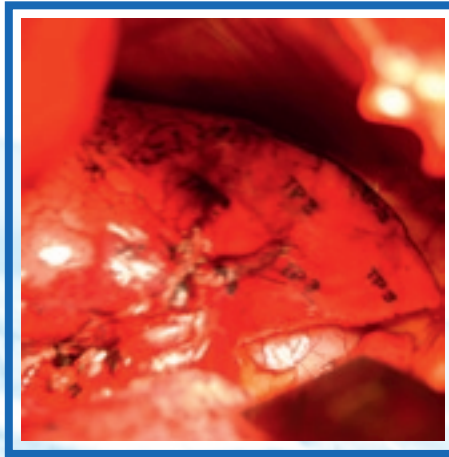


Upper surface is demonstrably hydrophobic

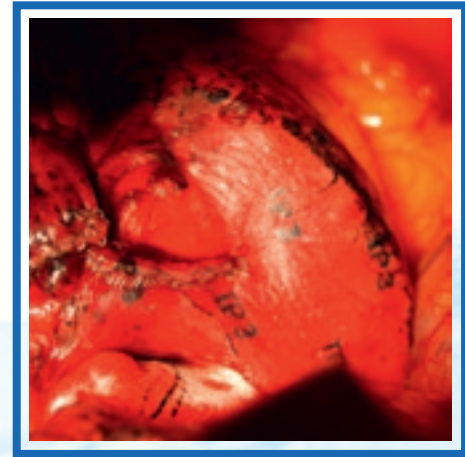
## Example application: Air Leak Resolution in Lung Surgery



Sutured Lung-  
No Patch Applied



Patch Applied-  
Lung Deflated



Lung Inflated

# Handling TissuePatch<sup>TM</sup>3: Getting the best from the product

TissuePatch<sup>TM</sup>3 is easy to use, but like all products there are things the operator can do to ensure optimum ease of use and product performance. Here are a few;

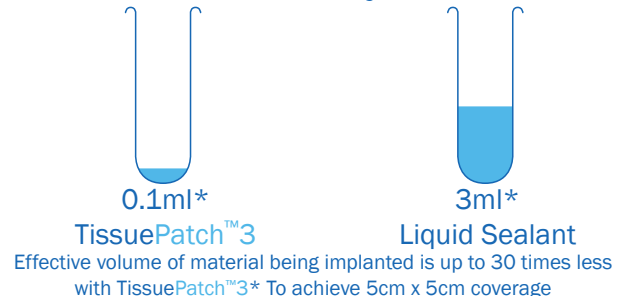
## Do

- Apply with the logo facing the operator (ie readable). If applied the wrong way round the product will not stick.
- Ensure there is a surround area of at least 1cm beyond the wound being sealed.
- Gently swab the target tissue to ensure standing fluid has been removed. TissuePatch<sup>TM</sup>3 chemistry works by bonding to the surface of the target tissue, so activation by contact with blood or other fluids may impair ultimate adherence.
- Handle the product as little as possible...use forceps if possible and hold at the edge of the patch
- Cut to shape as required.
- Remain patient. With firm, “even” pressure the product will be adherent after 30 seconds. Adherence will continue to improve over a few minutes.
- Understand the limitations of the product. TissuePatch<sup>TM</sup>3 is a fine sealant film and not a thrombogenic haemostat. Operator experience will define the performance limits, but the product is designed to staunch mild to moderate “oozing” bleeding.
- Wet the upper surface of the patch once happy it has achieved adequate adherence.
- In lung surgery apply with the lung  $\frac{3}{4}$  inflated then reduce tidal volume.

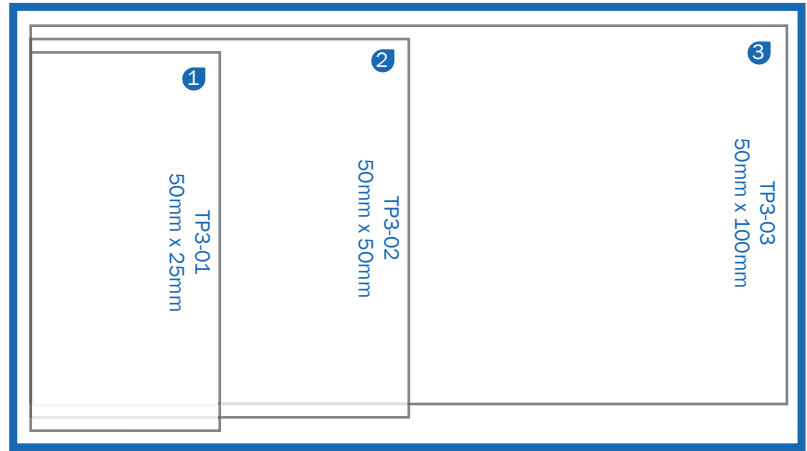
## Do Not

- Overlay unless necessary. The upper barrier layer possesses anti adhesion characteristics so will not provide a good target tissue for the sticky surface.
- Repeatedly “test” the adherence of the product... once *in situ* it should be handled minimally in order to allow the contact chemistry to optimise. TissuePatch<sup>TM</sup>3 is only 40 microns thick and can be damaged if disturbed too much after application, especially with sharp or narrow instruments...if in doubt, use a fresh dry swab to reapply broad firm pressure to the patch.
- Reposition... unless it is immediately post application. Adhesion is likely to be compromised.
- Apply over voids... the product relies on contact with underlying tissues for its efficacy.

## Think about it this way...



# Ordering Information



Pack contents; 1 x TissuePatch™3, Single Packed, Sterile, 1 x Instructions for Use, Triple Patient Notes Stickers



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This product is not available for sale in the United States

## Indications

TissuePatch™3 is indicated for use to seal and reinforce against air leakage in thoracic surgery, e.g. lung resection, and against leakage of low pressure or oozing bleeding or fluid leakage following surgical procedures on soft tissue, e.g. liver and splenic resection, splenic injury. TissuePatch™3 is intended for use as an adjunct in thoracic and general surgery and is not intended to replace sutures or staples, as appropriate, in tissue approximation.