



Reducing the risk of surgical site infection

Skin recolonisation sales guide

Hello Team IPD!

There are so many clinical papers on the process of skin recolonisation and the importance of 3M™ Ioban™ Antimicrobial Drapes that it can be quite confusing as to what messages you should share with your customers. This sales guide has been developed to clarify the skin recolonisation process, and provide you with a framework to construct your sales call. We have included a quick reference guide to help you with handling objections, and instructions for application and removal. Our product information guide at the end of this booklet will help you to select the right solution for your customers.

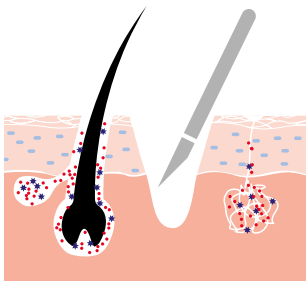
Best wishes and happy selling!



Sophie Singh
Senior Marketing Executive

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Surgical site infections and skin recolonisation

Did you know...

NICE recommends: "If an incise drape is required for surgery, use an iodophor-impregnated drape unless the patient has an iodine allergy."

Ioban is the only iodophor impregnated drape on the market with clinical evidence to support its performance.

NICE

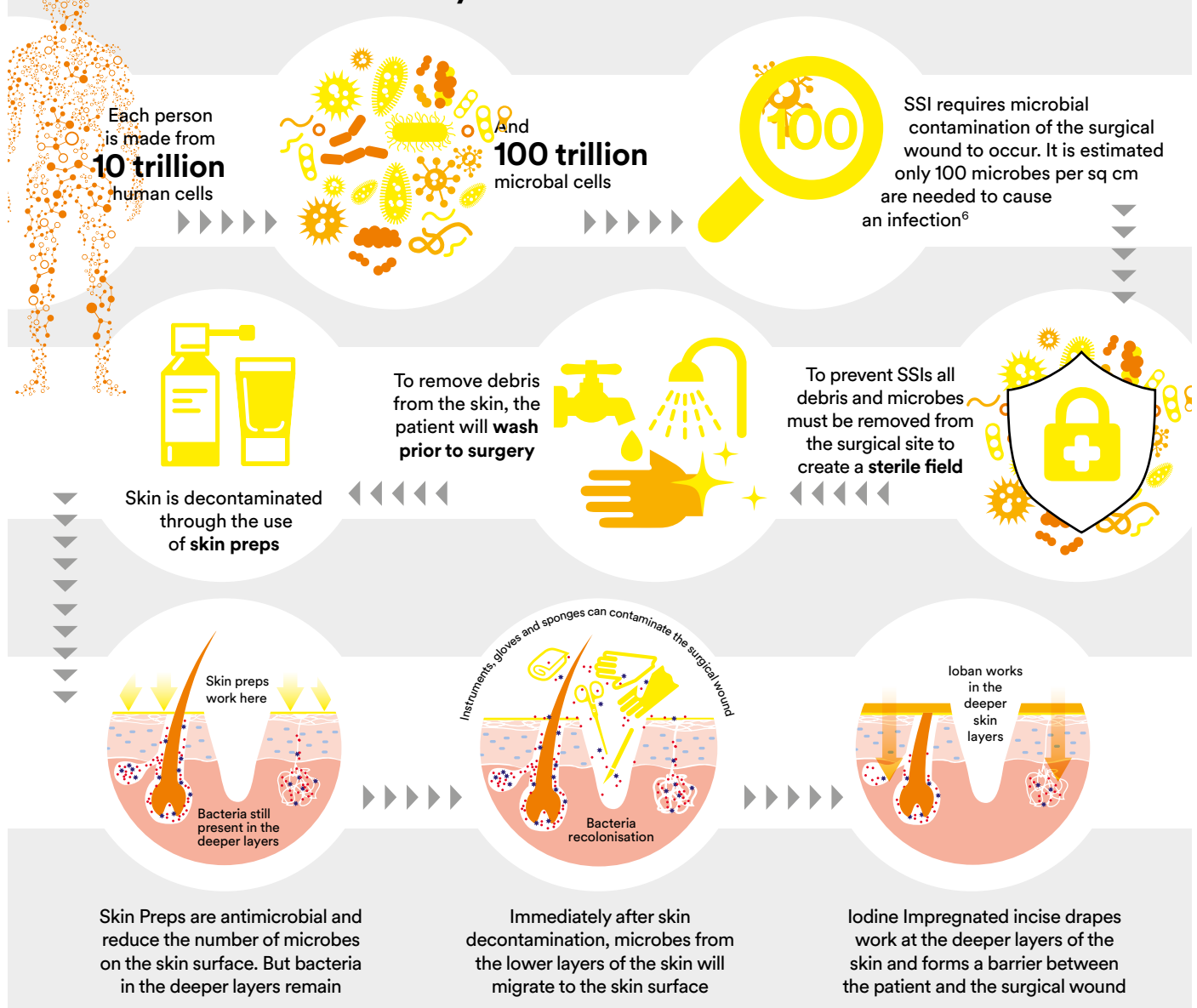
National Institute for Health and Care Excellence

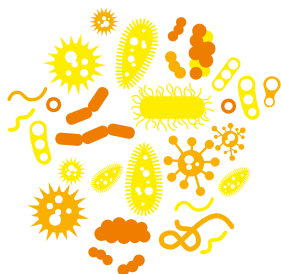
A prevalence survey undertaken in 2006 suggested that approximately 8% of patients in hospital in the UK have a health care acquired infection (HCAI). Surgical site infections (SSIs) accounted for 14% of these infections and nearly 5% of patients who had undergone a surgical procedure were found to have developed an SSI.¹ However, prevalence studies tend to underestimate SSI because many of these infections occur after the patient has been discharged from hospital.

SSIs are associated with considerable morbidity and it has been reported that over one-third of postoperative deaths are related, at least in part, to SSI.² SSI can double the length of time a patient stays in hospital and thereby increase the costs of health care. Additional costs attributable to SSI of between £814 and £6626 have been reported depending on the type of surgery and the severity of the infection.^{3,4} The main additional costs are related to re-operation, extra nursing care and interventions, and drug treatment costs. The indirect costs include a loss of productivity, patient dissatisfaction and litigation, and reduced quality of life.

