

# THE SUSTAINABILITY ADVANTAGE WITH RECYCLED PVB



 Meridian



## Polyvinyl Butyral (PVB)

is a resin that has many desirable performance characteristics, such as **adhesion, binding, clarity, flexibility, and toughness**.

One of its main uses is for impact resistance in laminated glass by keeping the glass from completely shattering. The PVB film is separated from broken wind shields (that would otherwise go into landfills) and recycled into chips or pellets that can be reclaimed and used in a water-based dispersion.

### **POLYCOM Solutions, a Meridian Adhesives Group Company**

is the **ONLY manufacturer in North America** that recycles PVB into a water-based dispersion that we call EcoBlend. EcoBlend helps customers incorporate upcycled materials into their products for post-consumer or post-industrial recycled content.

This unique solution can be used in multiple applications, such as adhesives, coatings, latex formulations, paint formulations, pre-coats, primers and more. When our PVB dispersion is utilized as a co-binder, its inherent plasticizers may render the modification of film-forming agents unnecessary in a formulation. It can also be prepared as a pre-formulated temporary coating for a variety of surfaces. The temporary coating can be removed, for example, when goods are prepared for painting or assembly, ensuring a clean surface is maintained.

EcoBlend can be formulated for specific applications. Pigments and fillers can be easily incorporated. The dispersion can be diluted with water. Viscosity can be adjusted with thickeners. Formulators must be careful not to add ingredients with a pH below 7 because acids will coagulate the dispersion. The technical staff at PolyCom will help with customer formulation or create a ready to use product for specific customers.





## Properties

- Compatibility with other polymers
- Excellent film-forming properties
- Exceptional adhesion to a variety of substrates
- Maintains physical properties in thermoplastic processing
- Mechanical properties offer a highly elastic & tough film
- Robust service temperature (-40°F to 195°F)
- Unique optical properties
- Water resistance

## Advantages

- Landfill diversion (safety glass products – post-consumer and post-industrial waste)
- Low VOCs for better indoor air quality compliance
- Reduced resource and energy consumption & not contributing to raw material scarcity
- Solvent-free, water-based
- Supports your finished product's environmental credentials

## Applications

- Automotive
- Construction/building materials
- Flooring assembly
- Furniture/office equipment
- Marine
- Merchandising/POS
- Modular homes
- Packaging
- Paints
- Product sampling
- Roofing systems
- Wall coverings

# The Recycled PVB Supply Chain

There were over 290.8M registered vehicles in the United States alone in 2023.

12-15 Million of those vehicles are junked each year. (5.6% of vehicle population). An additional 14M windshields are replaced annually.

Polycom was the first company in the U.S. that converts this r-PVB into a water-based dispersion

Glass recyclers separate the PVB from the glass and convert it to usable r-PVB

## PVB Dispersion Product Details

- Aqueous dispersion light blue in appearance
- Solids: 47 - 49% (by weight)
- pH: 9.5 - 10.5%
- Viscosity: <1500 cps
- Specific Gravity: 1.01
- Weight per gallon: 8.40 lbs/gal
- Particle Charge: Anionic
- Amorphous polymer
- Readily available

