



ADVANCED
WOUND CARE

MARATHON[®]

NO-STING CYANOACRYLATE SKIN PROTECTANT



The science of skin protection

CLINICAL EVIDENCE

Evaluation of a Cyanoacrylate Protectant to Manage Peristomal Skin Irritation under Ostomy Skin Barrier Wafers – Lit 236R

Approximately 10-70% of ostomy patients experience peristomal skin problems due to mechanical, chemical, and microbial causes. Major causes of peristomal skin irritation include urine leakage, undigested food matter, and feces. The purpose of the study was to evaluate the efficacy of a cyanoacrylate liquid skin protectant in managing peristomal skin irritation under ostomy wafers in acute care and outpatient settings. The peristomal skin assessment discomfort levels decreased from 9.5-10 to 3.5 at the first wafer change and were absent by the second wafer change. There was an increase in time between wafer changes, and epidermal resurfacing occurred within 10.2 days in outpatients and 7 days in acute care patients. Patients reported high satisfaction because of the reduced discomfort and immediate wafer adherence at all wafer changes. The cyanoacrylate was found to be a viable option to manage peristomal skin irritations under ostomy wafers in acute and long-term care settings.



Day 1



Day 10

Milne CT, Saucier D, Trevellini C, Smith J. Evaluation of a cyanoacrylate protectant to manage peristomal skin irritation under ostomy skin barrier wafers. Presented at: Presented at the Clinical Symposium on Advanced Skin and Wound Care; September 2010; Orlando, FL.

The use of a Cyanoacrylate based skin barrier in the protection of the skin around a tracheostomy – Lit 1011R

A tracheostomy is frequently associated with fluid leakage onto intact skin around the insertion point, which tends to corrode skin. The efficacy of the cyanoacrylate was assessed on 11 patients with evidence of skin damage around the tracheostomy puncture wound. The days to discontinuing the cyanoacrylate averaged 12.5 days, with an outlier of 53 days. Without the outlier, cyanoacrylate discontinuation averaged 8.5 days. Skin improvement was observed in all 11 patients, and the liquid skin protectant did not cause pain or stinging. The nursing care time appeared to decrease significantly, and a health economic study was proposed.



Day 1



Day 12

Ondrejko M. The use of a cyanoacrylate based skin barrier in the protection of the skin around a tracheostomy. Presented at: Symposium on Advanced Wound Care (SAWC); May 2013; Denver, CO.

+ TESTIMONIALS

“This product has worked miracles on our patients when NOTHING else in-house has worked. Every once in a blue moon you come across something that works the way it is advertised. Please test this product. You will not be disappointed.”

- Donald Johnston PhD, RN – MHS, RRT

HOW DOES MARATHON WORK?

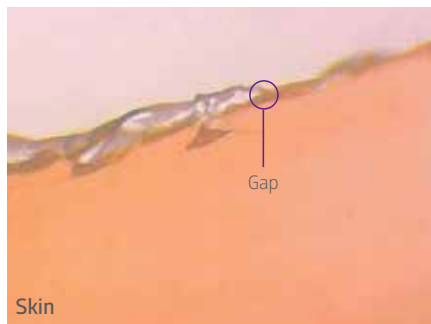
MARATHON Cyanoacrylate Skin Protectant consists of individual molecules (cyanoacrylate-based monomers) that polymerize when they come in contact with moisture on the skin surface. This reaction continues until the monomer molecules have joined either to each other (cohesion) or to molecules of substances present in skin (adhesion).

Cyanoacrylate-based barrier



A $>20\text{ }\mu\text{m}$ layer of cyanoacrylate-based barrier can be clearly seen at x200 magnification. There are NO visible gaps between the skin and Marathon, since it bonded directly to the skin.³

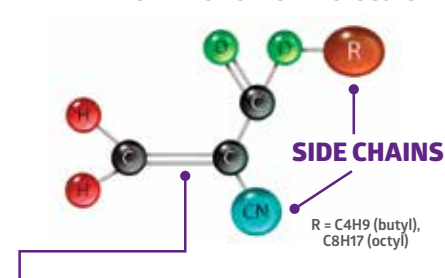
Solvent-based barrier



The approximate $<5\text{ }\mu\text{m}$ layer of a solvent-based barrier at x200 magnification is seen in this image. The gap between the skin and the solvent-based barrier is visible.³

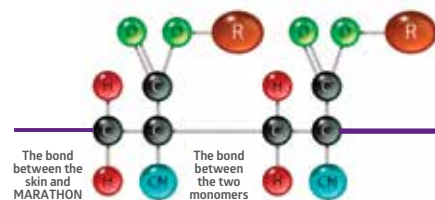
This type of bonding ensures that the product remains in place until the epidermal cells naturally slough away³, maintaining skin integrity. Since Marathon is cyanoacrylate-based, product remains on the skin and does not evaporate upon application.

