

EPIPROTECT[®]

ADVANCED WOUND HEALING





EPIPROTECT[®]

Highway to healing[®]

A biosynthetic membrane for advanced wound healing

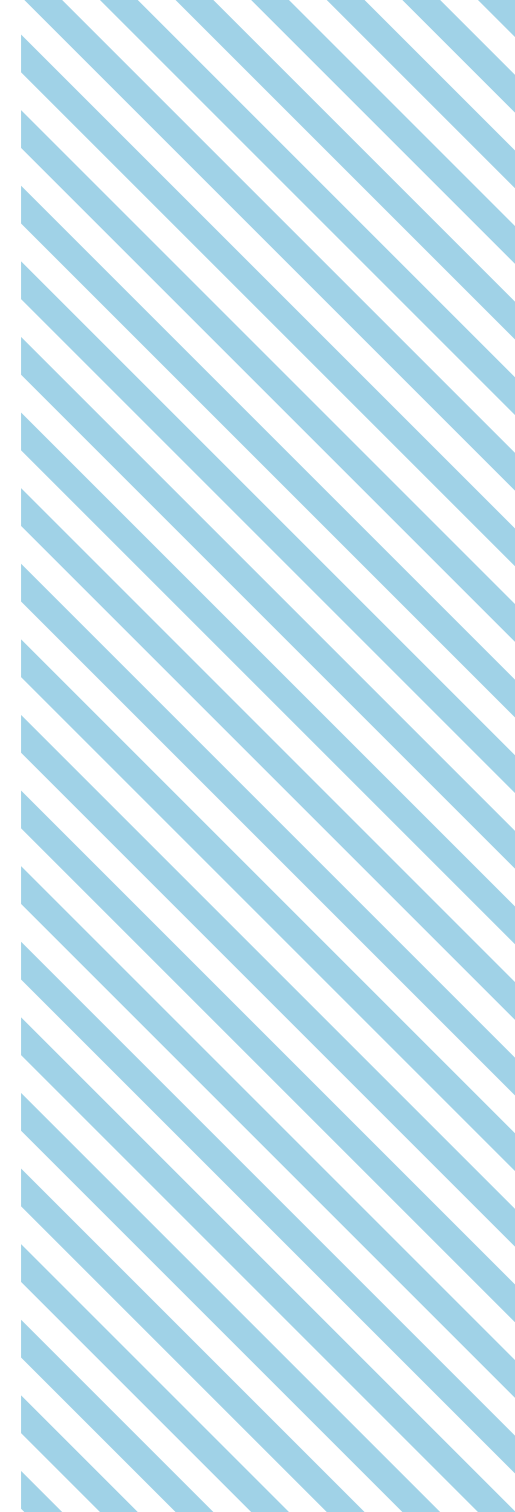
The skin is a protective barrier that prevents infections, fluid and heat loss. A breach in this barrier will therefore cause an immediate need for protection. Epiprotect[®] forms a cell-free temporary epithelium that can replace the lost barrier, making it perfect for advanced wound healing. Epiprotect[®] is supporting the body to control the microenvironment, keeping tissue viable and improving healing. Epiprotect[®] is available in a line of conformable wound dressings based on our eiratex[®] material technology.

Eiratex[®] is a registered trademark of S2Medical AB. The material is based on a biosynthetic polymer of sugar molecules that have been further developed by S2Medical. Our exact and controlled production gives the material unique properties such as superior conformability, transparency, strength and breathability. Epiprotect[®] is one of the very few dressings that is so conformable that it even can be efficiently used to treat facial burns. Epiprotect[®] will help the body to control the level of moisture at any given phase of the healing process. This means that the healing conditions will be optimal during all the different stages of healing without any need of dressing changes.

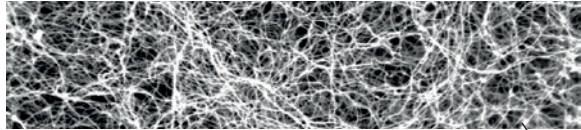
Products:

EPIPROTECT[®]2117

EPIPROTECT[®]ULCER

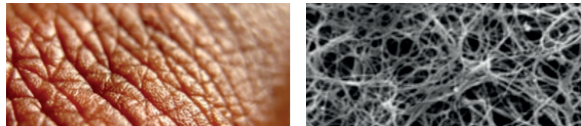


The highway to healing by skin mimicking structure



eiratex®

eiratex® shares the nanostructure of human skin but is a biosynthetic epithelium that does not originate from animal or human tissue.



Human skin



Bacteria



Epiprotect® with its eiratex®-membrane holds a nanostructure similar to collagen, giving it an extremely high biocompatibility and full functionality as a cell free, biosynthetic epithelium. The nano size network will even stop bacteria from reaching the wound.



O₂, H₂O

The membrane is gas permeable and buffers moist, allowing an optimized fluid and gas homeostasis giving a perfect environment during the whole healing process.



