

# Tape Solutions for Transportation Vehicles



### Tape Solutions for Transportation Vehicles

**Saint-Gobain**<sup>®</sup>, a leader in the automotive and transportation markets, provides attachment and sealing tapes that solve for the specific needs of transportation vehicle applications. With proven success over more than 50 years, our OEM approved automotive products have been designed to achieve the longevity and durability performance essential to manufacturers in this market. All types of transportation vehicles have used our **Norbond**<sup>®</sup> Bonding Tapes and **Norseal**<sup>®</sup> Foam Sealing Tapes in the manufacturing of:

- Buses
- Horse and utility trailers

- Truck cabs and bodies
- Intermodal containers

• Ambulances and fire trucks

**Saint-Gobain** tapes make assembly easier, faster and more economical. Joints are stronger and more water tight with **Saint-Gobain** foam and tape products in place. Our engineers will work closely with you to determine the best solution for your bonding or sealing application.

#### **Attachment Tapes**

Products: Polyurethane Foam Attachment Tape, Acrylic Foam Attachment Tape
Function: Bonding of wall skin panels, roof bows, trims, moldings, emblems
Features: Quick-stick application, NVH (Noise, Vibration and Harshness) benefits, colour options for hiding in sight-line

**Norbond** Bonding Tapes have a long history of providing secure, long-lasting solutions for the transportation industry. Combining either a polyurethane or acrylic foam core with pressure sensitive acrylic adhesive, **Norbond** Tapes allow for tailored performance depending on specific application requirements. Bonding tapes offer many advantages to other fastening methods such as screws and rivets, including:

- Immediate bond strength for speed of assembly and handling time
- Durable foam core enables the distribution of stress across the entire bond line
- Fit and form providing fast application, and reducing clean up time

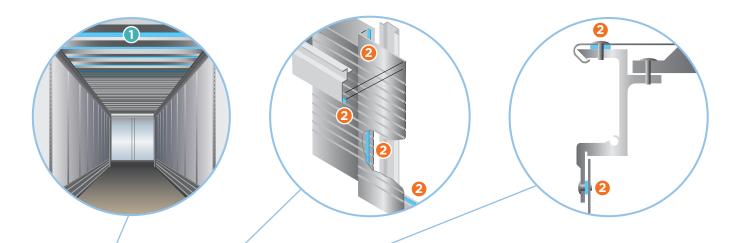
**Norbond** PUR Tapes offer reliable performance while also providing NVH benefits and a discrete black colour that hides from the sight line. **Norbond** Acrylic Tapes offer higher elongation capability, crucial for areas that experience thermal expansion and high differential movement.

- Norbond V2800 has a black polyurethane foam core that features high conformability to help with adhesive-to-surface contact. The colour allows the product to hide in the sight-line, creating a pleasing visual aesthetic, while the pressure sensitive acrylic adhesive provides secure long term bonding performance. Suitable for emblem attachment, roof bow attachment, and general bonding applications with parts less than 1m in length.
- Norbond A7600 features a grey acrylic foam core that allows for greater elongation capability. A specially formulated pressure sensitive adhesive exhibits strong quick-stick characteristics and high adhesion capability in a short term period, speeding up assembly. Best suited for interior and exterior trailer skin bonding.
- **Norbond** A7450 (white) and A7350 (grey) feature an acrylic foam core that offer high ultimate peel and tensile adhesion performance. Best used in applications where stresses may be elevated due to the presence of additional treatments, such as welds or thicker gauge materials.

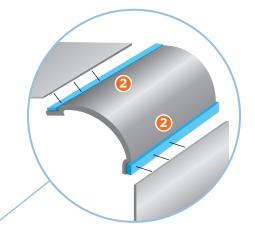
#### **Common Attachment and Sealing Tape Applications**

1 Norbond Bonding Tapes

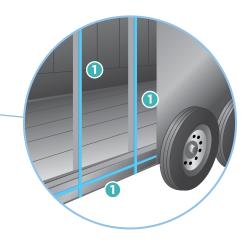
2 Norseal Sealing Tapes











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#### Sealing Tapes

Products: PVC Foam Tape, PUR Foam Tape
Function: Sealing foam tape
Features: Swirl-free properties; wide range of firmness options; aggressive adhesive for quick-stick; seals out air, dust and moisture

