# Automotive Labeling Solutions

Labels + Packaging Brochure North America 2022

Performance that goes the distance.





### Automotive Labeling Solutions

It's a fast-moving world in vehicle manufacturing and design. Stay on track with innovative automotive labeling solutions for diverse applications, including interior, exterior and under-the-hood.

At Avery Dennison, we understand your labels have to cope with harsh chemical environments, challenging substrates and the stress of use and maintenance.

With these factors in mind, our Automotive Labeling Solutions portfolio is equipped with materials ready to perform under most extreme environments, supply chain processes and industry regulations.

### Features of automotive label matrials

- + Excellent adhesion to low energy substrates
- + High temperature and chemical resistance
- + Durable performance in harsh environments
- + Compliant with WEEE, RoHS, IMDS and common testing parameters specified by OEMs

### Designed for all elements

Explore an exceptional selection of Avery Dennison label materials for vehicle exteriors, interiors, engine compartments and EV batteries – created with our expertise on the latest automotive technologies.

### **Exterior**

### More than meets the eye

Our labeling solutions for automotive exteriors are centered on the importance of long-term protection from weather (including UV and salt exposure), abrasion and tampering.

#### Interior

#### What's inside matters

Our performance materials for interiors will resist fade while adhering readily to low surface energy plastics, and can be enhanced with smart security features to combat tampering.

### Under the Hood

#### In the heat of the action

Our materials for under hood applications perform as required from very low (-40C) to very high (+150C) temperature ranges, and adhere to oily and textured surfaces while resisting moisture, steam cleaning and harsh engine chemicals.

### Electric Vehicles

#### A bright future for electrification

Our battery label solutions are engineered to address a variety of applications with proven adhesive technologies suitable to multiple substrates.

# Custom Testing Capabilities

Materials must meet strict automotive qualification requirements and legislation. It is critical that important information remains visible on every label despite extreme temperatures, corrosive chemicals, mechanical stress and aging. Our team of experts in global compliance testing will ensure labeling solutions meet all necessary government regulations and OEM specifications.





Automotive Fogging Test



Automotive Abrasion Test



Hot Water/ High Pressure



Accelerated Weathering



Flammability



Salt Spray/ Corrosion Testing

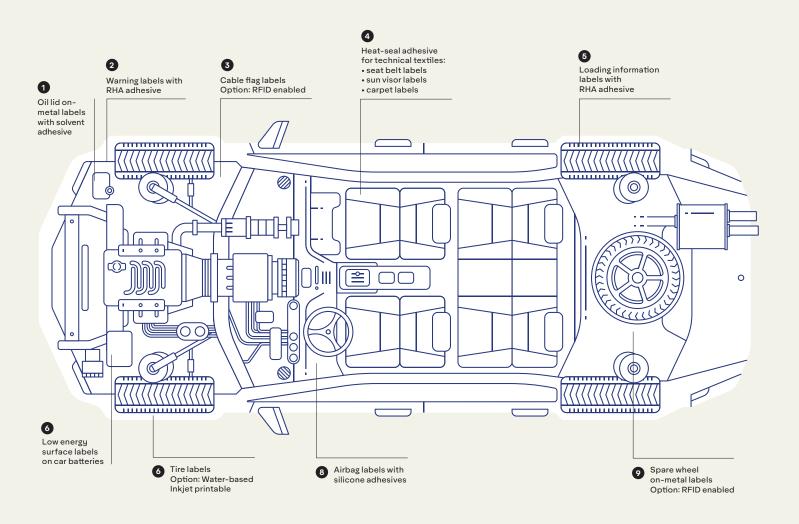


### **Avery Dennison Accredited Test Scope**

Our laboratory in Mentor, Ohio, was audited in June 2017 and received ISO 17025 accreditation, which has been renewed through 2023. This accreditation allows us to provide both materials and testing services, which are free to our customers and eliminate the need for additional testing.

In addition, the Mentor Innovation Center is ISO 9001:2015 accredited.

