Secure. Protect. Stabilize.
Background
Numerous scientific investigations conducted since the 1970s have examined the role of dressings for I.V. site and wound care.1-5 This research demonstrated the importance of the dressing for I.V. protection and enhanced wound healing, and stimulated the search for dressing materials with properties similar to healthy, intact skin.

Semi-permeable transparent film dressings were designed to provide this improved environment. They prevent the passage of liquids, bacteria and viruses to the I.V. site or wound, while allowing moisture vapor and gas exchange through the dressing. These properties, together with transparency and conformability, make transparent film dressings an excellent complement to I.V. catheter care and wound management protocols. 3M™ Tegaderm™ Transparent Film Dressing is the preferred transparent dressing worldwide.

Indications for Use
Tegaderm™ transparent dressings can be used to cover and protect catheter sites and wounds, to maintain a moist environment for wound healing, as a secondary dressing, as a protective cover over at-risk skin, to secure devices to the skin and as a protective eye covering. They can also be used to provide a moist wound environment to facilitate autolytic debridement. Common applications include a variety of I.V. catheters and other percutaneous devices, such as:

- Peripheral and midline catheters
- Subclavian and jugular catheters
- PICC lines (peripherally inserted central catheters)
- Pulmonary artery catheters
- Tunneled catheters and implanted ports
- Epidural catheters
- Dialysis catheters
- Subcutaneous insulin catheters
- Umbilical catheters

Applications for wound management and site protection include:

- Clean, closed surgical incisions
- Skin graft donor sites
- Stage I or II pressure ulcers
- Superficial wounds such as abrasions, skin tears and blisters
- First-and second-degree burns
- Protective cover to prevent skin breakdown
- Secondary dressing over gauze, alginates or hydrogels
- Protective eye covering

While both 3M™ Tegaderm™ and Tegaderm™ HP Transparent Film Dressings are appropriate for any of these applications, Tegaderm™ HP Film has a different adhesive that provides greater holding power in moist conditions, such as:

- Diaphoretic patients
- Conditions of high humidity
- Lightly draining wounds
- Sacral wound and skin protection

* In vitro testing shows that the transparent film of 3M™ Tegaderm™ brand dressings provide a viral barrier for viruses 27 nm in diameter or larger while the dressing remains intact without leakage.
Product Description

3M™ Tegaderm™ and Tegaderm™ HP Transparent Film Dressings consist of a thin film backing with a hypoallergenic, latex-free adhesive that gently, yet securely, adheres to skin. Tegaderm™ dressings are breathable, sterile, transparent and waterproof, and provide a barrier to external contaminants.

Tegaderm™ HP Film has a special adhesive for greater holding power in the presence of moisture.

Specially designed Tegaderm™ dressings, with unique shapes and securing tapes provide solutions for difficult to dress wounds and I.V. catheters.

Product Features and Benefits

**Versatile—one product to satisfy many clinical situations**

Tegaderm™ dressings can be used to protect I.V. sites, enhance wound healing, prevent skin breakdown, and protect clean, closed surgical incisions.

Tegaderm™ dressings are available in many sizes, shapes and application styles to meet a wide variety of needs.

The frame allows the dressings to be tailored for special applications, when desired. Application systems of most other transparent dressings do not allow for this customization.

**Easy to apply—unique frame delivery system**

Application of Tegaderm™ dressing is intuitive and quick, making it easy to remember and easy to teach. It is especially convenient for patient self-care.

Tegaderm™ dressing minimizes application time and saves dressing waste and costs. The frame delivery system provides maximum control of the thin film for rapid application of even the largest dressings. The unique “picture-frame” allows precise and secure placement of the dressing every time. If the adhesive surface accidentally touches itself, the dressing can be separated and applied, eliminating wasted dressings.

Tegaderm™ dressing is also available in a first-aid style delivery system for the health care professional who prefers this application method.

**Gentle adhesive—just the right balance in adhesive strength**

Tegaderm™ dressings are made with a hypoallergenic, latex-free adhesive that is gentle to the skin, yet securely holds catheters and other devices in place.