More care, less stress

Epiprotect® will give you more time for your patients since it is developed for easier care and maintenance. Epiprotect® will adapt to the healing process and is most often only applied once. The dressing will after attachment stay on the wound until the wound is healed. The transparent feature of the dressing makes monitoring both faster and more convenient.

Prevents formation of exudate

Epiprotect® is a superior alternative for exudating wounds as it prevents the forming of exudate which is an important factor both in the care of burns but also many chronic or complicated wounds.

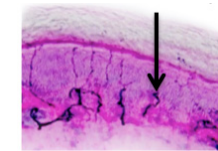


Outstanding pain reduction

Being severely burnt is both painful and traumatizing. One of the most important features of Epiprotect® is therefore the pain reducing effect, especially when treating children.

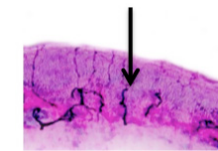
Epiprotect® has an extremely tight adherence to the wound which ensures that all free nerve ends will be covered, giving an instant pain relief. In fact, Epiprotect® treated patients rarely feel a need for analgesic medications.

No pain signal



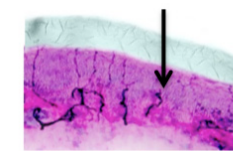
Normal skin

Pain signaling



Exposed nerve
Ends

Reduced pain signaling



Nerve ends covered by
Epiprotect®2117



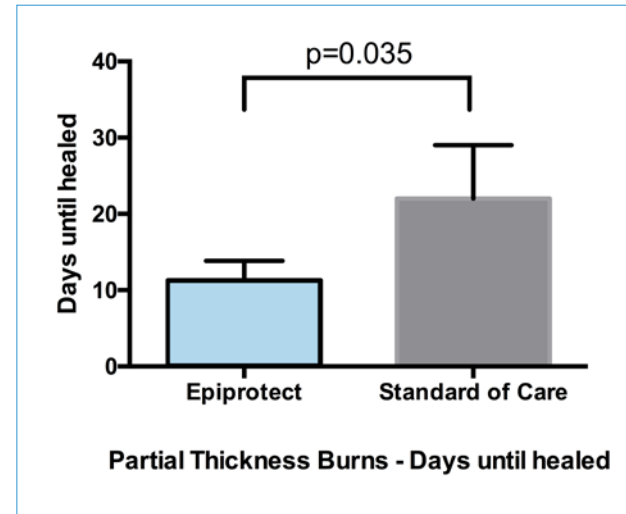
Benefits

- Adheres and conforms to the wound
- Easy to apply, easy to cut
- Near total transparency, easy monitoring
- Moist wound healing
- Allows the body to control the microenvironment
- Collagen mimicking nanostructure
- 100% free from animal or human origin
- Impermeable to bacteria
- Hemostatic
- Applied only once
- Breathable
- Prevents fluid loss and exudate
- Fully compatible with antibiotics
- Reduced pain

EPIPROTECT®2117

An eiratex® dressing for advanced wound healing

Epiprotect®2117 can be used on all skin surfaces where the epithelium is missing. The dressing will attach to the wound, acting as a temporary epithelium until the wound is healed or transplanted. The dressing will stay attached to wounds that do not penetrate the dermis. When the wound is re-epithelized, the dressing will automatically dry out and fall off. Extensive wounds that have penetrated dermis can not self heal and need transplantation. Early excision is recommended and Epiprotect®2117 is the best alternative to protect the excised wound while waiting for transplantation. The dressing can be used on infected wounds if anti-microbial treatment is applied and careful monitoring is exercised.



The expected healing time for superficial burns treated with Epiprotect® is 9-14 days with the mean healing time of 11 days.

The expected healing time of mid-dermal burns is 20-30 days with the mean healing time of 23 days.

The time to healing is prolonged with a delayed onset of treatment.

EPIPROTECT®2117

Scald burn, fast and reliable healing with minimal pain



DAY 1

DAY 9

DAY 14

Epiprotect®2117 can be used to cover scald burns, acting as a temporary epithelium until the wound is healed. Superficial to mid dermal burns and wounds can self heal and current research shows that the best healing is given by moist healing. A wound that is cleaned and protected by a layer of Epiprotect®2117 will be given the best possible opportunity to heal fast with minimal scarring. The dressing will integrate to the wound surface and stay attached until the wound is healed. When the wound is re-epithelized, the dressing will automatically dry out and fall off.

Epiprotect®2117 can be used to heal infected wounds if an anti-microbial treatment is applied and careful monitoring of the wound is exercised.

Replace the use of xenografts and allografts when treating scald burns with Epiprotect®2117.

