octylseal™ Tissue Adhesive
The Next Generation 2-Octyl Cyanoacrylate
A New Generation of 2-Octyl Cyanoacrylate Products

Medline’s octylseal tissue adhesive features a proprietary formulation with pure 2-octyl cyanoacrylate. This formulation is designed to create an exceptionally strong, long-lasting and flexible polymer layer.

2-octyl cyanoacrylates represent over 90% of the surgical adhesives used today. This high level of clinical acceptance is due to their flexibility, strength and microbial barrier properties. With octylseal, Medline has improved the state of the art for products formulated with 2-octyl cyanoacrylate as the adhesive ingredient.

The octylseal difference

- Exceptionally Strong and Flexible
  Contains 2-octyl cyanoacrylate
- High Viscosity
  For total control over the application process
- Minimal Heat Reaction During Polymerization
  Reduced discomfort for patients

This remarkably strong tissue adhesive has a patented, controlled-viscosity formula. This viscosity helps prevent octylseal from running into areas not intended for adhesive exposure (i.e., eyes when repairing a wound on the brow). It polymerizes (dries) without the use of an external activator, thus minimizing the exothermic reaction and associated discomfort. Plus, its distinctive violet color makes it easy to observe during application.

In vitro studies have shown that octylseal acts as a barrier to microbial penetration, as long as the adhesive film remains intact. (Clinical studies were not conducted to demonstrate microbial barrier properties.)

An effective suture replacement

Porcine skin with two similar wounds. Wounds closed with octylseal (upper) and sutures (lower). Octylseal’s glue line doesn’t rupture with flexion.
Deep dermal sutures
Filament sutures
Staples
Strips

Exceptional Strength and Flexibility

Less need for sutures

octylseal provides a strong, safe and effective suture replacement for flat areas with low tension and for laparoscopic, plastic and facial-triangle surgeries. This can reduce OR time and eliminate several challenges, such as surgical site trauma due to traditional suturing, inflammation and costs.

When used in conjunction with sutures, staples or strips, octylseal is always recommended as a topical wound sealant regardless of the closure method. octylseal aids closure and helps protect against water, thus allowing the patient to shower.

For a variety of applications

Two applicators in each pouch

Precision tip applicator for detailed application and a foam tip applicator for uniform spreading.
Easier Application

octylseal’s unique, syrup-like viscosity provides exceptional flow control. A single application or layer can close a wound because octylseal is much more likely to be retained at the wound site instead of leaking away. Compared to competitive products, octylseal is much less likely to run into undesired areas or onto the physician’s hand. It’s also easier to visualize because of its distinctive violet color.

Physicians can easily dispense the perfect amount of octylseal by simply applying pressure to the dispenser tube. With some competitive adhesives, the product only flows by gravity, reducing dispenser maneuverability. octylseal applicators are also glass-free, so there’s no chance of glass particles entering the wound, and there’s no risk of the glass ampoule piercing surgical gloves during application.

Each pouch contains two tip applicators: a precision tip for detailed application and a foam tip for uniform spreading – both with self-puncturing caps. Physicians can change from one tip to the other over multiple incisions (on the same patient during the same procedure). octylseal tends NOT to clog the applicator because the applicator tip does not require or contain a reactive activator ingredient.

Each octylseal applicator holds 40 percent more product (0.7 g vs. 0.5 g for butyl and other cyanoacrylates). octylseal applicators are designed to dispense most of the product, with very little getting trapped and remaining unused inside the tube.

Steps for application

Step 1 — Cleanse and prepare the wound
Step 2 — Open the device
Step 3 — Choose one of two tips provided and twist onto tube, puncturing seal.
Step 4 — Squeeze tube gently and apply over approximated skin edges.

Topical application

To hold closed easily approximated skin edges of wounds from:
- Surgical incisions
- Punctures from minimally invasive surgery
- Simple, thoroughly cleansed, trauma-induced lacerations
- And in conjunction with, but not in place of, deep dermal sutures
More Comfort for Patients

No chemicals in the product tip means no heat-related discomfort for the patient

Patients experience a more comfortable application with octylseal because it polymerizes (dries) without an external activator. With some 2-octyl cyanoacrylate surgical adhesives, a polymerizing activator in the tip can result in increased heat at the wound site (known as exotherm). This unintended generation of heat can be very uncomfortable to patients with trauma injuries. With octylseal, however, there is no external activator, so the exothermic reaction is greatly reduced.

