NovoSorb® BTM
A unique synthetic biodegradable wound matrix
Regain control. Graft when you want to, not when you are forced to.

As a surgeon, you should be in control. NovoSorb BTM offers a fully temporising solution, allowing surgeons to graft when the patient is ready; in stages or all at once.

BTM is a synthetic, biodegradable and biocompatible device designed to facilitate the dermis to grow within a patented polyurethane foam matrix. When ready, the sealing membrane is removed, leaving a fully vascularised dermis, ready for closure.

**BTM Advantages**

- Fully synthetic, no biologic material or chance of cross contamination.
- No preparation, ready to use.
- Physiologically seals the wound — healing can begin.
- Clinically choose when to delaminate.
- Designed to minimise scarring and contracture.
Composition

NovoSorb BTM Wound Dressing is composed of three layers.

Sealing membrane
Designed to physiologically close the wound and limit evaporative moisture loss.

Bonding layer
Polyurethane adhesive bonds foam to the sealing membrane.

Polyurethane foam
2mm open cell biocompatible foam with >90% porosity designed to fully biodegrade.

Phases of BTM integration

1. Apply BTM to a full thickness wound
   - Fully clean and debride wound removing all necrotic, non-viable tissue.
   - Abut BTM to wound margin and contour to fit anatomy.

2. BTM integrates into the wound bed
   - Blanch test to determine full vascular integration and rapid reprofusion.
Removal of sealing membrane
- Remove sutures/staples followed by delamination in one smooth motion.
- Removal may be done in phases.

Wound closure
- Method of closure is surgeon's clinical choice.
NovoSorb® BTM biodegradable temporising matrix

A synthetic biomaterial designed to provide:

- Mechanical support for cellular activity.
- Rapid cell ingrowth due to the high porosity.
- Degradation through hydrolysis.

“I’m very happy with the outcome and have full movement of my arm.”

BTM applied to right forearm
BTM vs non-BTM areas on the same patient

The following cases highlight areas for each patient where BTM was applied as well as areas that did not receive BTM.

Patient 1: BTM applied to highly mobile area around the arm

Patient 2: Notice the return of pigmentation to the BTM arm vs the keloid scarring on the chest

Patient 3: Supple skin on BTM back vs the chest scarring

Supple skin on the back where BTM was applied, as opposed to considerable scarring on the chest.
BTM applications

Necrotizing fasciitis – neck
Results at Day 77 showing full range of movement and lack of contraction. Notice the natural contouring under the chin.

Free flap application

Current standard of care non-BTM
Note the scarring and the tendons in this example of the traditional approach.

BTM – Innovates the standard
Note the lack of scar/contracture and topography.
“NovoSorb BTM has changed the lives of patients at our hospital.”

Professor John Greenwood
Royal Adelaide Hospital
Staged grafting

BTM allows staged grafting in cases with insufficient donor site skin.

Note half the back was grafted at day 31 while BTM remained in place on the other half until more donor graft could be harvested at day 38.

BTM applied over entire back, notice early signs of integration.

Half the back was delaminated and mesh grafted. BTM left in place on other half of back.

Notice rapid rate of closure of the interstices after 7 days. Remaining half of back is delaminated and prepared for grafting.
Patient outcomes

Necrotizing fasciitis

Full range of motion restored to complex area around neck and chest after BTM application. Note the contouring around the complex area of the Adam’s apple.
Changing lives

Trauma cases

Over tendon
Over exposed tendon range of motion restored after trauma to dorsal foot.

Over bone
BTM was applied to the calvarium.
Biodegradable and biocompatible

NovoSorb BTM has been designed for tissue integration with your patient’s safety and cellular health in mind by removing aromatic isocyanates and solvents. The NovoSorb foam degrades through hydrolysis by established pathways forming hydroxy-acids such as L-lactic acid, and is gone by 18 months.

Histology – BTM resorbed in 18 months

6 months

9 months

12 months

18 months
**Estimate of pieces required**

<table>
<thead>
<tr>
<th>Application Site</th>
<th>BTM size</th>
<th>Surface area</th>
<th>~No: Sheets</th>
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<tbody>
<tr>
<td>Neck</td>
<td>10x20cm</td>
<td>200cm²</td>
<td>1–2</td>
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<tr>
<td>Anterior Trunk</td>
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<td>800cm²</td>
<td>3–4</td>
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<tr>
<td>Posterior Trunk</td>
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<td>3–4</td>
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<tr>
<td>Buttocks</td>
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<td>800cm²</td>
<td>2</td>
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<tr>
<td>Arms</td>
<td>10x20cm</td>
<td>200cm²</td>
<td>A mix of sizes is advised to tailor to contours</td>
</tr>
<tr>
<td></td>
<td>20x40cm</td>
<td>800cm²</td>
<td></td>
</tr>
<tr>
<td>Legs</td>
<td>10x20cm</td>
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<tr>
<td></td>
<td>20x40cm</td>
<td>800cm²</td>
<td></td>
</tr>
<tr>
<td>Melanoma/wide excisions</td>
<td>10x10cm</td>
<td>100cm²</td>
<td>1–2</td>
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<td>10x20cm</td>
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<tr>
<td>DRFU</td>
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</tr>
<tr>
<td>VLU</td>
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BTM comes sterilised in a multilayer packaging. A cardboard envelope contains a white aluminised peel-able pouch which encloses a sterile transparent peel-able pouch containing the BTM. Labels are affixed to the white aluminised pouch and the outer cardboard envelope, and carry details such as date of manufacture, product batch number and expiry date. Each pouch is nitrogen filled. Sterilisation: Gamma irradiation.

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>BTM-1010</td>
<td>NovoSorb BTM Wound Dressing (10cm x 10cm)</td>
<td>Each</td>
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<tr>
<td>BTM-1020</td>
<td>NovoSorb BTM Wound Dressing (10cm x 20cm)</td>
<td>Each</td>
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<tr>
<td>BTM-2040</td>
<td>NovoSorb BTM Wound Dressing (20cm x 40cm)</td>
<td>Each</td>
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Please see our Instructions For Use for contraindications, warnings and precautions. These can be found on our website at: polynovo.com.au/products/BTM

References