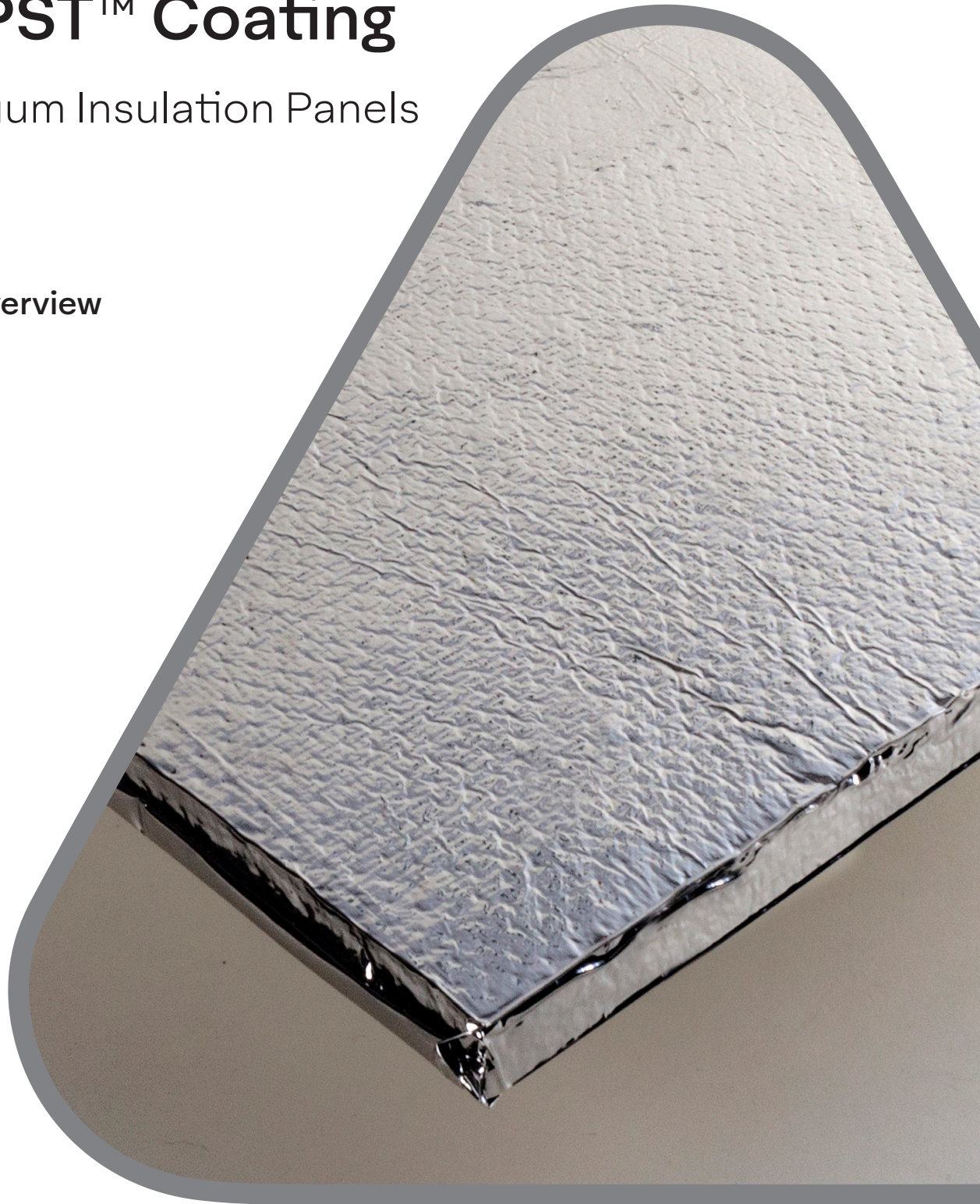


Ultra High Barrier Laminates

UHB Metallized PET Laminates with PST™ Coating

For Vacuum Insulation Panels

Product Overview

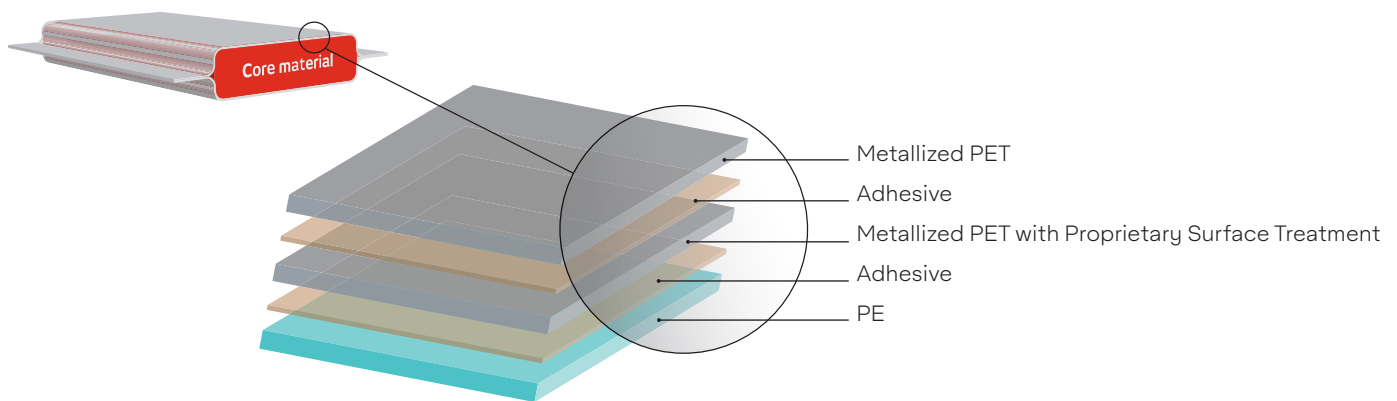


Absolute barrier, negligible thermal bridge

The PST™ range of metallized PET based ultra high barrier (UHB) laminates from Avery Dennison Hanita achieves the gas barrier levels of Aluminium foil, but without foil's detrimental thermal bridge.