**Norseal** is the foam sealant standard for many manufacturers in the transportation industry. Made of closed-cell compressible foam with pressure sensitive adhesive, **Norseal** Foam Sealing Tapes are designed to seal against water, dirt, and air when compressed 30% under extreme conditions. Because of the tape's aggressive adhesive, application is quick and accurate. Other advantages include:

- No special tools needed to apply
- No curing required
- Won't ooze or squeeze out of the joint
- Won't dry out, drip, crack or become brittle

**Norseal** PVC Foam Tapes, offered with differing levels of firmness, provide balanced properties with weathering capability you can rely on. The **Norseal** PUR Foam Tapes accommodate the elevated temperatures typical with paint cycles. **Norseal** remains flexible through the hottest desert regions and the coldest mountain passes, enabling travel through all global climates.

- **Norseal** 2520 Series is a soft foam tape that is ideal for sealing thin gauge materials and larger gaps. The softer foam minimizes the distortion of the assembly and minimizes the number of fasteners required to compress the foam.
- **Norseal** 4030 Series is a medium firmness foam tape with swirl-free properties that makes it ideal to accommodate fasteners without twisting or distorting the foam. This tape is designed for use in side lap seams.
- **Norseal** 5040 Series is a firm high-density foam tape with abrasion resistant properties, making it the best option for sealing thicker panels seams with larger fasteners.

### Attachment Tape Material Selection Guide

| Backing<br>Material | Product<br>Code  | Colour | Thickness<br>(mm)          | Adhesive<br>Configuration/<br>Type | 90° Peel<br>Adhesion<br>(stainless steel)<br>(N/cm) | Tensile<br>Adhesion<br>(kPa) | Dynamic Shear<br>Adhesion<br>(kPa) | Common Application   |
|---------------------|------------------|--------|----------------------------|------------------------------------|---|------------------------------|------------------------------------|--|
| PUR Foam            | Norbond<br>V2800 | Black  | 0.8, 1.2, 1.6,<br>2.3, 3.0 | Double-sided/<br>Acrylic PSA       | 21  | 689                          | 827                                | Emblem attachment,<br>roof bow attachment  |
| Acrylic Foam        | Norbond<br>A7600 | Grey   | 1.1, 1.6                   | Double-sided/<br>Acrylic PSA       | 39  | 572                          | 545                                | Interior and exterior<br>trailer skin bonding  |
| Acrylic Foam        | Norbond<br>A7450 | White  | - 1.1                      | Double-sided/<br>Acrylic PSA       | 53  | 979                          | 579                                | In combination with<br>additional treatments,<br>such as welds or thicker<br>gauge materials |
|                     | Norbond<br>A7350 | Grey   |                            |                                    |   |                              |                                    |  |

#### Sealing Tape Material Selection Guide

| Backing<br>Material | Product<br>Code        | Colour | Thickness<br>(mm)            | Adhesive<br>Configuration/<br>Type | Density<br>(kg/m³) | Force to<br>Compress | Common Application               |
|---------------------|------------------------|--------|------------------------------|------------------------------------|--------------------|----------------------|----------------------------------|
| PVC Foam            | Norseal<br>2520 Series | Grey   | 3, 4.5, 6,<br>10, 12, 15, 20 | Single-sided<br>Acrylic            | 100                | Soft                 | Floor to bottom rail             |
| PVC Foam            | Norseal<br>4030 Series | Grey   | 1.5, 3,<br>4.5, 6, 10        | Single-sided<br>Acrylic            | 160                | Medium               | Panel side lap seams             |
| PVC Foam            | Norseal<br>5040 Series | Grey   | 1.5, 3,<br>4.5, 6, 10        | Single-sided<br>Acrylic            | 210                | Firm                 | Thick gauge panel side lap seams |

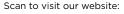
## Your Partner in Custom Tape Solutions

A custom tape solution can pay for itself many times over thanks to the process and product improvements it can provide. Tape development engineers will work with partners to design an economical but highly effective tape product.

Even with endless permutations of industrial tapes available there is only one company that can deliver a custom-made tape with optimal adhesive, the perfect backing materials, seamless process integration and superb performance.

To learn more about how **Saint-Gobain** can help solve tape and materials engineering challenges, call us or visit us online.

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#### Saint-Gobain Tape Solutions

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