MARATHON Monomer Molecule



The double bond between the two carbon atoms breaks when the monomer polymerizes, allowing it to join another monomer molecule.³

MARATHON Polymer Chain



This process is repeated a million-fold, resulting in the formation of a polymer film that protects the skin.³

WHEN SHOULD MARATHON BE USED?

MARATHON Cyanoacrylate Skin Protectant is intended to protect intact or damaged skin from friction, moisture and shear.

Indications for Use

Helps protect:

- » Skin exposed to irritation and moisture such as urine, feces, digestive juices, perspiration and wound drainage
- » Areas that are exposed to friction and shear
- » Skin from irritation caused by adhesive products

Contraindications:

- » Do not apply directly to deep, open or bleeding wounds
- » Do not apply to chronic wounds
- » Do not apply to second or third degree burns
- » Do not apply to infected areas

Clinical applications include:

Skin Protection Under Medical Devices

- » Ostomy care, including G-Tubes and tracheostomy
- » Tapes and adhesive dressings
- » Oxygen tubing

Skin Protection for Fragile and Compromised Areas

- » Perineal and perianal area
- » Periwound area
- » Skin folds (Intertrigo)
- » Heels



Skin tear, wrist



Ostomy site



Buttocks region



Closed skin

COST EFFECTIVENESS STUDIES

Cost Comparison of Treatments Used on Recalcitrant Peristomal Skin Conditions

A 70-year-old patient with an anterior posterior resection and end ileostomy experienced multiple peristomal ulcerations resistant to current best practice protocols. A comparison of peristomal ulcer regimens was calculated for cost and effectiveness. After limited success despite multiple treatment regimens, the use of Marathon Cyanoacrylate Skin Protectant was the only regimen able to bring the PUSH scale score down to zero.

| Dressing | Cost*/Dressing | Effect** |
|--|----------------|----------|
| Calcium Sodium Alginate | \$2.34 | 11-9 |
| Alginate + CMC + Ionic Silver | \$3.78 | 10-9 |
| Thin Hydrocolloid | \$0.86 | 11 |
| Silicone Based Non-Adherent Foam | \$1.92 | 11 |
| Transparent Film | \$1.00 | 11 |
| Powdered Polymer Dressings | \$6.43 | 11-7 |
| Collagen Powder/Gel | \$3.03 | 11-7 |
| Collagen Sheet | \$6.50 | 11-9 |
| Silicone Non-Adherent Contact Layer | \$4.51 | 11-7 |
| Polyvinyl Alcohol Sponge (PVA) + Methylene Blue + Gentian Violet | \$8.52 | 11-9 |
| Cyanoacrylate Monomer | \$7.23 | 9-0 |

*Costs calculated for supplies from this patients' DME supplier for a single dressing to treat ulcers when used either alone or in combination with other dressings listed.

**PUSH TOOL 3.0 from the National Pressure Ulcer Advisory Panel. Measures wound healing by surface area, exudate and type of wound tissue. Scores range from 17 to 0 with 0 being closed/resurfaced.

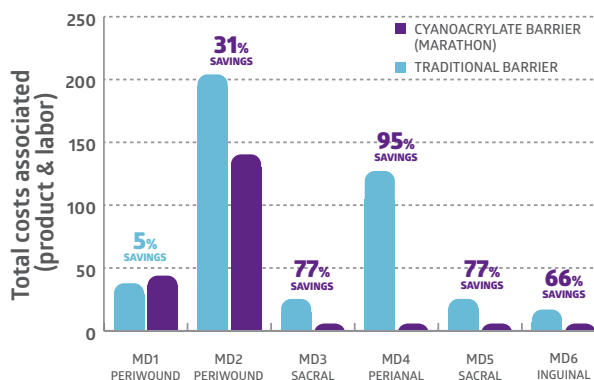
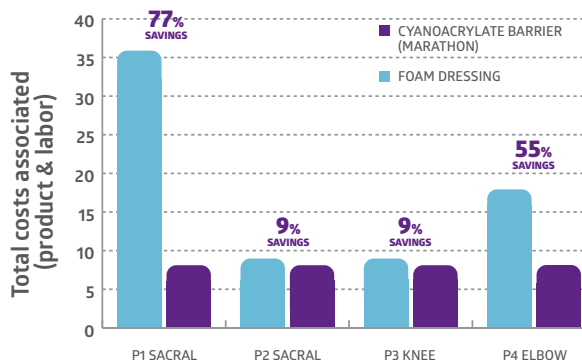
Reid J, Tucker J, Fore J. Tri-State Memorial Hospital Wound Healing Center (Clarkston, WA). Cost comparison of treatments used on recalcitrant peristomal skin complications.

