

Storage Conditions for Pressure-Sensitive Materials And Finished Labels

Many times we are asked how should we store our materials or how long will the finished labels be good? This bulletin will hopefully address these and several other frequently asked questions about material longevity and storage. These are all recommended practices and can not address all the different variables a pressure sensitive product might encounter during its useful life.

Pressure sensitive roll materials slit rolls and raw stock

All Avery Dennison roll materials have been tested and shipped in well designed packaging to minimize damage and ensure long storage life. We recommend these rolls be stored on their pallets in the protective wrap until ready to use. The protective wrap keeps dirt and dust from settling on the rolls, while also protecting the stock from extreme changes in humidity conditions within a storage warehouse.

Avery Dennison recommends that the materials be stored in an environment that is clean and dry. Storage temperature is recommended to be at 70 degrees F, 21 degrees C, or within a range of 55 - 85 degrees F, 12.8 - 29.5 degrees C. Recommended relative humidity, RH, should be 50%, or a range of 35% - 65%. Storage of the rolls should be on pallets, and never directly on concrete floors, and these pallets should be stored one high, and never stacked. Avoid storing materials too close to the ceiling within a building, as temperatures could be as much as 20 degrees higher in these locations.

Never store pallets of roll stock outdoors, as this will dramatically reduce the quality of the product, possibly making unusable for label converting.

Prior to converting on press the rolls should be removed from the plastic protective wrap, and then placed in the pressroom environment to equilibrate, both temperature and moisture content. This allows the stock to be stable at the point of converting or printing, not in a transitional phase. We recommend 24-48 hours within the pressroom before converting.

Corona treated film face stocks are a special item that deserves note. Most corona treated surfaces will remain within a usable dyne level for as much as one year, some less depending on the product. These products should be monitored for the receiving dates, and stored as near to the ground level as possible. Higher temperatures are thought to accelerate the decay of the corona treated surface. Checking dyne levels prior to printing is always a good recommended practice.

Finished rolls of labels

It is nearly impossible to address all the different storage conditions finished rolls of labels may be subjected to, however these guidelines should help establish a good benchmark for the best possible performance and longevity.

As with the unconverted roll stock, temperature and humidity conditions are very important to ensure good performance on the label applicator and on the end substrate. Storage at temperatures are recommended to be at 70 degrees F, 21 degrees C, with a range of 55 - 85 degree F, 12.8 - 29.5 degrees C. Relative humidity should be at about 50%, or a range of 35% - 65%.

Higher temperatures and higher humidity have more effect on finished labels than do low conditions. This is due to the more exposed release liner and finished label edge, together having more area for moisture and dust issues. A basic rule of thumb is, if you feel comfortable, so does the label.

Finished labels are nearly always shipped in a protective cardboard box. Labels should remain in these boxes for as long as possible, as this helps control exposure to moisture, light, dirt and dust. Many printers also wrap each finished roll in a protective plastic bag or wrap. Label rolls should also stay within these pouches for as long as possible, and pouches within the boxes are the best condition. Moisture causes the papers stocks to swell, light will fade the color of the inks, and dirt and dust will collect and foul the label application process, and possibly alter the finished look of the label on the package.

Never store rolls of labels directly on a concrete floor. Concrete floors have high moisture content, and the moisture will migrate into the finished rolls and weaken the paper.

All pressure sensitive materials will age at different rates, depending on face stock composition, adhesive chemistry, liner type, so it is only possible to have guidelines for storage conditions. Many labels will be useful far beyond the standard printers one year warranty, however label use beyond that point is up to the end-user. The ultimate decision if a roll of labels is good or bad lies with the end-user. They have sole responsibility in this decision, and should be based on fitness for use, both physical performance and visual acceptance. Use of labels within six months of receiving is usually a good manufacturing process.

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