In our armoury to prevent SSI, we can use iodophor impregnated incise drapes – most commonly known as Ioban. This helps to prevent the process of skin recolonisation, where microorganisms from the patient's skin are the most common source of SSI.⁵ Most of our customers are not aware of the benefits which Ioban offers, and wrongly assume it is specifically for orthopaedic surgery only. Our challenge is to tell the skin recolonisation story, so that our customers understand the value of Ioban.

Skin recolonisation made easy





1 The sales story Setting the scene

Clinical evidence

- 6 Berg, RD (1996). The indigenous gastrointestinal microflora. Trends Microbiol. 4 (11): 430–435
- 7 J.A.Urban, S.Hinrichs, H.Song, B.P.Hasley, and K.L.Garvin. "Skin bacterial counts in patients with a history of infected total joint arthroplasty." Amer.Acad. Orthop.Surg. Poster Pres. (2001)

Disrupt questioning

Why do you wear gloves during surgery?

Go on to discuss how microbes from the patient (not surgeon) are the number one cause of surgical site infection. Ioban works as a barrier between the patient's skin and the wound. A surgeon's glove works in the same way, by creating a barrier between the surgeon's skin and the patients' wound.

Microbes from the patient's skin are the most common cause of surgical site infection

Supporting information

Most surgical site infections are caused by contamination of an incision with microbes from the patient's own body during surgery. Infection caused by microbes from an outside source following surgery is less common.

Each human is estimated to host 100 trillion microbial cells. If the weight of all microbial cells was measured this would weigh approximately 1.2kg. Around 200g of microbes can be found on the skin.⁶

On average human skin will contain 100 to 100,000 microbes per sq cm. Just 100 microbes per sq cm can result in a surgical site infection.⁷

The CQC estimates that the risk of surgical site infection according to three distinct variables:

- 1 the dose of microbes contamination i.e. how many microbes there are;
- 2 the virulence of contaminating microbes i.e. how infectious the microbes are;
- 3 the resistance of the host i.e. how good the immune system is.

This relationship can be represented as:

$$\text{Risk of SSI} = \frac{\text{Number of microbes} \times \text{Virulence of microbes}}{\text{Host's immune system}}$$

As you can see from the equation above, there is a logical link between the number of micro-organisms and the risk of surgical site infection. If we can reduce the number of micro-organisms, we can reduce the risk of infection.

Meet your microbiome

The micro-organisms that you call home

Nose Mass of microbes **10g**
Typical resident **Streptococcus**

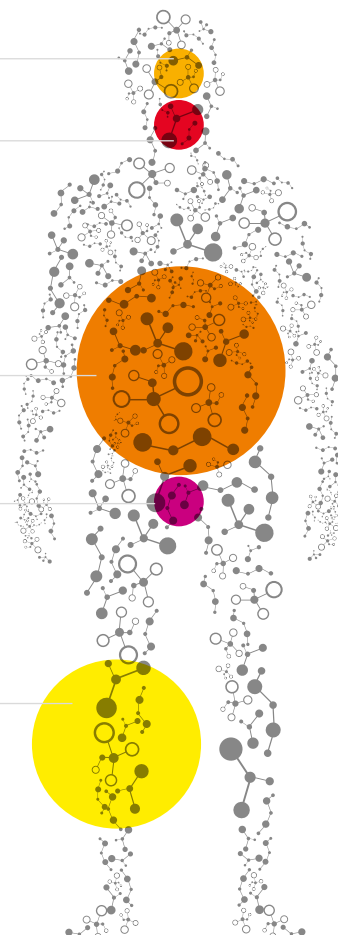
Mouth Mass of microbes **20g**
Typical resident
Streptococcus (cheek)
Neisseria (teeth)

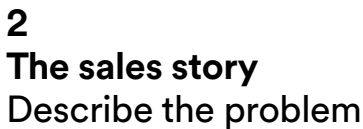
Gut Mass of microbes **1000g**
Typical resident **Bacteroidetes**

Vagina Mass of microbes **20g**
Typical resident **Lactobacillus**

Skin Mass of microbes **200g**
Typical resident
Staphylococcus (oily areas)
Corynebacteria (moist areas)

Microbial cells outnumber your own cells 10 to 1 and have a total mass of >1.2Kg





Skin prep alone is not fully effective at reducing skin micro-organisms

Supporting information

To prepare the skin immediately before a surgical incision is made, a skin antiseptic is applied to the patient's skin. NICE recommends that either povidone iodine or chlorhexidine gluconate (CHG) are used.

The updated High Impact Interventions published by the Department of Health (2010) recommends the use of 2% chlorhexidine gluconate in 70% alcohol (unless the patient has an allergy in which case povidone iodine should be used).

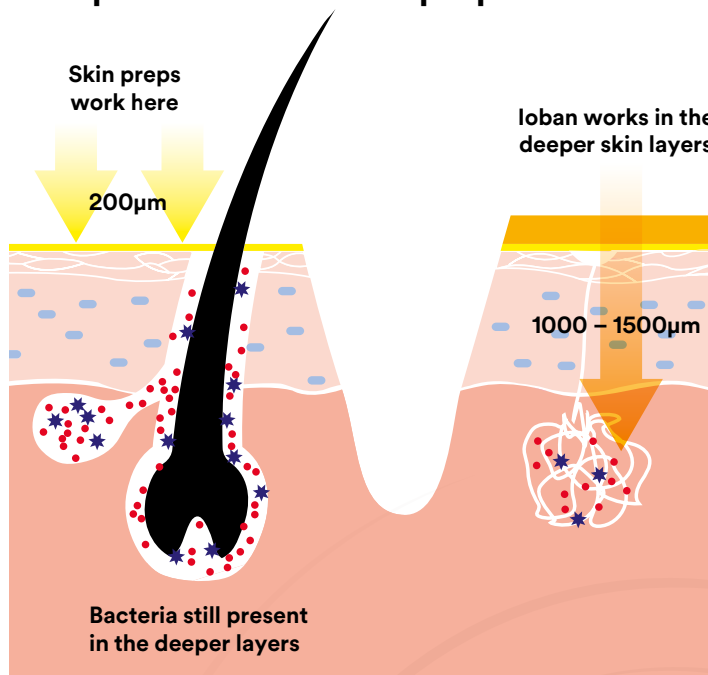
Skin antisepsis does not completely eliminate skin microbes, which may persist in the lower layers of the skin. As soon as skin prep has finished, the skin will begin to recolonise itself. This is a progressive process.⁸

CHG has been shown to penetrate skin at levels required for microbial death at a depth of approximately 200µm i.e. reaching only the upper layers of the skin.⁹

Iodine from Ioban has been shown to be present at levels required for microbial death at a depth of 1000-1500µm i.e. reaching the deeper layers of the skin around the hair follicles.⁹

CHG and loban can be used together and there is evidence to suggest that there may be clinical benefits to using a combination of CHG and loban to prepare skin prior to surgery.¹⁰

Skin penetration of skin preps and loban



Clinical evidence

- 8 Fairclough et al. Rate of bacterial recolonisation of the skin after preparation: Four methods compared. *Br. J. Surg.* 1987; 74:64
- 9 Elliott et al. Antimicrobial activity and skin permeation of iodine present in an iodine-impregnated surgical incise drape. *J. Antimicrobial Chemotherapy.* 2015
- 10 Andersen et al. Efficacy of concurrent application of chlorhexidine gluconate and povidone iodine against six nosocomial pathogens. *American J of Inf Cont.* 2010; 38(10): 826-831

Disrupt questioning

Skin prep is performed prior to a surgical incision, but how do you ensure skin antisepsis throughout surgery?

There is evidence to suggest using skin preps alone is not effective at preventing skin recolonisation, as they only kill microbes at the skin surface. Ioban works in the deeper layers of the skin and provides continuous antimicrobial action throughout the procedure.

Did you know...

OneTogether lists “preventing skin recolonisation” as one of the important steps for preventing SSIs across the surgical pathway. Is your customer aware of OneTogether? Perhaps it could be worth sharing its Assessment Tool as a way of opening up the discussions about skin recolonisation.

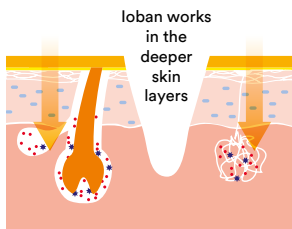
3. Assessment tool: 1,4 Preventing skin recolonisation			
1.4 Preventing skin recolonisation			
Competence that has to be demonstrated: The candidate demonstrates that he/she is able to prevent skin recolonisation	Initial situation Before the intervention	Intervention to be performed During the intervention	Result After the intervention
1. The candidate demonstrates that he/she is able to prevent skin recolonisation by using the correct technique for skin recolonisation.	Initial situation: Skin recolonisation is present.	Intervention: Skin recolonisation is prevented.	Result: Skin recolonisation is prevented.
2. The candidate demonstrates that he/she is able to prevent skin recolonisation by using the correct technique for skin recolonisation.	Initial situation: Skin recolonisation is present.	Intervention: Skin recolonisation is prevented.	Result: Skin recolonisation is prevented.
3. The candidate demonstrates that he/she is able to prevent skin recolonisation by using the correct technique for skin recolonisation.	Initial situation: Skin recolonisation is present.	Intervention: Skin recolonisation is prevented.	Result: Skin recolonisation is prevented.
4. The candidate demonstrates that he/she is able to prevent skin recolonisation by using the correct technique for skin recolonisation.	Initial situation: Skin recolonisation is present.	Intervention: Skin recolonisation is prevented.	Result: Skin recolonisation is prevented.

NOTES ON COMPLETING 1.4 PREVENTING SKIN RECOLONISATION

- 1. Check the candidate's knowledge and understanding of the procedure. The candidate is not allowed to use the skin recolonisation tool.
- 2. Check the candidate's knowledge and understanding of the procedure. The candidate is not allowed to use the skin recolonisation tool.
- 3. Check the candidate's knowledge and understanding of the procedure. The candidate is not allowed to use the skin recolonisation tool.
- 4. Check the candidate's knowledge and understanding of the procedure. The candidate is not allowed to use the skin recolonisation tool.

DO NOT COMPLETE THIS SECTION IF INCISE DRAPES ARE NOT USED IN THIS SPECIALITY





3 The sales story Introduce your solution

Clinical evidence

- 9 Elliott et al. Antimicrobial activity and skin permeation of iodine present in an iodine-impregnated surgical incise drape. J. Antimicrobial Chemotherapy. 2015.
- 11 Yoshimura et al. Plastic iodophor drape during liver surgery operative use of the iodophor impregnated adhesive drape to prevent wound infection during high risk surgery. World J. Surgery. 2003; 27:685-688
- 12 Bejko et al. Comparison of efficacy and cost of iodine impregnated drape vs. standard drape in cardiac surgery: Study in 5100 patients. J Cardiovasc Trans. Res. 2015; 8:431-437

Disrupt questioning

- Can you afford not to use loban?
- ▶ Link to SSI/morbidity
 - ▶ Link to cost saving study
 - ▶ Professional reputation
 - ▶ Antimicrobial resistance

loban has been shown to reduce the risk of SSI and SSI can contribute to morbidity.

The cost of treating SSIs has been proven to be more expensive than using loban in the first place.

What would increased SSI rates or morbidity do to a surgeons reputation? How about his/her ability to get private work and additional income?

Around 30% of infections can be prevented through the application of existing knowledge and tools.¹⁴ loban is the most underused tool across the surgical pathway. We cannot wait until antibiotics no longer work before we improve surgical practice, we have to begin now.

Iodine from loban reaches microbes in the deeper skin layers, and has been shown to reduce the risk of surgical site infections

Supporting information

Iodine from loban has been shown to be present at levels required for microbial death at a depth of 1000-1500µm i.e. reaching the deeper layers of the skin around the hair follicles.⁹

The microbial activity of loban suppresses microbial regrowth at and around the surgical incision site.

Clinical data has shown that loban can help to reduce the risk of infection:

Yoshimura study

Antiseptic



12.1% SSI

Antiseptic and loban



3.1% SSI

Bejko study

Standard drape



6.5% SSI

loban



1.9% SSI



Despite the additional upfront cost of loban, a recent study demonstrated that the use of loban can deliver overall cost savings of €957 per patient (approx. £650 per patient).¹² This is due to an increased risk of SSI without the use of loban and the high costs associated with the treatment of SSIs.

Antibiotics are a valuable resource, but their continued overuse increases incidence of antimicrobial resistance. With no new strains of antibiotics discovered since the 1990's we are on the cusp of a post-antibiotic era. The UK antimicrobial strategy aims to prolong the use of antibiotics. The adherence to good infection prevention and control principles is vital. As loban can reduce the risk of surgical site infection, it should form part of the surgical care bundle.





Clinical studies

Study

Fairclough et al. Rate of bacterial recolonisation of the skin after preparation: four methods compared. Br. J. Surg. 1987; 74:64

Objectives

- 1 Understand the process of skin recolonisation
- 2 Understand the impact of different preps on skin recolonisation rate

Methodology

15 volunteers lay supine in empty theatre for 3 hours. Different preps applied to areas of the volunteers abdomen.

- 1 Chlorhexidine in alcohol
- 2 Povidone iodine in alcohol
- 3 Alcohol + clear incise drape
- 4 Alcohol + loban

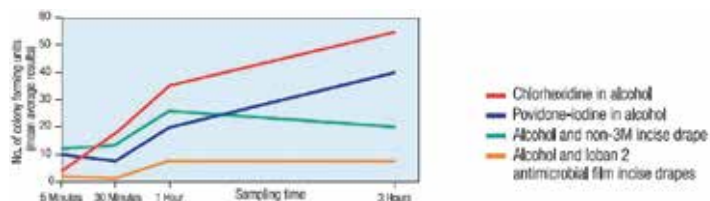
Samples were taken from each area at 5, 30, 60 and 180 mins.

Findings

Recolonisation of the skin surface occurs progressively.

Recolonisation was less after preparation with loban than with other skin preps.

The difference of loban v other preps was significant at 60 mins ($p=0.05$) and highly significant at 180 mins ($p=0.01$).



Study

Dewan et al. The use of an iodophor-impregnated incise drape in abdominal surgery – a controlled clinical trial. Aust. N. Z. J. Surg. 1987;57:859-863

Objectives

- 1 The effect of loban on wound contamination
- 2 The effect of loban on subsequent wound infections

Methodology

A prospective randomised clinical trial based on 1016 patients undergoing abdominal surgery. 529 patients received antiseptic + loban, 487 patient received antiseptic alone.

To measure wound contamination a swab was taken during surgery at the wound closure stage.

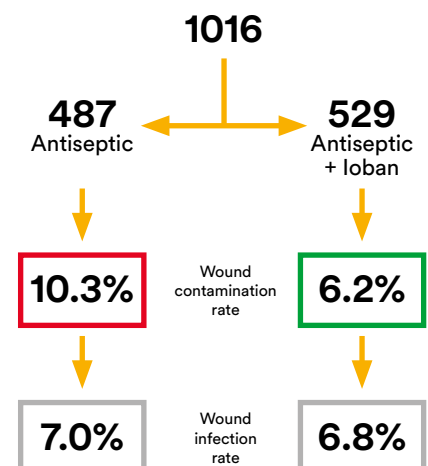
Infection Control Nurse reviewed the patient's surgical wound at 3–4 days, 8–10 days and 3 weeks post-op.

Findings

Wound contamination at the completion of surgery was reduced by the use of loban.

Contamination was observed in 6.2% of wounds draped with loban v 10.3% of wounds with no drape. ($p=0.03$).

There was no effect on wound infection rates. Infection rate with loban was 6.8% v no drape at 7.0% ($p<0.05$).





Clinical studies

Study

Yoshimura et al. Plastic iodophor drape during liver surgery operative use of the iodophor impregnated adhesive drape to prevent wound infection during high risk surgery. World J. Surgery. 2003; 27:685-688

Objectives

Investigate the risk factors associated with wound infection – with a special attention to ioban.

Methodology

A retrospective study on 296 patients undergoing high risk liver surgery during 1994 to 2001.

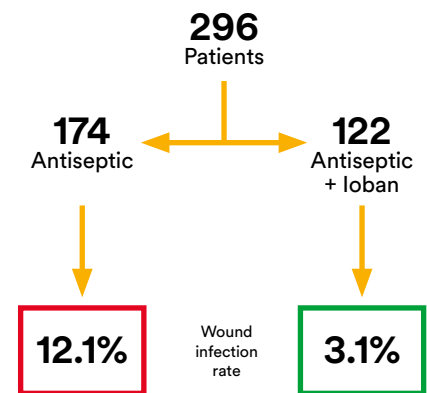
122 patients received antiseptic + ioban, 174 received antiseptic alone.

The presence or absence of wound infection was recorded up to 30 days after surgery.

Findings

Infection rates of patients treated with antiseptic alone was 12.1%. For patients treated with antiseptic + ioban infection rates were recorded at 3.1% ($p=0.01$).

The conclusion was the **non-use of ioban is a possible risk factor for wound infection after liver surgery.**



Study

Andersen et al. Efficacy of concurrent application of chlorhexidine gluconate and povidone iodine against six nosocomial pathogens. American J of Inf Cont. 2010; 38(10): 826-831

Objectives

Assess whether CHG and PI activity is more effective combined or alone.

Methodology

The antimicrobial kill activity of CHG and PI alone and combined was assessed against MRSA, MSSA, MRSE, E-Coli, A. baumannii, and P. aeruginosa. Cultures of each pathogen were cultivated and either CHG, PI or CHG+PI were added. The concentration of microbes remaining in the culture was assessed over time.

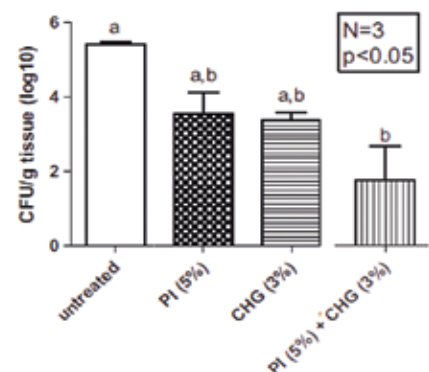
In addition, Porcine (pig) tissue was infected with MSSA and then treated with either CHG, PI or CHG + PI. After 2 hours, the number of microbes was measured.

Findings

Data from cultures demonstrated that combining CHG and PI had no negative effect on antiseptics.

Results from the porcine tissue study demonstrated that CHG + PI combined was superior to the use of either agent alone.

There may be clinical benefits to using a combination of CHG and PI to prepare skin prior to surgery.





Clinical studies

Study

Elliott et al. Antimicrobial activity and skin permeation of iodine present in an iodine-impregnated surgical incise drape. J. Antimicrobial Chemotherapy. 2015

Objectives

- 1 Assess effectiveness of loban against MRSA
- 2 Demonstrate the permeation of iodine into the skin

Methodology

Human skin was inoculated with EMRSA and then incubated for 5 mins or 18 hrs. Following incubation a 3 × 3 cm piece of loban, clear incise drape or no drape (control) was applied to the skin. After 5 mins, 2 h or 6 h application time, the drapes were removed. Bacteria was then removed from the skin and measured.

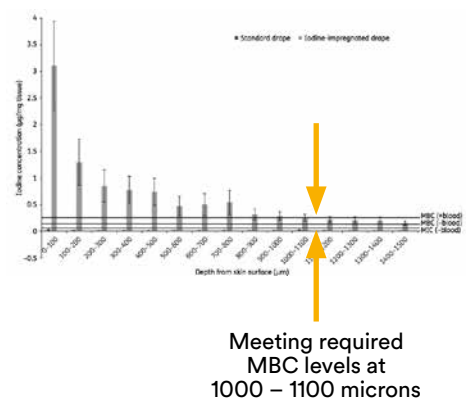
To measure permeation of iodine, skin samples were cryogenically frozen and biopsies 7mm in diameter were removed. The concentration of iodine in each biopsy was then measured.

Findings

loban demonstrated superior antimicrobial activity compared with the non-use of a drape.

The iodine from loban penetrated into the deeper layers of the skin. In conclusion the use of loban may reduce the number of bacteria present on the skin and reduce likelihood of bacterial recolonisation at the surgical site, thereby reducing the risk of SSI.

The use of loban is preferable to the use of a standard drape or non-use of a drape.



Study

Bejko et al. Comparison of efficacy and cost of iodine impregnated drape vs. standard drape in cardiac surgery: Study in 5100 patients. J Cardiovasc Trans. Res. 2015; 8:431-437

Objectives

- 1 Assess the efficacy of loban v standard incise drapes (incise drapes)
- 2 Evaluate cost effectiveness of each drape

Methodology

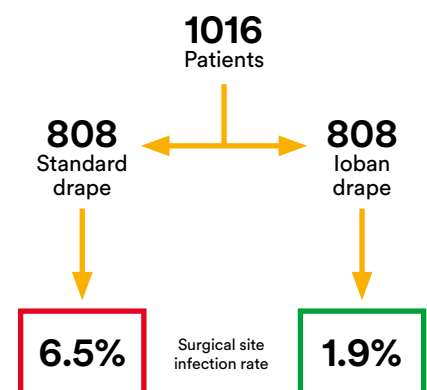
Prospective randomised study of patients undergoing cardiac surgery. A total of 1016 patients were matched in terms of risk factors. 808 patients received antiseptic + standard drape, 808 patients received antiseptic + loban.

The overall costs for each group was then measured, taking into consideration the cost of drapes, antibiotics, VAC therapy, sternal wound revision, staff salaries and extended hospital stay.

Findings

SSI rates for the group which received a standard drape was measured at 6.5%. In comparison the SSI rate of the group which received loban was measured at 1.9% (p=0.001).

A cost analysis demonstrated that although the cost of loban was approximately double the cost of a standard incise drape, in total its use offered **cost savings of €957 per patient.**





loban competitor information

Since its introduction to the market in 1980, loban is still the only iodophor impregnated drape on the market with clinical evidence to support its use. As such, there are no real competitors to loban, only its non-use. However, that being said, there are a couple of products on the market which you may come across, which are detailed below.

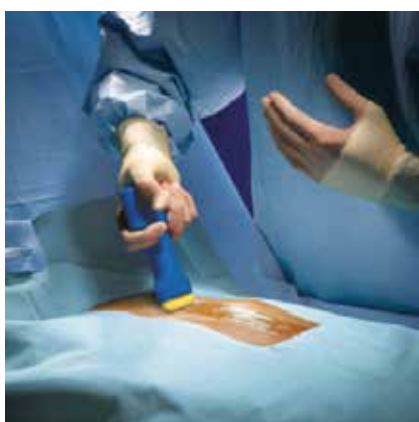


Integuseal, Halyard Health

Website description

InteguSeal Microbial Sealant is a sterile film-forming cyanoacrylate-based product provided in a ready-to-use applicator. The product is intended to be applied on the skin over commonly used surgical skin preparation products prior to a surgical incision. Upon polymerisation, InteguSeal bonds to the skin and immobilises the bacteria which survive the application of antimicrobial surgical skin preparation products.

InteguSeal can be used in combination with surgical skin preparations including iodophors and 2% chlorhexidine gluconate with alcohol. It is intended to remain on the skin following the completion of the surgical procedure without requiring removal. The incision is closed and dressed according to existing standards of care and, following surgery, InteguSeal naturally sloughs off the skin over the course of a few days.



Clinical discussion

- ▶ Integuseal reduces microbial contamination by physically immobilising micro-organisms
- ▶ It is a skin sealant
- ▶ It is not comparable to loban as it has NO microbial activity
- ▶ Wears away in 3–7 days
- ▶ Halyard Health uses data which shows Integuseal delivering microbial reduction vs an antimicrobial drape. This is based on Integuseal v Acti-Gard Drape not loban. Please note that Acti-Gard is no longer on the market

Study

Eyberg C et al.; **An In vitro Time-kill Study to Compare the Antimicrobial Activity of Three Antimicrobial Surgical Incise Drapes;**
Poster publication at SHEA 2009

Objectives

Measure the antimicrobial activity of three antimicrobial drapes: loban, Acti-Gard and Microban vs Steri-Drape (which has no antimicrobial activity)

Methodology

Twelve different microorganisms were added to the surface of each drape, and the bacterial kill rate was measured by taking samples at 30, 60 and 90 minutes.

Findings

After 90 minutes, loban™ reduced bacterial counts to a greater extent than either of the other antimicrobial drapes for all 12 microorganisms.

Using an iodine-based antimicrobial (loban™) gave superior antimicrobial results.

Superior results were demonstrated in the case of MRSA and MRSE.



