SAINT-GOBAIN

NORBOND® (5) Bonding Tapes For Trucks and Trailers

NORBOND® A7300 Series

High-performing acrylic tape engineered for bonding of truck and trailer body panels

Performance data

The NORBOND[®] A7300 series has been engineered to comply with the tough bonding requirements for trucks and trailers. Designed specifically for best performance in terms of holding power, it is one of the best in its category, especially at the high temperatures to which a trailer box is frequently subjected.

The holding power or static shear performance of a tape is a measure of its ability to maintain adhesion under a constant load applied parallel to the surface of the tape, for example, the weight of the truck panel.

The pluck/tensile strength of the tape is another important property allowing it to resist the forces generated by the wind blowing on the panels.

The combination of excellent static shear and pluck/tensile performance makes NORBOND[®] A7300 series an excellent choice for the types of stresses typically encountered on trucks and trailer bonding applications.

The tape itself will maintain good contact with the substrate to minimize deflection while eliminating the stress points common with mechanical attachments even under very extreme conditions.

The graphs to the right show static shear and pluck/tensile adhesion of NORBOND[®] A7300 series against competing acrylic tapes.



(1): Temperature under which the bonding tape still holds a certain weight for a specific amount of time (Test based on ASTM D3654)
(2): 1 week dwell – humidity/freeze cycling (10 cycles -based on IEC 61215)



By using bonding tapes versus mechanical fasteners, you receive substantial benefits:

Eliminates holes in body panels - Minimizes the potential for corrosion

Pressure-sensitive tapes, unlike mechanical fasteners, bond materials without drilling into the surface. The holes needed for most mechanical fasteners can chip or wear away protective coating that can allow corrosion and reduce the life span of the trailer.

Fast assembly - Lower costs

Tape fabrication is faster than drilling and using most mechanical fasteners. Refinishing is not needed for tapes, unlike most welds or liquid sealants, and the unit can quickly be moved to allow for the next stage in the fabrication process. Faster assembly increases output and lowers assembly cost.

Smoother exterior surface - Aesthetically pleasing for graphics or advertising

Tape-bonded panels have a smooth, uninterrupted appearance that avoids the unsightly rivet lines or protrusions from welds. The flat surface is ideal for custom painting or film graphics – turning your truck and trailer into a rolling advertisement.

By using NORBOND[®] acrylic tapes, you get additional benefits:

Aggressive adhesive - Faster assembly

The adhesive system is specially formulated with high tack and quick build. No need for temporary fastening devices while the adhesive strength builds. Once a panel is in place, it stays.

Easy release liner - Fast easy removal

Unlike other tapes that use paper liners, NORBOND[®] acrylic tapes incorporate a release-coated, high-strength blue LDPE liner that will not fall off prematurely, but is easy to start and removes with little effort.

Range of thicknesses - Suitable for your specific design

NORBOND[®] acrylic tapes are available in gauges as thin as 0.4 mm up to 2.0 mm. This wide range of thicknesses will allow the engineer to optimize the joint design to achieve maximum performance while still achieving the desired look.

Unique viscoelastic foam - Absorbs shock and dampens vibration

Vehicle vibration often contributes to pulled rivets, weld point shearing and cracking. Designed for this market, NORBOND[®] acrylic tapes incorporate a unique foam structure that can absorb shock and dampen vibration.



Application

Welding seams, riveting panels or other mechanical fasteners where traditional methods for constructing small specialty trucks or enclosed trailers.

Liquid adhesive systems were later used to bond or assist in bonding panels to the trailer frames. Modern construction is enhanced with the recent introduction of high-performing, pressure-sensitive adhesive tapes. Modern tape systems virtually eliminate surface refinishing of welds or the clean-up associated with many liquid bonding systems.

Pressure-sensitive tapes bond quickly and can be handled immediately in most cases. NORBOND[®] acrylic tapes minimize or replace mechanical fasteners to give a smooth, uninterrupted, panel surface ideal for graphics and easy cleaning.

NORBOND[®] acrylic tapes incorporate an advanced acrylic core coupled with a high-performing acrylic adhesive. The tapes' good quick stick, fast adhesion build and long-term durability lead help to improve fabrication efficiency and provide cost savings.



Application techniques

- 1. Pressure-sensitive adhesives require clean surfaces for bonding. Ensure all surfaces are free of dirt and contaminants. This is normally achieved by wiping with solvent followed by wiping with a clean dry cloth.
- 2. Apply tape to vehicle body frame. Ensure the adhesive makes good contact with the frame by using consistent pressure along the entire length of the taped area.
- 3. Remove the liner to expose the adhesive, press panels firmly into desired position and roll down to ensure good contact between the adhesive surface and the panel.
- 4. Liner can be disposed of in normal waste or landfill according to your local regulations. Clean-up is easy and simple.

Typical applications

Specialty enclosed trailers

- Horse trailers
- Racecar trailers
- Snowmobile / ATV trailers
- Moving trailers

Panel trucks

- Food / beverage delivery trucks
- Postal delivery trucks

Other

- Emergency vehicles
- RVs, motor homes, campers
- Buses
- Trains
- Marine

Performance tests are run using standard test procedures. The values presented are typical values and should not be used for specification purposes.

Contact your local Saint-Gobain representative for additional information.

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