

# Customer Evaluation of a New Gentle-To-Skin Medical Tape by 217 Clinical Evaluators

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## Introduction & Background

Application and removal of medical adhesive tapes can be traumatic to the skin. This can lead to skin breakdown, especially on patients with fragile or at-risk skin, or when repeated taping over the same area occurs.<sup>1,2</sup> Recently a new gentle-to-skin adhesive tape with new silicone-based adhesive technology has been developed. 3M™ Kind Removal Silicone Tape is designed to be a general use gentle-to-skin tape which can replace current gentle medical tapes. The goal of this Customer Evaluation was to validate that this new silicone tape meets customer needs for a gentle tape and compare its performance to currently available medical tapes. All required clinical and biocompatibility studies and regulatory work was completed prior to this evaluation. In addition, an outside clinical study was completed on healthy adults age >55 years old to compare gentleness of this silicone tape to a commercially available gentle paper tape.<sup>3</sup>

There is limited research on the extent and impact of injury due to adhesive products. Problems can arise from the choice of tape as well as application and removal techniques. One recent study documented that 15.5% of the time tape was removed from a patient's skin, it resulted in some kind of injury and that 8.8% of those resulted in infection.<sup>4</sup> In addition to skin trauma, pain from adhesive tape removal can be a significant adverse experience for the patient.

## Methodology & Results

Our primary target population for this study was adult (>12yr old) hospital-based patients with fragile or at-risk skin due to age and/or medical condition. Clinicians attended an in-service about the 3M™ Kind Removal Silicone Tape and were instructed to use it for two (2) weeks the same as they would use their current gentle tape. At the end of the two weeks, clinicians completed an evaluation form regarding their experience.

The results presented here are data from a variety of units in 15 hospitals throughout the U.S. (172 evaluations received), 2 hospitals in the U.K. (31 evaluations) and 1 hospital in France (14 evaluations). Evaluations were completed between March 23 and June 20, 2011. The data from each of the 217 clinicians represents their impressions after a variety of uses on multiple patients during the 2 weeks of use. Table 1 shows the distribution of the hospital units where the evaluation was conducted.

**Table 1:** Participant Distribution by Hospital Unit

Hospital Unit	Percentage of Participants
Oncology	31
Other Med-Surgical Units	14
Dialysis	12
Infusion/ IV Therapy	16
Critical Care	10
Wound Care	10
Other	7

At the beginning of the evaluation, clinicians were asked which tape they considered to be their current gentle tape. Paper and soft-cloth tapes were identified by 83% of clinicians, with paper tape being indicated over 75% of the time.

The clinicians were then asked if their current gentle tape meets clinical needs. Of the respondents, 39% responded 'yes', but 61% responded 'no'. The reasons why current gentle tape does not meet their needs are presented in Table 2.

**Table 2:** Reasons Why Current Gentle Tape Does Not Meet Clinical Needs

Reasons	Percentage of Respondents
Does not stick to skin	50
Allergies, skin irritation/ tears, pulls hair	42
Painful on removal	5

The evaluators were then asked to 1) compare the performance of the new gentle silicone tape to their current gentle tape, 2) indicate which gentle tape they preferred and 3) indicate their willingness to replace their current gentle tape with the new silicone tape. The results are presented in Tables 3, 4, and 5.



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**Table 3:** Ratings of 3M™ Kind Removal Silicone Tape Performance Characteristics Relative to Current Gentle Tape

Performance Characteristic	Percent rated silicone better or much better than current gentle tape	Likert Scale Rating 5=much better than; 1=much worse than
a. Skin irritation on removal	86.0	4.61
b. Minimal pain on removal	91.5	4.65
c. Initial adhesion to dry skin	77.4	4.54
d. Adhesion if skin becomes diaphoretic	77.8	4.43
e. Adhesion to gauze-like dressings 24 hrs	78.3	4.49
f. Adhesion to gauze-like dressings 48 hrs	75.5	4.40
g. Good adhesion to tubing	71.5	4.40
h. Handles well with gloves	78.6	4.40
i. Able to reposition tape	93.9	4.64
j. Residue on skin after removal	85.5	4.59
k. Overall Performance	91.6	4.58

**Table 4:** Tape Preference by Clinicians

Tape Percentage	
3M™ Kind Removal Silicone Tape	92.0
Current gentle tape	7.5
Both	0.5

**Table 5:** Willingness to Replace Current Gentle Tape with 3M™ Kind Removal Silicone Tape

Percentage	
Yes	90.2
No	9.8

Both clinicians and patients were very pleased with the adhesion of the tape as well as the gentleness, ability to reposition the tape and pain-free removal. 3M™ Kind Removal Silicone Tape offers clinicians and patients a new choice in a gentle medical tape, with superior performance and comfort compared to currently available traditional medical tapes. ■

## References

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4. Konya et al. (2002). Skin injuries caused by medical adhesive tape in older people and associated factors. *J. Clinical Nursing*. 19: 1236–42.



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