## Sustainability Details

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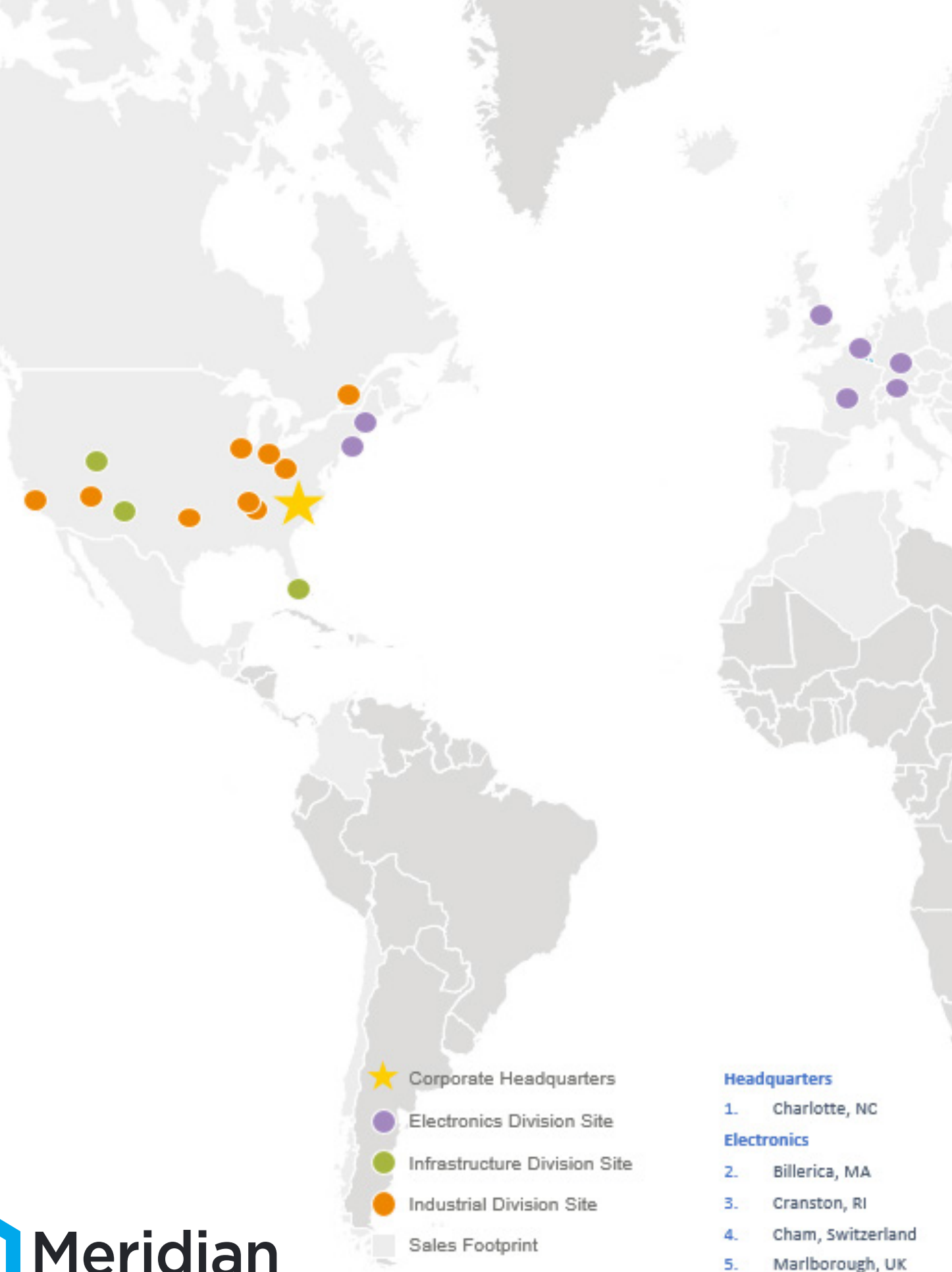


# Virgin PVB vs. Recycled PVB

Virgin PVB	Recycled PVB
Derived from petrochemicals	Carbon footprint is 25x lower ✓
Additional process needed to add plasticizer	Inherent plasticizer while maintaining critical properties ✓
Increased time cost due to necessary processes	Reduced production time and costs ✓

## PVB Facts & Figures

- 370 million ft<sup>2</sup> of PVB film available for recycling in the US each year
- Over 80% of available PVB goes into landfill today
- Over 290.8 million registered vehicles in the US in 2023
- 12-15 million are junked each year. **(5.6% of vehicle population)**
- 14 million windshields are replaced annually
- Average car windshield is 12.5 ft<sup>2</sup>



-  Corporate Headquarters
-  Electronics Division Site
-  Infrastructure Division Site
-  Industrial Division Site
-  Sales Footprint

- Headquarters**
1. Charlotte, NC
- Electronics**
2. Billerica, MA
  3. Cranston, RI
  4. Cham, Switzerland
  5. Marlborough, UK
  6. Augsburg, Germany

# The Science of Solutions

## Global Footprint



- 7. Orgeval, France
- 8. Nivelles, Belgium
- 9. Shanghai, China
- 10. Shenzhen, China
- 11. San Po Kong, Hong Kong
- 12. Penang, Malaysia
- 13. Penang, Malaysia

### Infrastructure

- 14. Pompano Beach, FL
- 15. Albuquerque, NM
- 16. Orem, UT

### Industrial

- 17. Dalton, GA
- 18. Dalton, GA

- 19. Alvaredo, TX
- 20. Columbus, OH
- 21. Fort Wayne, IN
- 22. Elk Grove Village, IL
- 23. Saint-Eustache, QC, CAN
- 24. Fontana, CA
- 25. Las Vegas, NV
- 26. Santa Ana, CA



CONTACT US  
**WE LOOK FORWARD TO  
TALKING!**



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Meridian Adhesives Group is a leading manufacturer of high-value adhesive technologies. With a broad portfolio of dynamic solutions, Meridian serves the electronics, infrastructure, and industrial (flooring, packaging, and product assembly) markets. The group's operations are located in the Americas, EMEA, and Asia, with a multitude of sales/service offices worldwide that are positioned to serve Meridian's global customer base. For more information, visit [meridianadhesives.com](http://meridianadhesives.com).