Based on an innovative Proprietary Surface Treatment (PST™) coating process that dramatically reduces permeation of atmospheric gasses, these metallized polyester (MPET) and sealable polyethylene laminates provide the answer for VIP panels in applications where ultra-high barrier to gas is critical.

Typical structure



The advantages

- Exceptional barrier to gas for increased longevity
- Negligible thermal bridge
- Highly cost-efficient
- Eliminates need for getter, increasing savings
- High thermal durability
- No width limitations
- High efficiency enables use of lower-performing core types

Applications

Avery Dennison Hanita metallized laminates with PST coating are designed for typical fiberglass core applications such as refrigeration or thermal packaging. Additionally, when high temperatures are involved in the application (for boilers, hot vending, rice cookers, district heating etc), the new PST films complement both fiberglass and fumed silica cores. In fact, thanks to their cost effective yet high resistance qualities, PST laminates open the door to using a wide range of alternative core types, from Perlite to PU.

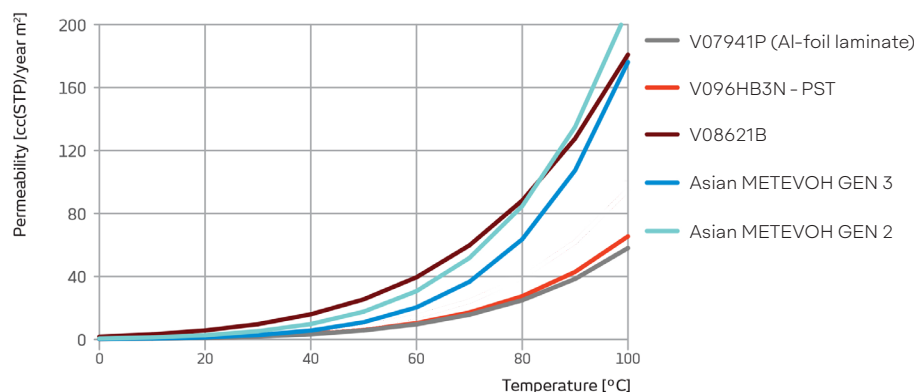
- VIPs for hot/cold vending machines
- VIPs for hot water tanks
- VIPs for long term cold shipping containers
- VIPs for long term refrigeration/heater markets

Exceptional barrier performance

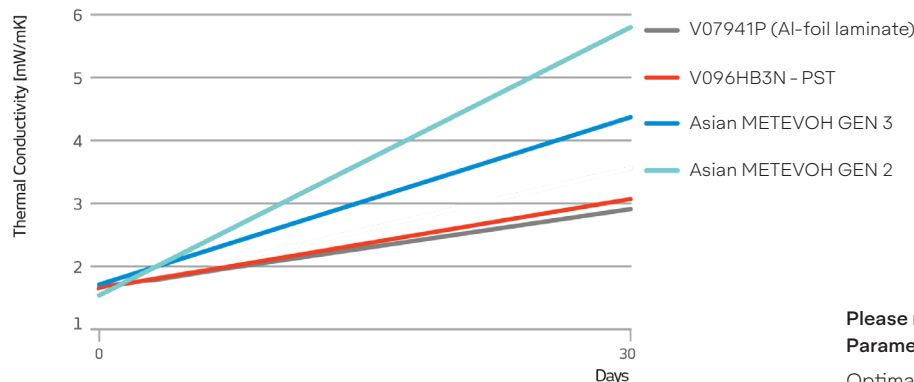
The comparative gas barrier levels and thermal performance of different laminates can be seen in the graphs below:

MPET laminates with PST coating feature an outstandingly low Gas Transmission Rate (GTR) of <math><3.0 \text{ [cc (STP)/ m}^2\text{/ year]} \text{ @ } 22^\circ\text{C}/50\% \text{ RH}</math>. This combines with the superior metallization and MVTR performance (0.035gr/m²day @38°C/90%RH) of standard Avery Dennison Hanita MPET films, yet without the thermal bridge issues arising from use of Al-foil laminates.

Comparison of air permeability of different VIPs formed from various laminates, as per Arrhenius equation



Thermal Conductivity at 80°C, Initial and after 30 days (center of panel)



Please review the Storage Conditions and Sealing Parameter Technical Sheets.

Optimal conditions may vary according to equipment used.

About Avery Dennison

Avery Dennison Corporation (NYSE: AVY) is a global materials science company specializing in the design and manufacture of a wide variety of labeling and functional materials. The company's products, which are used in nearly every major industry, include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical, and retail applications; tags, labels and embellishments for apparel; and radio frequency identification (RFID) solutions serving retail apparel and other markets. Headquartered in Glendale, California, the company employed more than 32,000 employees in more than 50 countries in 2020. Reported sales in 2020 were \$7.0 billion. Learn more at www.averydennison.com

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