Health Economic Benefits of Cyanoacrylate Skin Protectants

Twelve patients with superficial skin damage were treated with Marathon. Cost analysis was conducted comparing the cost of care seven days before and seven days after Marathon was used.

RESULTS:

The average cost of care in the management of pressure ulcers was \$18.04 using foam dressings in comparison with \$8.18 using cyanoacrylate barrier. The use of a cyanoacrylate barrier achieved cost savings between 9% and 77% when the comparison involved two or more foam dressings. The cost savings associated with the use of a cyanoacrylate barrier to manage MASD could be as high as 95% in patients with frequent fecal and urinary incontinence. An analysis of the average (excluding the outlier) shows that the traditional treatment, per patient, per week, averaged \$46.20, compared to the average cost of \$12.26 using Marathon LSP.



Woo, K.Y. School of Nursing, Queen's University, Kingston, ON Canada. Health economic benefits of cyanoacrylate skin protectants.

IN VITRO STUDIES

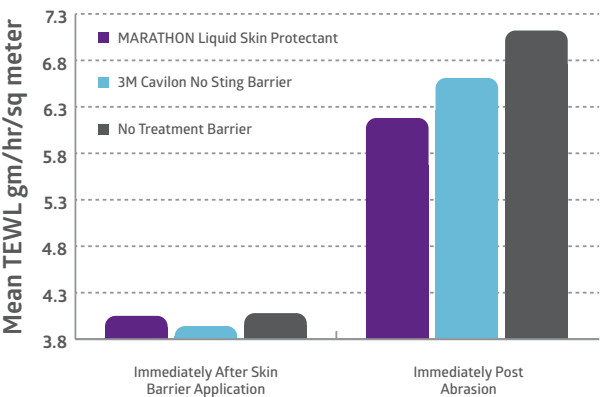
Abrasion Resistance

An independent test involving 12 people over age 60 compared how bare skin, skin with an application of Marathon Cyanoacrylate Skin Protectant, and skin with an application of 3M Cavilon® was protected from the effects of abrasion (friction).^{4,5}

Transepidermal Water Loss (TEWL) was measured at the application sites as a gauge of skin injury. High TEWL post abrasion was used as a measure of the extent of skin damage.⁶

RESULTS:

Areas where MARATHON was applied showed better protection of skin from TEWL when compared to Cavilon or no treatment at all.



| Comparison | P value |
|--------------------------|---------|
| Cavilon vs MARATHON | <0.05 |
| Cavilon vs No Treatment | >0.05 |
| MARATHON vs No Treatment | <0.001 |

Independent lab testing data on file.⁴

Physical Barrier Test

In vitro studies have shown that Marathon skin protectant acts as a physical barrier to contaminants for up to 72 hours.



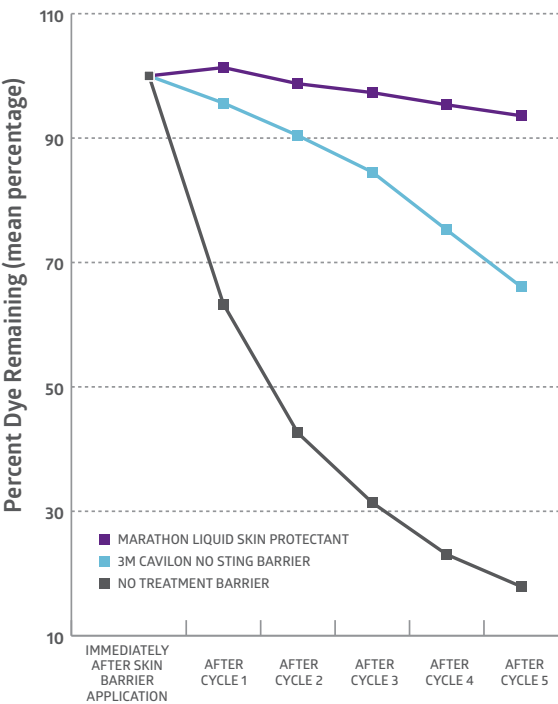
Data on file.

Corrosive Fluids and Wash-off Resistance Test

An independent test involving 12 people over age 60 compared how bare skin, skin with an application of MARATHON, and skin with an application of Cavilon resisted exposure to a corrosive fluid (synthetic urine).

RESULTS:

Areas where MARATHON was applied showed better resistance after each of the five urine and washoff cycles compared to the areas where Cavilon or no product at all were applied.



Percentage of retained dye after all five urine and wash-off cycles (mean percentage)⁷

| Comparison | Percentage |
|------------------------|------------|
| MARATHON | 94% |
| Cavilon | 66% |
| Skin with No Treatment | 18% |

| Comparison | P value |
|--------------------------|---------|
| Cavilon vs MARATHON | <0.05 |
| Cavilon vs No Treatment | >0.05 |
| MARATHON vs No Treatment | <0.001 |

THE BREAKTHROUGH CYANOACRYLATE **TECHNOLOGY EVERYONE'S TALKING ABOUT**

WHAT IS MARATHON?