Indications

octylseal is intended only for topical application, to hold closed, easily approximated dermal and epidermal layers in incisional or laceration type wounds. This includes punctures from minimally invasive surgeries and simple, thoroughly cleansed, trauma-induced lacerations. octylseal may be used in conjunction with, but not in place of, deep dermal sutures as a topical sealant.

Contraindications

- Do not use octylseal on any wound with evidence of active infection or gangrene, or on wounds of decubitus etiology.
- Do not use octylseal on mucosal surfaces or across mucocutaneous junctions (e.g., oral cavities, lips), or on skin that may be regularly exposed to body fluids or with dense natural hair (e.g., scalps).
- Do not use octylseal on patients with a known hypersensitivity to cyanoacrylate or formaldehyde.
- Do not allow octylseal to contact the eyes.
Advantages Over Other 2-Octyl Cyanoacrylates (CA)

No thermal discomfort

Studies show that octylseal causes less of an exothermic reaction, which is defined as the creation of heat or thermal energy, as the product polymerizes on moist skin or skin equivalent.

Clinical use of the product has shown that it meets or exceeds expectations, closing wounds with ease and convenience, and without trauma.

Viscosity is remarkably higher yet the product is easily applied

Compared to a competitive cyanoacrylate glue-based product, octylseal was shown to have much higher viscosity. This syrup-like viscosity helps physicians to keep the product from getting deep in between wound edges, which can impair healing and affect cosmetic results. With octylseal, physicians can often close a wound with a single application.

Wound closure strengths are comparable

A series of tests that examine the strength of bonding of incisions made on pig skin indicate that the bond strength created with octylseal and a leading competitive product are comparable.
Larger molecule – for a more flexible film

The FDA has approved only two types of cyanoacrylates as surgical tissue adhesives: butyl and octyl. The 2-octyl cyanoacrylate, due to its longer molecular size, tends to form a more flexible film.

Butyl cyanoacrylates tend to cure faster from a speed-to-cure perspective. This faster cure, however, comes at a significant cost. Due to its fundamentally different, smaller and more compact molecular structure, butyl cyanoacrylates form a more brittle polymer film on skin. Such a polymer film obtained from butyl cyanoacrylates has a propensity to easily crack or slough off in areas that flex with normal motion. Such rupture of the film’s integrity around the incision site can compromise the microbial barrier and limit the range of suitable wound sizes.

In short, octylseal reacts with the skin to provide longer-lasting protection than conventional butyl cyanoacrylates.

Studies have proven the effectiveness of 2-octyl cyanoacrylate (octyl CA) versus butyl cyanoacrylates (butyl CA).

Octyl vs. butyl study

In a clinical study by Singer et al, bursting strength for octyl was 66% higher than that butyl CA (358+/−136 mmHg vs. 215+/−90 mmHg), with a confidence interval of 95% and statistical significance of P=0.002.4

When tested to their limits:
- Butyl CA experienced cohesive failure (splitting), occurring 86% of the time; wounds closed with butyl CA are more likely to exhibit wound dehiscence post operatively
- Octyl CA experienced cohesive failure only 14% of the time

Appearance of the “glue line”:
- Octyl CA: thick, uniform, smooth and strong.
- Butyl CA: thin, irregular, cracked, potentially serving as a portal of entry for bacteria and infection.1

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No need to refrigerate

While butyl products have a shorter lifespan when not refrigerated, octylseal is stable and storable at room temperature during the shelf life indicated on the package.

Patients may shower and pat the incision area dry but should not soak or wash the area.

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Count on Medline for a complete selection of post-operative care products

Arglaes Post-Operative Dressing
Arglaes Film and Arglaes Island offer protection to post-operative incision sites by providing a barrier that inhibits the growth of new bacteria.

Optifoam Ag Silver Antimicrobial Dressing
Optifoam Ag provides a targeted release of ionic silver that provides an antimicrobial barrier for up to seven days.

MARATHON® Liquid Skin Protectant
MARATHON is recommended to help protect recently closed wounds from friction and moisture damage.

For more information, contact your Medline representative, or visit Medline.com/woundcare

References: