

Comparative Study of Acrylic vs Silicone Eye Protection

Unlike other eye protect, the iPRO eye protectors are made from our unique patent-pending design of silicone which is incredibly kind to skin and non-porous, meaning it is resistant to bacterial build-up.

Silicone has been shown to be **very gentle** to the skin¹, with greater patient satisfaction when used as an alternative to standard adhesive tapes². Silicone has a lower surface tension and requires only a gentle force for removal³, carrying significantly **less risk of skin injury** and result in a **lower incidence of skin trauma**⁴.

Findings suggest that an older population (65 and over) are more susceptible to skin injuries caused by medical tape⁵. With a growing elderly population and advancing surgical procedures growing in complexity & duration, minimising skin trauma on removal of eye care products is essential. Therefore, our silicone iPRO fills this performance-expectation gap, especially among patients with fragile or at risk skin⁶.

Since little guidance currently exists on the appropriate selection and use of adhesive products to minimise medical adhesive related skin injuries, many other available adhesives have the disadvantage of skin trauma if they are incorrectly applied & removed³.

This can be visually shown when compared with an acrylic adhesive. Peel release force testing was conducted on both materials and found that the average peel release force required for the silicone iPRO was **92% lower** than an acrylic adhesive.



Acrylic Adhesive

- 5.78N / 25mm
- Removal of epidermal layer



Silicone Adhesive iPRO

- 0.44N / 25mm
- Minimal impact on skin area

1. McNichol L, Lund C, Rosen T, Gray M (2013). Medical Adhesives and Patient Safety: State of the Science: Consensus statements for the assessment, prevention, and treatment of adhesive-related skin injuries. J Wound Ostomy Continence Nurs 40(4): 365-80.

2. Comparison of Medical Adhesive Tapes in Patients at Risk of Facial Skin Trauma under Anesthesia. Zeng LA, Lie SA, Chong SY. Anesthesiol Res Pract. 2016;2016:4878246.

3. Medical adhesive related skin injury after dental surgery. Kim TH, Lee JS, Ahn JH, Kim CH, Yoon JU, Kim EJ. J Dent Anesth Pain Med. 2018 Oct; 18(5):305-308.

4. TY Chuang, MD; Allen H. L. Li, MD; M.W. Yang, MD; Peter C.H. Chung, MD; P.W. Lui, MD. Chang Gung "Inadvertent Eyelid Irritant Contact Dermatitis from Hypoallergenic Surgical Tape." Med J Vol. 29 No. 4 [Suppl] September 2006.

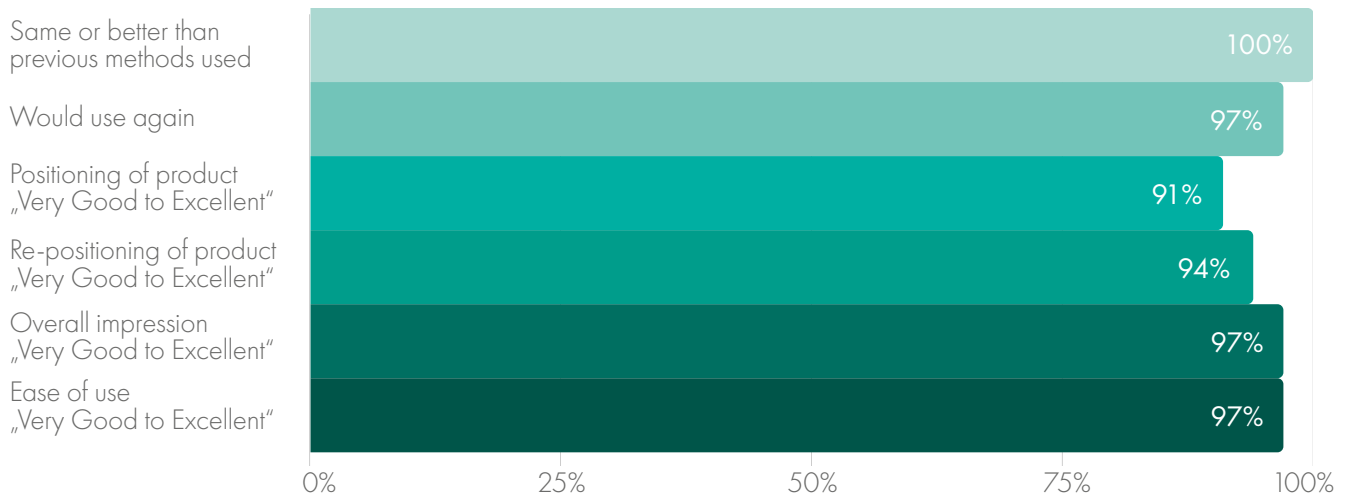
5. Konya, et al. J of Clin Nursing 2010;19:1236-42.

6. Evaluation of a new silicone adhesive tape among clinicians caring for patients with fragile or at-risk skin. Manriquez S, Loperfido B, Smith G. Adv Skin Wound Care. 2014 Apr;27(4):163-70.

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The iPRO is designed to be **flexible** & **conform** easily to the delicate eye orbital. Suitable for even the most **sensitive skin** types, the iPRO is perfect for a **gentle**, yet **reliable** approach to eye protection during surgery. Despite being **ultra-soft** to the touch, silicone is impressively **long-lasting** and **water-resistant**.

In fact, from our findings during clinical use, **97%** of users gave an overall impression of very good to excellent:



We have designed the iPRO with a coloured tab to aid in the placement and removal of the device. This allows the user to line up the device with the eye area before placement and after use; the tab encourages the user to peel the device from the eye, rather than pulling, **minimising potential skin damage**.

The iPRO has also undergone various biocompatibility studies which meet the strict requirements of ISO 10993.

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