Tegaderm™ dressing provides good initial adhesion without building to excessive levels over time. Even for dressings left in place for extended periods, the risk of patient discomfort and skin trauma is minimal when the dressing is properly removed.

The hydrophilic nature of the Tegaderm™ HP Film adhesive makes it exceptionally adherent and useful for moist conditions and difficult-to-dress areas. It provides extra holding power, reducing unscheduled dressing changes.

**Breathable—lets oxygen in and moisture vapor out**

The breathability of Tegaderm™ dressings allows moisture vapor and gas exchange, which is essential to maintain normal skin function under the dressing.

Patients can wear Tegaderm™ dressings for extended periods of time, with minimal risk of skin irritation or maceration, and without excessive proliferation of skin flora.

**Waterproof, sterile barrier—impervious to liquids, bacteria and viruses**

Tegaderm™ dressing acts as a barrier to protect the I.V. site or wound from external contaminants such as bacteria, viruses,* blood and body fluids.

Because Tegaderm™ dressings are waterproof, patients may bathe, shower or swim, if the dressing is completely sealed around the catheter or wound.

Tegaderm™ dressing is sterile and remains so as long as the outer package is intact. Do not resterilize by gamma, steam, or E-beam.

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Product Features and Benefits (continued)

Conformable—flexes with skin for greater patient comfort
3M™ Tegaderm™ Transparent Film Dressing conforms to body contours, stretches easily, and prevents stress on the skin when the patient moves. It protects skin and bony prominences from abrasion, and allows the patient to move easily. Tegaderm™ dressing is comfortable to wear and presents a flat profile.

The special shapes of Tegaderm™ dressings conform easily on difficult-to-dress areas, such as jugular and PICC insertion sites, and sacral wounds.

Enhanced wound healing—improved outcomes and patient comfort
Tegaderm™ dressing seals in natural wound fluid to maintain a moist environment, which has been shown to enhance the healing process. It prevents scab formation and dehydration of the wound bed, which can occur with conventional dry dressings. Tegaderm™ dressing provides a wound environment that allows epithelial cells to migrate easily across the wound surface, reducing pain caused by wound dehydration, and increases patient comfort.

Transparent—allows wounds and I.V. sites to be easily monitored
The transparency of Tegaderm™ dressing provides complete visibility of the site during application. It also allows continuous monitoring of the I.V. site or wound without disturbing or removing the dressing. This visualization eliminates unnecessary dressing changes and saves nursing time.

Fewer dressing changes—increased patient comfort
With Tegaderm™ dressing, fewer dressing changes mean improved patient comfort and the risk of skin trauma from repeated adhesive removal is reduced.

For I.V. care, fewer dressing changes result in less catheter manipulation, and reduced exposure to potential outside contaminants.

For wound applications, the longer wear time of Tegaderm™ dressing allows the wound to remain undisturbed, thereby preventing disruption of the healing process.

Affordable—can be worn longer than tape and gauze dressings
The HICPAC/CDC Guideline for the Prevention of Intravascular Catheter-Related Infection supports longer wear times for transparent dressings than tape and gauze dressings for I.V. applications. Less frequent dressing changes save nursing time and supply costs such as preps, gloves, and dressing materials.

Clinically proven—efficacious for I.V. site and wound care
Numerous clinical trials by independent researchers support the use of Tegaderm™ transparent dressings for both I.V. site and wound care. Internationally recognized I.V. guidelines base site care recommendations on clinical studies using Tegaderm™ dressings.

Most of the major I.V. studies have been conducted on high-risk patients with central catheters. The results of the largest, prospective randomized trials of central line dressings have proven that Tegaderm™ dressings are as safe as gauze and tape, even when worn for longer periods of time. The extended wear times of Tegaderm™ dressings did not increase the risk of I.V. catheter-related bacteremias.

Several studies of peripheral I.V. catheters have also been conducted. The largest of these, with 2088 catheters, demonstrated the safety and cost-effectiveness of Tegaderm™ dressings left in place for the duration of catheterization.

Wound studies have demonstrated the importance of transparent dressings for rapid healing, protection of the wound from external contamination, and patient comfort.