Microban, Microtek

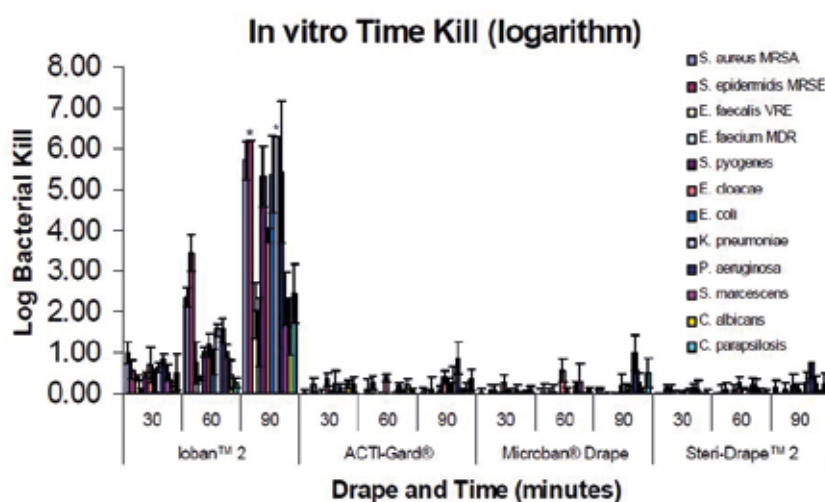
Website description



Microban® protection is permanently built-in throughout the film to control bacterial growth. Effective against a broad spectrum of bacteria. Prolonged protection that lasts not just hours, but through the longest surgical procedures. Non-toxic, latex, and iodine free. Improved transparency for an unobstructed view of pre-surgical markings regardless of skin colouration. Prolonged protection that lasts not just hours, but throughout the longest surgical procedures. Non-toxic, ideal for iodine sensitive patients.

Clinical discussion

- ▶ The main ingredient in Microban is triclosan. Triclosan is registered with the EPA for use as a preservative
- ▶ According to the CDC Guidelines for the prevention of Surgical Site Infections 1999, iodophors (active agent in Ioban) are deemed to be broader spectrum antiseptic agents than triclosan
- ▶ Triclosan is added to the backing of the drape and an adhesive is applied over its surface. Therefore the antimicrobial agent of Microban does not come in direct contact with the skin
- Microban claims to possess antimicrobial activity, but in a poster publication from Eyberg et al. (SHEA 2009) it was shown that Microban does not have better antimicrobial kill than Steri-Drape 2



* No organisms were recovered from any of these samples at this time point, so the standard deviation was 0.00.



Frequently asked questions



Procedures

I don't need to use loban in my specialty, it's only needed in orthopaedics.

loban can be used for all surgical procedures but has the most benefit in clean and clean contaminated surgeries. Provide examples of this. e.g. colorectal, vascular and general surgery.

But we mostly perform laparoscopic surgeries, and not open surgery.

loban can be used for all surgeries, including laproscopics. Although it cannot be used in ophthalmics.

You can't use loban for c-sections!

loban can be used for c-sections and there is no contraindication for use during pregnancy. Given the surface area of skin exposed to the loban drape along with the average duration of a typical caesarean section surgery of 45 to 60 minutes, systemic exposure of iodine to the unborn child and to breast milk is expected to be minimal to none.

You can't use loban in paediatric surgery.

Yes you can. loban can be used in paediatric surgery but it is contraindicated in neonates (babies of four weeks or less).

Can 6661EZ loban incise drapes be used as a wound dressing?

The 6661EZ loban incise drape is not intended for use as a wound dressing. If you customer needs a large transparent dressing, the 3M™ Tegaderm™ 1629 dressing should be recommended.

Infection rates

I don't have an issue with high infection rates.

Infection rates are often understated. Try and establish if this is a hidden issue. Do they have an SSI surveillance programme?

Skin prep

I use ChloraPrep so I don't need loban.

This is untrue. Skin preps only reduce the skin microbes by a certain number of logs and recolonisation begins as soon as prepping is finished.

Chlorhexidine is known to have a residual effect up to 48 hours so I don't need loban.

This may be so but loban provides added protection with a sterile surface which gives you assurance the skin organisms are being reduced especially if the procedure time increases. There is evidence to suggest that skin preps only last in effectiveness for short periods and there is also the likelihood that the skin prep may be washed away during the procedure. You can refer to the Elliott study here, where loban has been shown to penetrate the deeper layers of the skin.

You can't use loban with ChloraPrep.

Yes you can. We have evidence supporting the use of loban with chlorhexidine in the Andersen paper. In addition, we can send out a letter explaining why and how they are compatible.

Our hospital protocol states that skin prep alone is good enough.

Try and uncover what leads them to come to this conclusion. You may find that taking them through the skin recolonisation story will help their understanding as to why loban should be used in conjunction with skin prep.



Frequently asked questions



Clinical evidence

NICE Guidelines are just guidelines, they are advisory, not mandatory.

Guidelines are not mandatory but if all measures are not taken to reduce harm to the patient and there is suggested guidance around beneficial interventions then the trust can be left exposed if a patient does develop an infection. Guidelines help us to achieve best practice and best patient outcomes.

There aren't any randomised controlled trials supporting loban.

There are an extensive number of studies which support the use of loban (refer to those included within this booklet if needed). It is unlikely that there will ever be a randomised control trial. This would require a very large number of patients to make it statistically significant and this would be very expensive and also take a very long time. Also it might be very difficult to get this through an ethics committee as selecting which patients get the intervention and which don't may be considered ethically questionable, however there is extensive clinical evidence supporting the use of loban.

I need to see clinical evidence of 'nothing' vs 'loban.'

You can refer to the Elliott study here, where loban demonstrated superior antimicrobial activity compared with the non-use of a drape.

Cost

loban is expensive.

Try and understand how they have arrived at this conclusion. Each surgical site infection is estimated to cost between £814 and £6,626 to treat and can result in a patient staying three times longer in hospital. The average price of a 3M loban Antimicrobial incise drape is approximately just £7 which is negligible when compared to cost of treating a surgical site infection. In fact the Bejko study demonstrated that the use of loban can deliver cost savings of €957 per patient (approximately £650 per patient).

loban will add a cost pressure to our limited budget.

Refer to the Bejko study.

Skin and product issues

Can loban Drapes be used when a patient has an Iodine allergy?

No. It is contraindicated for use on patients with a known iodine sensitivity and neonates.

Can loban Drapes be used when a patient has a shellfish allergy?

Many people believe that you'll be at risk for having an adverse reaction to iodine if you have a shellfish allergy. This is largely a misconception. Research has shown that shellfish allergies are not linked to an iodine allergy.

Can loban compromise the skin integrity?

Provided loban drapes are applied and removed correctly there is negligible risk of compromising the skin integrity.

But I've seen that loban can cause blistering when removed.

An loban incise drape only causes skin blistering when applied or removed incorrectly. 3M has a range of resources available that can support you with all your training needs including 3M Clinical Specialists and Technical Support to provide advice on the best clinical application of loban incise drapes.

loban drapes are so difficult to apply and remove.

3M has a range of resources available that can support you with all your training needs including 3M Clinical Specialists and Technical Support to provide advice on the best clinical application of loban incise drapes.

Does loban stain the skin?

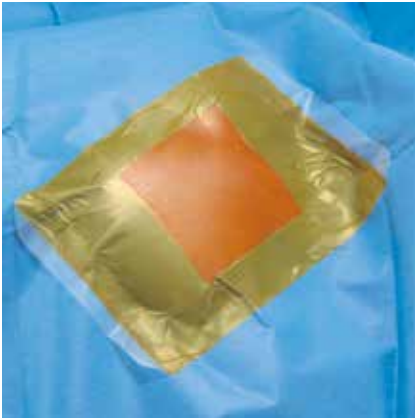
No. It does not leave any residual colour on the skin.

loban obscures previous surgical site incisions.

If there is a need to see a previous surgical scar a sterile skin marker can be used to mark the incision site prior to application of an loban drape.



Frequently asked questions



Clear v incise drapes

I use a clear incise drape. Why do I need to change to using an antimicrobial incise drape?

For the prevention of surgical site infection NICE guidelines recommend that 'if an incise drape is required, use an iodophor impregnated drape.' A clear incise drape or a non-impregnated incise drape simply immobilises the skin flora as it continues to grow throughout the procedure. Ioban has sustained antimicrobial activity throughout the procedure and reduces the risk of wound contamination which is the most common cause of an SSI.

Strong adhesion of the incise drape to the wound edge is key in clean and clean contaminated surgery.

Studies shows that increasing drape lift also increases infection rate.

Ioban adhesion to skin is designed to be more effective than clear incise drapes. This is due to the combination of the pressure sensitive adhesive and the presence of iodophor directly incorporated into the adhesive.

Switching from clear incise to a 3M™ Ioban™ incise drape will result in a cost pressure.

There is evidence to show that clear incise may increase the risk of a surgical site infection. The cost of a surgical site infection will be significantly more than the cost of the upfront cost of Ioban.





3M™ Ioban™ 2 Antimicrobial incise drape

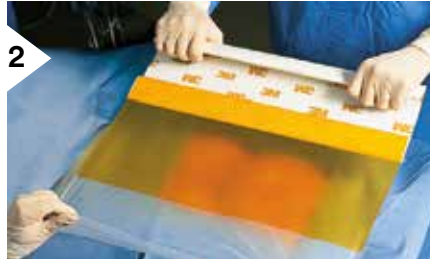
Application



1
Disinfect the skin with your usual skin preparation. Allow the skin preparation agent to dry completely.

Rationale

- ▶ The purpose of skin prepping is to reduce microbial flora with the least amount of tissue irritation
- ▶ Pressure-sensitive adhesives will not adhere to wet surfaces.



2
Apply the incise drape to thoroughly dry, intact skin. Hold incise drape a few inches above the skin. Grasp edges of non-adhesive film handle. Firmly peel off paper liner.



3
When 'stop' symbol appears, discontinue peeling.



4
Smooth the drape first along the intended incision line with a sterile towel. Working away from the incision line, smooth the remainder of the drape into place.

Rationale

- ▶ If the drape is adhered securely at the wound edge, it reduces the likelihood of bacteria entering the wound
- ▶ Sufficient contact between the iodophor adhesive and the skin is necessary to provide antimicrobial activity that cannot be washed away



5
Peel remainder of drape off paper liner and complete drape application.

Guidance for all 3M Incise Drapes

Do

- ▶ Apply to prepped, dry skin
- ▶ Apply using slight tension
- ▶ Remove by peeling drape at 180° angle whilst supporting the skin

Do not

- ▶ Overstretch the drape during application
- ▶ Defibrillate through the drape
- ▶ Use Ioban 2 antimicrobial incise drapes on iodine-sensitive patients



3M™ Ioban™ 2 Antimicrobial incise drape EZ

Application



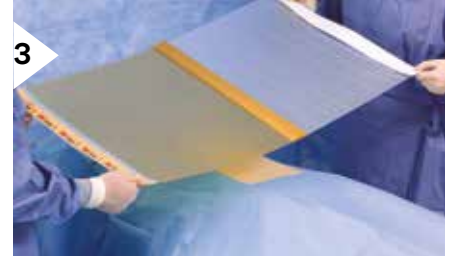
1
Disinfect the skin with your usual skin preparation. Allow the skin preparation agent to dry completely.

Rationale

- The purpose of skin prepping is to reduce microbial flora with the least amount of tissue irritation
- Pressure-sensitive adhesives will not adhere to wet surfaces



2
Using two people, remove the liner on the incise drape.



Rationale

- This will keep slight tension on the drape and keep it wrinkle-free during application.



4
Hold the drape over the intended incision site with adequate tension, but without overstretching.

Rationale

- Applying the drape without stretching avoids skin tension and assists maintenance of skin integrity
- Excessive tension at the wound edge can cause the film to lift



5
Smooth the drape first along the intended incision line with a sterile towel. Working away from the incision line, smooth the remainder of the drape into place.

Rationale

- If the drape is adhered securely at the wound edge, it reduces the likelihood of bacteria entering the wound
- Sufficient contact between the iodophor adhesive and the skin is necessary to provide antimicrobial activity that cannot be washed away

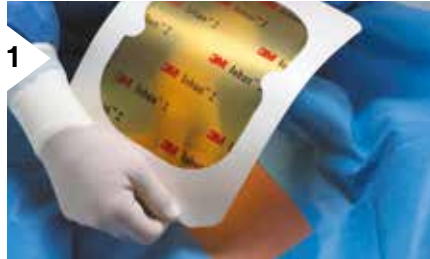


6
After the drape has been applied, remove the card handle from the drape.

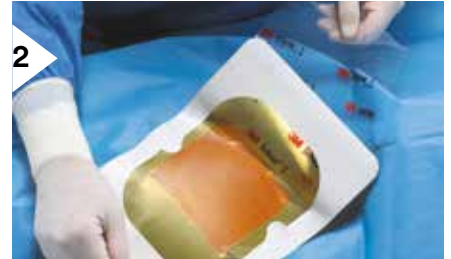


3M™ Ioban™ 2 Antimicrobial incise drape 6661EZ

Application of framed delivery



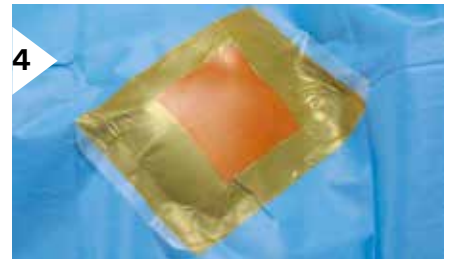
1 Grasp tabs and align drape over incision site.



2 Adhere drape to the sterile field as release liner is peeled away.



3 Remove frame...



4 Removal is same as Ioban Antimicrobial incise drape EZ





3M™ Ioban™ 2

Antimicrobial incise drape, EZ and 6651EZ

Removal



Prior to skin closure

Create a crease in the drape by pinching the film near the incision's edge.

Rationale

- Creates a 'handle' for easy removal



Pull up on crease, separating the drape from the skin at the incision's edge, exposing up to three centimetres of skin surface. Proceed with closure.

Rationale

- Separating the drape from the skin at the incision's edge exposes the skin for closure



After skin closure

Before removing the drape, first cover the incision with the dressing. Remove the incise drape by supporting the skin, not the drape and gently folding back at 180° on itself. Do not pull the drape.

Rationale

- Protects the incision site during drape removal
- Maintains skin integrity while allowing safe and easy drape removal
- Pulling on the drape could damage the patient's skin

Storage conditions

- For best results, store at room temperature
- Avoid excessive heat and humidity
- 2 year shelf-life

Symbols explained



Sterile unless package is damaged or open



This product and package do not contain natural rubber latex



Product information

loban 2 Antimicrobial Incise Drapes



loban benefits by 3M

- ▶ Provides continuous broad spectrum, antimicrobial activity throughout the procedure.
- ▶ High moisture-vapour transmission rate (MVTR) for breathability ensuring adhesion to the skin throughout the procedure.
- ▶ Low memory stretch allows limb mobilisation or heavy retraction with reduced tension to the skin.
- ▶ Latex free

loban benefits by Mr Philip Roberts, Consultant Orthopaedic Surgeon

- ▶ loban drapes protect and seal skin edges which is key during minimally invasive surgery
- ▶ Skin markings can be seen and maintained under loban drapes, ensuring wound edges are realigned perfectly. Better skin closure means less chance of an infection and improved appearance for the patient
- ▶ Use of loban drapes allows safe extension of the wound and allows you to cover large areas just in case you need to make further incisions
- ▶ loban drapes allow you to perform more accurate surgery as you can expose key landmarks rather than hiding them under a surgical drape






Did you know...

loban 2 Antimicrobial incise drapes adhere securely to the skin, reducing the risk of drape lift. Drape lift may lead to a 6-fold increase in surgical site infections.¹³






What is the difference between loban 2 and loban EZ antimicrobial drapes?

Feature	loban 2 incise drapes	loban 2 EZ incise drapes	Framed loban (6661EZ)
Lining	Paper	Polyethylene	Polyethylene
Application system	Non-adhesive film handle	Removable application handle	Framed
Ease of use	Two-person application	Two person application	One person application

3M™ loban™ 2 Antimicrobial Incise Drapes

3M Cat No.	Product	Overall size	Adhesive area	Items/box	Boxes/case	Recommended application
6635	Treatment incise 	15cm x 20cm	10cm x 20cm	10	4	For small limb surgery i.e. fingers and toes
6640	Small incise 	44cm x 35cm	34cm x 35cm	10	4	Small limb surgery, ankles, wrists
6650	Medium incise 	66cm x 45cm	56cm x 45cm	10	4	Hernia repair, paediatrics
6648	Large incise 	66cm x 60cm	56cm x 60cm	10	4	Knees, shoulders, abdominal procedures
6651	Extra large incise 	66cm x 85cm	56cm x 85cm	10	4	Hips, cardiac surgery, major abdominal surgery

3M™ loban™ 2 Antimicrobial Incise Drapes EZ

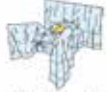








3M Cat No.	Product	Overall size	Adhesive area	Items/box	Boxes/case	Recommended application
6661EZ	Frame delivery 	30cm x 20cm	26cm x 20cm	50	2	Paediatric surgery, ankles, wrists
6640EZ	Small incise 	60cm x 35cm	35cm x 35cm	10	4	Small limb surgery, ankles, wrists
6650EZ	Medium incise 	90cm x 45cm	60cm x 45cm	10	4	Hernia repair, paediatrics
6648EZ	Large incise 	90cm x 60cm	60cm x 60cm	10	4	Knees, shoulders, abdominal procedures
6651EZ	Extra large incise 	90cm x 85cm	60cm x 85cm	10	4	Hips, cardiac surgery, major abdominal surgery



Product information

3M Drapes with loban 2 Incise Area (Specialty Drapes)

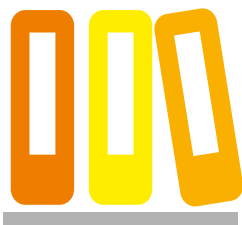
3M Drapes with loban 2 Incise Area (Specialty Drapes)

3M Cat No.	Product		Overall size	Adhesive area	Items/box	Boxes/case	Recommended application
6665	Abdomino-perineal drape		200cm x 270cm	35cm x 46cm	10	1	General surgery
6677	Cardiovascular sheet		274cm x 338cm	41cm x 92cm	6	1	Cardiac surgery
6681	Cardiovascular drape		230cm x 230cm	30cm x 152cm	8	1	Cardiac surgery
6682	Cardiovascular drape		330cm x 254cm	78cm x 43cm	8	1	Cardiac surgery
6657	Pouch with 3M loban incise film		87cm x 74cm	30cm x 30cm	10	1	Obstetrics, gynaecology
6697	Caesarean section drape		196cm x 292cm	30cm x 30cm	5	1	Obstetrics, gynaecology
6617	Isolation drape		320cm x 213cm	50cm x 24cm	5	4	Orthopaedic
6619	Large isolation drape		328cm x 254cm	70cm x 32cm	5	1	Orthopaedic
6687	Craniotomy drape		196cm x 432cm	36.8cm x 21.4cm	10	1	Neurosurgery



Notes

Notes



Appendices

loban sales guide references

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