### **Automotive Applications**



### **Converted Labels**



















### **Adhesive Solutions**

Condition/PET Face	S8001	S8015	S8025	S8029	S8049
Low surface energy substrates*	•	•	•	•	•
Textured Surfaces**	•	•	•	•	•
Water resistance, 4 Hr Immersion	•	•	•	•	•
Chemical resistance***, 4 Hr Immersion	•	•	•	•	•
Outdoor exposure, ASTM G155	•	•	•	•	•
Low temperature , up to -40C, HSE/LSE	•/•	•/•	•/•	•/•	•/•
High temperature, up to 180C/Under hood	•	•	•	•	•
Small diameter (1", PET Rod)/Wire harness	•	•	•	•	•
Oily substrate	•	•	•	•	•
Humidity	•	•	•	•	•
FMVSS 302****	•	•	•	•	•
Interior cabin	•	•	•	•	•

<sup>\*\*\*\*</sup> Rating may be affected by face material



<sup>\*</sup>LSE: e.g. PP, HDPE, LDPE

\*\* Textured Surfaces: e.g. Powder Coated Paints, Textured Plastics

\*\*\* Chemicals: e.g. IPA, Oil, Gas Splash, Diesel, Detergent, Brake Fluid



### Innovative hybrid adhesive \$8049/\$8029

These materials are highly resistant to heat and harsh chemicals and convert/die-cut very easily. S8049 is ideal for engine compartment labels due to its exceptional adhesion performance on textured, somewhat oily and low surface energy substrates. When heavy texturing is not present, S8029 is a lower coat weight option offering consistent converting.

### Under hood and Exterior adhesives \$8015/\$8025

These adhesives provide good performance on a broad variety of low surface energy substrates, along with excellent shear and cohesive strength. They offer good performance in both high and low temperatures over extended periods of time. They are also excellent candidates for wire or harness wrap applications.

### Interior adhesive \$8001

Designed for environments with lower heat and humidity along with less demanding chemical resistance, this adhesive is most commonly used in the cabin. It offers relatively strong low surface energy adhesion and good performance around small diameter wiring and tubing.

### Silicone Adhesive S8092

Silicone coated or otherwise contaminated substrates are found in many automotive parts such as airbags or molded parts. This is an innovative adhesive that provides initial tack and final peel adhesion for superior performance, making it ideal for technical textiles.

### Specialty Adhesives Removable and Void

Certain automotive label applications require highly specialized materials. These can include labels that are applied during the manufacturing or assembly process, but are removed downstream with clean removal. In addition, tampering and authentication concerns are growing, leading to increased requirements for security features. We offer several void options, and can customize this capability based on specific conditions.

## Leaders in Innovation

Our global R&D resources are available to develop new materials for unique applications and changes in regulations or legislation. We combine decades of innovation with deep knowledge of the realworld conditions our label materials must perform, along with the technical challenges they will meet. Whatever the product, we can help develop a label material that sticks with it.

### Meeting growing demand challenges





#### **Electric Vehicles**

Electric vehicle sales will continue to accelerate in the coming years, with the potential for more than a quarter of vehicles on the road globally to be electrified by 2030. Electric powered pickups, semi-trucks and buses will gain traction in the near future, and improving battery technology continues to increase EVs driving range while decreasing battery costs. Labels need to meet standards for durability, perform under harsh conditions and adhere to a variety of substrates.

#### Wires and Cables

With increased electrification of vehicles, there will likely be changing needs for wire harnesses and wire cables. We are developing materials for new cable substrates and smaller/larger diameter cables.

### **Anti-counterfeiting**

The possibility of counterfeiting or tampering is always a concern, therefore we have solutions for laser-etched anti-counterfeiting labels and other security labels that can be used on multiple substrates. This will ensure labels meet any security standards and provide peace of mind for both consumers and brand owners.

### Adhesives for multiple textiles

Vehicles have many technical textiles in the cabin, used in multiple applications such as seats, carpets, and safety belts. We have developed highly specialized heat activated adhesives that are ideally suited to these materials.

### **Out-of-sight applications**

For any non-line-of-sight applications, we have RFID enabled labels designed to provide readability behind the dashboard, within a seat, or any other place not visible to the eye.

### Gear up for full speed ahead

With a presence in more than 60 countries and three cutting-edge research and development facilities, our technologists are always looking ahead to engineer new solutions for challenging automotive environments. Mix and match from ready-made options in our comprehensive portfolio, or explore customized solutions to meet unique requirements with the help of our dedicated sales and support team. Choose Avery Dennison and surpass industry standards today.

### 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 and solutions, 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. The company employs approximately 36,000 employees in more than 50 countries. Reported sales in 2021 were \$8.4 billion.

Learn more at www.averydennison.com.



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