Clinical dossiers, one for the use of Tegaderm™ dressings for I.V. Therapy and the other for Wound Care, are available from your 3M representative upon request.

Radiologically transparent
Tegaderm™ dressing is radiologically transparent. Removing the dressing from a patient prior to x-ray is not necessary.
**Physical Properties/Definitions**

**Semi-Occlusive (Semi-Permeable)**

Tegaderm™ and Tegaderm™ HP Transparent Film Dressings are made of semi-permeable films. They can be thought of as selective filters—they are occlusive to liquids, bacteria, and viruses; yet water vapor, oxygen, and carbon dioxide can easily be exchanged.

Tegaderm™ and Tegaderm™ HP Film dressings are breathable. The breathability of a material is generally described in terms of oxygen and moisture vapor transmission rates (MVTR). Both rates are determined by the amount of gas that travels through the dressing in a given period of time, under specific conditions of temperature and humidity.

**MVTR (Moisture Vapor Transmission Rate)**

Moisture vapor transmission rate (MVTR) is the measurement of water vapor diffusion through a material.

Two laboratory test methods are commonly used to measure MVTR. The results of these two tests are often used to compare transparent dressings for I.V. use. However, they do not represent real life conditions, and numerous variables can impact the results. This raises the question of whether laboratory test data for MVTR can accurately predict dressing performance in clinical practice.

The inverted beaker test produces higher numbers with greater variability. These variances are seen within samples of the same dressing, as well as among different products. This inconsistency occurs because the films can stretch and swell due to the water pressure against the test dressing, increasing the surface area measured.

The MVTR values produced by the upright method are lower and more consistent among different products, and within samples of the same dressing. Because the liquid does not come in contact with the film in this test method, stretch and swell are not factors in the results.

Aside from the test method chosen, many other variables can dramatically affect moisture vapor transmission rates.

- Volume of liquid in the test beaker (generally 10–50 ml)
- Type of liquid medium (water, saline)
- Concentration of substances in the liquid (salt, proteins)
- Environmental conditions (temperature, humidity)

MVTR bench tests are generally performed under tightly controlled temperatures and low relative humidity. In clinical settings, where temperatures and humidity vary considerably from typical test conditions, MVTR numbers will be much different than those produced in the laboratory. For example, under conditions of high humidity, moisture vapor transmission will proceed at a much slower rate.

A third, less common method, uses computerized evaporimetry to measure moisture handling properties of transparent dressings. This instrument records actual evaporation through the film on skin, and moisture build-up underneath the dressing. When moisture vapor transmission is measured with this device, dressings with significant differences in bench MVTRs show no significant difference in actual moisture accumulation on the skin.17

Research studies have been conducted to investigate the effect of MVTR on clinical outcomes for I.V. therapy. The results of these trials do not demonstrate a correlation between higher MVTR and lower incidence of complications, including catheter-related bacteremia.

For example, in a large, prospective, randomized, clinical trial conducted by Dennis G. Maki, M.D. on Swan-Ganz catheters, there was no evidence to document a beneficial effect of a “higher MVTR” dressing (OpSite IV3000), compared with a standard film dressing (Tegaderm™ dressing). The data showed no statistical difference in clinical outcomes (skin colonization, catheter tip colonization or the incidence of catheter-related blood stream infection) between Tegaderm™ dressings and OpSite IV3000 dressings.15

To date, there is no specific clinical evidence to suggest the optimal moisture vapor transmission rate. More important than MVTR in preventing I.V. infections are proper site preparation, sterile insertion technique, and strict adherence to protocols for I.V. line maintenance.

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General Application Hints

1. Select a dressing size that will adequately cover the catheter and insertion site or wound. Ensure at least a one inch margin of dressing adheres to healthy, dry skin.

2. Prepare the catheter insertion site or wound according to your institution's approved protocol.

3. To ensure good adhesion, clip excess hair where the dressing will be placed. Do not shave the skin because of the potential for microabrasions.

4. Make sure skin is free of soaps, detergents, and lotions. Allow all preps and protectants to dry thoroughly before applying the dressing. Wet preps and soap residues can cause irritation if trapped under the dressing. Additionally, adhesive products do not adhere well to wet or oily surfaces.