EPIPROTECT®2117

Flame burn, fast treatment with low pain and easy assesment



Epiprotect®2117 can be used to cover flame burns, acting as a temporary epithelium until the wound is healed or transplanted. The dressing will attach to wounds that do not penetrate the dermis. The dressing will first adhere and then automatically peel off when the wound is re-epithelized. Epiprotect®2117 will help the operator to decide if transplantation is needed, since the dressing acts non-adherent to extensive wound areas that have penetrated dermis and therefore are in need of auto-grafting. The dressing can be used on infected wounds if an anti-microbial treatment is applied and careful monitoring is exercised.

EPIPROTECT®2117

Treatment of wounds that are intended to self heal

1. Clean the wound and remove dead tissue.
2. Open bag and use a tweezer to remove the dressing from the vial.
3. Place the dressing over the wound, press out bubbles. If several dressings are used. make 2-3 cm overlap.
4. Topical (water soluble) antibiotics can be used if needed. The dressing will automatically adhere to the wound without staple, glue or suture. Place a layer of vaseline gauze on top of the dressing and then fixate with gauze (staple, glue and suture is also possible to use). If positioned on the face, avoid a secondary dressing.
5. Remove gauze and inspect the wound (after 1-3 days). When the dressing is attached, no secondary dressing is needed. Normally the dressing will be attached after 1-3 days (if no infection or third degree burn). If the wound looks healthy and no sign of infection, repeat control of wound with 4 days interval. If any concern, shorten the interval. If any sign of infection, remove that part of the dressing and clean thoroughly. Add a new dressing over the cleaned area.
6. Treat infection according to standard protocol.
7. When the wound is re-epithelized, the dressing will release from skin.

EPIPROTECT®2117

Early excision, protecting excised tissue before autografting



DAY 1



DAY 2



DAY 3

Early excision is a technique that has dramatically improved the survival in many clinics around the world. Briefly, the unviable tissue is surgically removed at an early stage and the wounds are then auto-transplanted with the patients own skin once the wound bed has been shown to be viable and ready to receive the transplant. This is a life saving procedure that requires high performance dressings to cover the excised areas awaiting transplantation, the donor sites as well as the post transplanted areas.

Epiprotect®2117 is a truly versatile dressing that preferably is used to cover all of these wounds throughout the treatment. Epiprotect®2117 will not adhere to deeper wounds and can easily be removed to evaluate the wound bed and when it is time for transplantation.

EPIPROTECT®2117

Wounds that are not intended to self heal and need protection

1. Stop bleedings with Epiprotect®SafeStop, remove the bloodstopping SafeStop.
2. Place Epiprotect®2117 over the area that needs temporary protection, press out bubbles. If several dressings are used, make 2-3 cm overlap.
3. If needed, Topical (water soluble) antibiotics can be used. Initial fixation of the dressing is made with or without staple, glue or suture. Place a layer of vaseline gauze on top of the dressing and then fixate with gauze.
4. Monitor patient carefully, treat infection according to standard protocol.
5. Remove secondary dressings and Epiprotect®2117 before auto-grafting.

EPIPROTECT®ULCER

Faster healing of ulcers with less exudate and less pain



DAY 1



DAY 12



DAY 53

Epiprotect®ULCER is made to protect and heal ulcers, acting as a temporary epithelium until the wound is healed. The dressing will attach and stay attached until the wound is re-epithelized, when the dressing automatically will peel off. In most ulcers there will not be any formation of exudate. Providing an optimal wound healing environment at an early stage, before the wound has progressed is what we believe will change the negative spiral. The moisture buffering properties will give the wound an appropriate moisture level at the same time as it protects the wound from mechanical stimuli and infections.

Epiprotect®ULCER can be used on infected wounds if anti-microbial treatment is applied and careful monitoring is exercised.

EPIPROTECT®ULCER

An eiratex® dressing for healing and protection of ulcers

Ulcer

Hard to heal wounds such as diabetic ulcers are a major problem world wide and account for several percent of the health care expenditure. Patients normally need to have their wounds inspected and re-dressed at least twice per week. This is done under several months and often for years without getting the wound to heal. For some patients, amputation will become the only option. After amputation, deterioration of health ultimately leads to the fact that 50% of the patients are dead within 3 years.

Treatment of ulcers

1. Clean and debride the wound.
2. Use standard protocol for diagnosis of underlying cause and/or infection.
3. Treat underlying disease and/or infection according to standard protocol. Topical (water soluble) antibiotic can if needed be used.
4. Open bag and use a tweezer to remove the Epiprotect®ULCER dressing from the vial.
5. Place the dressing over the wound, press out bubbles.
6. Place a layer of vaseline gauze on top of the dressing and then fixate with gauze.
7. Remove gauze and inspect the wound (after 1–3 days). When the dressing is attached, no secondary dressing is needed. Normally the dressing will be attached after 1–3 days (if no infection). If the wound looks healthy and no sign of infection, repeated control of wound with 4 days interval. If any concern, shorten the interval. If any sign of infection, remove that part of the dressing and clean thoroughly. Add a new dressing over the cleaned area.
8. Treat infection according to standard protocol.
9. When the wound is re-epithelized, the dressing will release from skin.



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