MARATHON Cyanoacrylate Skin Protectant is a non-cytotoxic, cyanoacrylate-based monomer that forms a remarkably strong protective layer over skin. As the cyanoacrylate polymerizes, it bonds to the skin surface.¹ It resists external moisture, yet it allows the skin to breathe.

Marathon forms a remarkably strong film that:

- » Minimizes friction which helps reduce the risk of developing skin tears
- » Protects skin from prolonged exposure to moisture, which weakens and damages the skin surface making it more susceptible to breakdown²
- » Protects skin from the onslaught of corrosive body fluids such as urine, feces, digestive fluids and wound drainage

NO-STING**BREATHABLE
SKIN
PROTECTION****LONG
LASTING**

Healing and Skin Protection for Indigent Residents with a Novel Product (Cyanoacrylate) at one County Long Term Care Facility – Lit 808

In long term care, skin damage may result from incontinence, friction, pressure, trauma, and skin stripping which leads to pain and increased costs. The efficacy of the cyanoacrylate liquid skin protectant was tested on several residents with incontinence associated dermatitis (IAD) on their buttocks as well as an obese resident with denuded skin on her thigh. The cyanoacrylate did not cause stinging, and it stood up to bodily fluids. The cyanoacrylate provided the residents with strong protection from further skin damage.



Day 1



Day 16

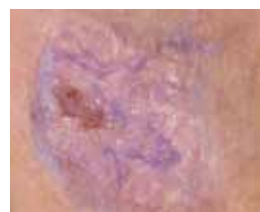
Webb M. Healing and skin protection for indigent residents with a novel product (cyanoacrylate) at one county long term care facility. Presented at: American Professional Wound Care Association Annual Conference; April 2010; Philadelphia, PA.

Evaluation of a Cyanoacrylate Protectant to Manage Skin Tears in the Acute Care Population – Lit 018R

In acute care, the skin tear incidence rate is 14-24%. Skin tears result from sheer, friction, or blunt trauma. The study examined the efficacy of cyanoacrylate dressings on 23 patients in a Medical-Surgical unit. The skin tear incidence was low. The cyanoacrylate required a single application for most of the patients, which significantly decreased costs and usage time. Nurses indicated high satisfaction with the cyanoacrylate.



Day 1



Day 8

Milne CT, Valk D, Mamros M. Evaluation of a cyanoacrylate protectant to manage skin tears in the acute care population. Presented at The Symposium on Advanced Wound Care; April 2010; Orlando, FL and the 2010 Joint Conference of the WOCN/WCET; June 2010; Phoenix, AZ.

[Click here to view detailed product information and pricing.](#)

Call 800-397-5899 to order today!

REQUEST A FREE SAMPLE



ORDERING INFORMATION

| Item No. | Description | Pkg |
|-------------|---|----------|
| MSC093005 | Marathon Cyanoacrylate Skin Protectant | 10 ea/bx |
| MSC093001 | Marathon Cyanoacrylate Skin Protectant | 5 ea/bx |
| MSC093001CE | Marathon Cyanoacrylate Skin Protectant UK | 5 ea/bx |
| MSC093INTL | Marathon Cyanoacrylate Skin Protectant Multi-Language | 5 ea/bx |

**Contact your Medline representative
or call 1-800-MEDLINE.**

For direct sales to patients, visit chooserecovery.com.

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For informative video, additional studies, as well as FAQs about Marathon, visit us at www.medline.com/try-marathon



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REFERENCES: 1. Bond P. Scanning Electron Microscope Examination and Assessment of SUPERSKIN (Liquishield® S). 2001. University of Plymouth, UK. Data held on file at MedLogic Global Limited. 2. The Merck Manuals Online Medical Library. Pressure Sores. Available at: <http://www.merck.com/mmhe/sec18/ch205/ch205a.html?qt=moisture%20skin%20damage&alt=sh#sec18-ch205-ch205a-262>. 3. Coover HW and McIntire JM. Cyanoacrylate Adhesives. In: Skeist, I, ed. Handbook of Adhesives. 2nd ed. New York: Van Nostrand R inhold Co.; 1977:569-580. 4. Abrasion Test. Data on file. 5. Pinnagoda J, Tupker RA, Anger T, Serup J. Guidelines for transepidermal water loss (TEWL) measurement. Contact Dermatitis. 1990;22:164-178. 6. Nangia A, Patil S, Berner B, Boman A et al. In vitro measurement of transepidermal water loss: a rapid alternative to tritiated water permeation for assessing skin barrier functions. International Journal of Pharmaceutics. 1998;170(1):33-40. 7. Study to Compare the Wash-off Resistance of Two Barrier Films Exposed to Synthetic Urine. Data on file.

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