5. Do not stretch the Tegaderm™ dressing during application. Applying an adhesive product with tension can produce mechanical trauma to the skin. Stretching can also cause adhesion failure.

6. The adhesive of Tegaderm™ dressing is pressure-sensitive. To ensure best adhesion, always apply firm pressure to the dressing from the center out to the edges.

7. To tailor a dressing for a special application, use sterile scissors to cut the dressing into desired shapes or sizes before removing the printed liner. For best results and ease of application, cut the pieces so that a portion of the frame remains on at least two sides.

Removal Hints

Support the skin when removing Tegaderm™ dressing. For removal from I.V. sites, also stabilize the catheter to prevent dislodgment. Use one of the following removal techniques based on your patient’s skin condition and your own personal preference:

- Gently grasp one edge and slowly peel the dressing from the skin in the direction of hair growth. Try to peel the dressing back over itself, rather than pulling it up from the skin.
  
  or

- Grasp one edge of the dressing and gently pull it straight out to stretch and release adhesion.
  
  or

- Apply an adhesive remover suitable for use on skin to the adhesive edge while gently peeling from the skin.

To aid in lifting a dressing edge, secure a piece of surgical tape to one corner and rub firmly. Use the tape as a tab to help you slowly peel back the dressing.

I.V. Dressing Tips

- For added catheter stability, a small strip of non-stretchy tape can be placed over the hub without obscuring the site. If placed under the dressing, use sterile tape.

- For subclavian and jugular sites, apply the dressing with the patient’s head turned away and neck extended as expected in normal movement. This helps prevent contamination of the site from respiratory secretions and stress on the dressing when the patient moves.

- When preparing a site, always clip excess hair including the beard area to ensure good dressing adhesion. Watch for regrowth, which can lift the dressing off the skin.

- For multilumen, pulmonary artery and dialysis catheters, select bordered/notched dressings. These dressings are designed to prevent dressing lift caused by the weight of the catheter or manipulation of the lumens.
Wound Dressing Tips

- Protection of periwound skin from maceration by exudate is important. A skin protection or barrier film product (such as 3M™ Cavilon™ No Sting Barrier Film) can decrease the risk of skin maceration, and protect fragile skin. If using a liquid product, allow it to dry completely before dressing application.

- In situations where exudate may compromise dressing adhesion, the use of 3M™ Tegaderm™ HP Transparent Film Dressing may provide longer wear times due to the special adhesive.

- It is normal for exudate to accumulate in many types of wounds, and is more visible with transparent dressings.

- When applying the dressing to the coccyx, extend but do not stretch the skin away from the gluteal fold. Secure the dressing into the gluteal fold first and then smooth outward.

General Risk Reduction Notes

- Transparent dressings allow easy site assessment. Inspect the site frequently for early signs of complications.

- Change the dressing according to your institution’s protocol, or when it becomes compromised. Edge lift is not necessarily failure, unless there is a channel from the edge of the dressing to the I.V. entry site or wound.

- For maximum barrier protection, Tegaderm™ dressing must maintain good adhesion around the total periphery of the I.V. site or wound, and be free of punctures or tears.

Risk Reduction Notes for I.V. Therapy

- Before insertion of the catheter and at each dressing change, thoroughly prep the skin with an approved antiseptic solution. Pay careful attention to skin disinfection around and under the catheter.

- Carefully disinfect ports before access.

- Protect against skin irritation. (3M™ Cavilon™ No Sting Barrier Film can be used to help prevent skin irritation.) Compromised skin near the catheter entry site increases the risk of complications.

- Use maximum barrier precautions for central I.V. insertion and sterile technique for site care. Use aseptic technique for peripheral I.V. insertion and dressing application.

- No dressing can substitute for your professional site care.

Precautions:

1. Hemostasis of the catheter site or wound should be achieved before applying the dressing.

2. Do not stretch the dressing during application. Mechanical skin trauma may result if the dressing is applied with tension.

3. Tegaderm™ transparent dressings should not be re-sterilized by gamma, E-beam or steam methods.

4. Antimicrobial ointments containing polyethylene glycols may compromise the strength of Tegaderm™ HP Transparent Film Dressing.

References

Background


Wound Care


I.V. Sites


### Ordering Information

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| 3M™ Tegaderm IV Securement Dressing Designed for the BD Nexiva™ Closed IV Catheter System |
| 9525HP       | 8333-9525-01     | 2 ½ in. x 2 ¾ in. (6,5 cm x 7 cm) | 100            | 4           | A6257      |

| 3M™ Tegaderm HP (Holding Power) Transparent Film Dressing Frame Style |
| 9534HP       | 8333-9534-01     | 2 ⅛ in. x 2 ¾ in. (6 cm x 7 cm) | 100            | 4           | A6257      |
| 9536HP       | 8333-9536-01     | 4 in. x 4 ¾ in. (10 cm x 12 cm) | 50             | 4           | A6258      |
| 9543HP       | 8333-9543-01     | 4 ½ in. x 4 ¼ in. (11,5 cm x 12 cm) | 12             | 4           | A6258      |
| 9545HP       | 8333-9545-01     | 2 ⅛ in. x 2 ½ in. (5,4 cm x 6,4 cm) | 50             | 6           | A6257      |
| 9546HP       | 8333-9546-01     | 4 in. x 4 ½ in. (10 cm x 11,5 cm) | 50             | 4           | A6258      |
| 9548HP       | 8333-9548-01     | 5 ½ in. x 6 ½ in. (14 cm x 16,5 cm) | 10             | 8           | A6258      |

| 3M™ Tegaderm Transparent Film Dressing Frame Style |
| 1622W        | 8333-1622-05     | 1 ¾ in. x 1 ¾ in. (4,4 cm x 4,4 cm) | 100            | 4           | A6257      |
| 1624W        | 8333-1624-05     | 2 ⅛ in. x 2 ¾ in. (6 cm x 7 cm) | 100            | 4           | A6257      |
| 1626W        | 8333-1626-05     | 4 in. x 4 ¼ in. (10 cm x 12 cm) | 50             | 4           | A6258      |
| 1630         | 8333-1630-05     | 4 in. x 4 ½ in. (10 cm x 11,5 cm) | 50             | 4           | A6258      |
| 1634         | 8333-1634-01     | 2 ⅛ in. x 2 ¾ in. (6 cm x 7 cm) | 100            | 4           | A6257      |
| 1626         | 8333-1626-01     | 4 in. x 4 ¾ in. (10 cm x 12 cm) | 50             | 4           | A6258      |
| 1627         | 8333-1627-01     | 4 in. x 10 in. (10 cm x 25 cm) | 20             | 4           | A6258      |
| 1628         | 8333-1628-01     | 6 in. x 8 in. (15 cm x 20 cm) | 10             | 8           | A6258      |
| 1629         | 8333-1629-01     | 8 in. x 12 in. (20 cm x 30 cm) | 10             | 8           | A6259      |

| 3M™ Tegaderm Transparent Film Dressing Frame Style (Small quantity packages) |
| 9505W        | 8333-9505-05     | 2 ⅛ in. x 2 ¾ in. (6 cm x 7 cm) | 20             | 10          | A6257      |
| 9506W        | 8333-9506-05     | 4 in. x 4 ¾ in. (10 cm x 12 cm) | 10             | 10          | A6258      |

To learn about Tegaderm™ Transparent Film Dressings, visit us at go.3M.com/TegadermFilm, contact your 3M Skin & Wound Care representative or call the 3M Health Care Customer Helpline at 1-800-228-3957. Outside of the United States, contact the local 3M subsidiary.

**Disclaimer:**
HCPCS codes have been provided to assist you in the preparation of Medicare Part B claims. Please note, however, that the reimbursement information provided by 3M Health Care and its representatives is intended to provide general information relevant to coverage and coding for 3M products. Insurers’ reimbursement policies can vary and the use of the codes discussed here does not guarantee that an insurer will cover or pay at any particular level. Health care providers should exercise independent clinical judgement in choosing the codes which most accurately describe the products provided.