

Best Business Practices: An Analysis of Hot Melt Versus Tape for Packaging



BEST BUSINESS PRACTICES: AN ANALYSIS OF HOT MELT VERSUS TAPE FOR PACKAGING

An uncountable number of small, medium and large businesses need to hold things together on a daily basis, including boxes and other containers, as products ship from place to place on a global scale.

In addition to the brick-and-mortar establishments that ship items, more and more commerce is coming via Web- and home-based businesses. That marketplace characteristic drives up the importance of packing supplies for small business and proper shipping preparations, since those costs represent the kind of competitive edge that can give businesses a boost and enable them to operate sustainably.

Among the shipping standards for small businesses is a debate between shipping tape and hot-melt adhesive for sealing packages and boxes. Both materials accomplish many important tasks, from sealing boxes to securing parts during the manufacture of products. Business owners and managers continually seek ways to streamline, save time, reduce costs and keep operations running smoothly. For many, that involves sealing boxes and other packages for secure shipment.

As an expert in hot-melt solutions for small businesses, we at [Keystone Industries](#) answer many questions about small business shipping solutions and are glad to share information about the differences among the options.

What are the Materials?

HOT MELT

AN ADHESIVE,
USUALLY A SYNTHETIC
MATERIAL, USED FOR
BINDING THAT GETS LOADED
INTO AN APPLICATOR.

TAPE

TYPICALLY BE MADE OF A
PRESSURE-SENSITIVE
PLASTIC OR
NYLON-REINFORCED
FILAMENT.

The term hot melt refers to an adhesive, usually a synthetic-thermoplastic material, used for binding that gets loaded into an applicator. The applicator might be anything from a small, handheld consumer model to a big, automated industrial machine, and the applicator is typically the mechanism that brings the adhesive to working temperature for placement.

One of the ingredients in hot melt is a synthetic backbone polymer, which gives it strength, along with multiple different formulas and compounds to give the adhesives specific bonding properties. The polymer, derived from natural, carbon-based materials, mixes with resin, wax and antioxidants to make the adhesive. Except for some special formulations to meet uncommon needs, most consider hot-melt formulas to contain nothing harmful to the environment.

Packaging tape will typically be made of a pressure-sensitive plastic, nylon-reinforced filament, some form of rubber, acrylic, hot melt or water-activated formula. The main "ingredient" in tape adhesive is usually a polymer. In packaging tape, for example, it's usually a styrenic-block co-polymer.

It is available in general purpose and industrial grades, as well as a few color choices. The grade normally refers to the gauge or thickness of the tape, often called the mil. This also relates to the width of the roll and sometimes the type of adhesive formula used in the tape.

Price-affecting Factors

Professional recommendations for securely sealing a carton or box using tape usually entail more material than some people use. Shipping giant UPS recommends [three strips of tape on the tops and bottoms](#) of all boxes shipped, with the "middle and two edge seams" sealed and two inches of overhang on both ends.

Moving companies make the same recommendation, and describe it as using the tape to create an H shape on the box with pieces securing the seam down the middle and both edges. If the load is extra heavy, they suggest an additional X in tape on the bottom of the box. Other common recommendations include use of a tape designed for packages, such as those [at least two inches wide with a 60-pound grade](#).

The first thing most small- or home-business owners want to do is check the numbers, which demonstrate that hot melt is a superior option in bulk shipping for small business.

Calculate the Costs

Businesses' carton-sealing needs will vary widely among specialties and products. To a certain extent, you can simulate the shared examples to calculate how the methods compare in your specific situation.



COST TO START HOT MELT:
\$188
WHICH WILL SEAL 8,998 BOXES

A brown cardboard box is shown to the right of the banner. It features a white cross-shaped tape seal on top, a barcode on the side, and three icons: an umbrella, two upward-pointing arrows, and a recycling symbol.

Hot Melt Adhesive Film

Keystone, of course, draws information about hot melt adhesive from its own experience and price list. To calculate costs, you must know the basics.

- Cost to start: About \$188
 - \$75 for a KGG100 handheld hot-melt glue-stick gun at 120V (call or email to order)
 - [\\$113 for a minimum 22 pounds of KA1012 glue sticks at \\$5.15 each](#)
- Cost to seal a 14-inch box: \$ 0.01, based on the following properties
 - [1,910 feet/22,920 inches of adhesive](#) per pound
 - Standard bead size for KGG100 is [0.08 inches](#)
 - Normal application = four beads per box
 - [56 inches of adhesive per box, so about 409 boxes per pound](#)
- Cost methodology: 22,920" of adhesive per lb ÷ by 56" of adhesive per box = ~409 boxes per lb of adhesive, so \$5.15 per lb ÷ 409 boxes = \$.01 / box

The initial investment of \$188 will seal 8,998 boxes. Sealing the same number of boxes with tape would cost approximately \$324, since you would need 163 rolls of tape at a cost of about \$1.88 each plus an \$18 dispenser.

Packaging tape

While your tape and dispenser needs may differ from those used in the example, the basic comparison will hold true whether you buy a dispenser that costs [\\$9 or \\$56](#). For comparison, we selected \$18 to use for calculations and an estimate of 36 inches of tape per box. Accounting includes two 18-inch strips of tape on each box including a two-inch overhang on each end of both strips.

- Cost to start: [About \\$20](#)

- \$18
 - for a two-inch, heavy duty, handheld tape dispenser
- \$1-2 for packaging tape (\$1.15/roll for 1,152 rolls; about \$1.88/roll if fewer than 1,152) two inches wide, 55 yards long)

Cost to seal a 14-inch box: \$0.021-\$0.034

- .021 cents per box if tape is \$1.15 per roll
- .034 cents per box if tape is \$1.88 per roll
- Normal application = 36 inches of tape per box with at least two, 18-inch strips of 1.6 mil.
- Each roll of tape has 55 yards/1,980 inches

Cost methodology: 1,980 ÷ 36 inches per box = 55 boxes per roll of tape for two per-box prices it is possible to pay.

Benefits Create Value Beyond Costs

Business owners tend to look at the hard numbers, such as costs and quantities. However, there are plenty of softer, indirect advantages hot melt provides over packaging tape. Depending on the workplace and its industry functions, you may value some qualities of hot melt more or less than others.

To find the right solution, consider all the benefits of hot melt package sealing:

- Applicators and refills take up much less space than a tape dispenser and its replacement rolls.
- Guns do not have a sharp blade, incurring fewer injuries.
- Applicators provide fast, accurate and safe melting. Fumbles, such as when the tape gun slips and fails to grip as you try to start a new strip of tape, are drastically reduced.
- Systems make little to no noise, which can be an important aspect of workplace satisfaction.
- Adhesive creates a neater, more professional-looking seal without the bulk, creases or other imperfections that come along with tape.
- Provides broader versatility with multiple formulas of adhesive and an endless array of different nozzles to accurately apply it.
- Refills are a water-free solid (stick, chip, pellet, etc.) that are easy to replace, as opposed to fumbling around trying to find the end of a tape roll.
- Substances adhere to the environmental requirements for sealing agents.
- Provides sealing strength comparable to or better than popular taping methods.
- Hot melt sets rapidly, which can increase line speed in production applications, and save the floor space formerly needed for a longer bonding time.
- Fumes not considered harmful or a fire hazard.
- Stock not affected by minor moisture and humidity, with some formulas made specifically for such conditions.
- Process goes faster and saves time through more-precise application and handling.
- Adhesive can weigh less than the average, recommended packaging-tape grade, which could enable you to shave weight and save money.

The operation of the glue guns and especially the bigger, industrial models, require some upfront training, too. Users must be aware of the heat involved and know how to load and position the applicator properly. Depending on how you use the adhesive, it comes in a stick, block, cylinder, rope, flat piece, pellets or even in a 55-gallon drum.

Benefits Beyond Packaging



OTHER USES

IT'S GREAT FOR LABEL ADHESIVE, CRACK SEALANT AND STABILIZING AGENTS.

While the glue versus tape for shipping comparison is popular because of the volume of shipping, hot melt is relevant for other usages too. For example, it's great for label adhesive, crack sealant and stabilizing agents. Furthermore, forms of it are used to manufacture many different kinds of products including furniture, automobiles, books and non-woven objects.

The continuous feed of the hot melt created through pressure within the applicator and nozzle enables you to hit the target spots with time-saving precision. And, if you handle small packages, it might be your preference to use a hot-melt system for ease of use rather than trying to fumble with tiny boxes and a big tape dispenser.

As you venture out to gather your own information about hot-melt solutions for packaging and other applications, you're bound to run into the specification lingo often used in text and discussion about this option. You will want to be aware of what the terms mean:

- Substrate = the surface to which an adhesive is applied
- Viscosity = how easily it flows, with low being slow and high being fast & thickness of adhesive
- Open time = how long it stays in its hot state and sets
- Molten = when it's in the hot state and flows
- Stability = how well the glue resists degradation.

Chances are, you already know such small-business shipping tips (or home-business shipping tips) as never to use duct tape, masking tape or any other type not designed for "sealing cartons." If you do use packaging tape, be proactive, and ask if it's compatible for use with corrugated cardboard, or any specialty materials that may be involved.

About Keystone and all it carries

Among the important points of wholesale shipping for small business is sealing the boxes quickly, accurately and at a reasonable cost. [Keystone Industries](#) can help with many aspects of a business' commercial packaging supplies and strategy for sealing boxes, packages and cartons.

SEALING THE BOXES QUICKLY,
ACCURATELY AND AT A
REASONABLE COST IS **KEY TO**
KEEPING SHIPPING COSTS
DOWN FOR A BUSINESS



We offer new hot-melt adhesive systems as well as the after-market parts to fit most existing systems. We'll help you implement, upgrade, improve or service your existing hot-melt system with all the parts it needs:

- Hot melt adhesive
- Applicators, handheld and bigger
- Melters
- Pumps and motors
- Hoses
- Electrical parts
- Modules
- Cleaners
- Nozzles
- Hardware
- Controllers
- Maintenance kits
- Rebuilt products.

Keystone offers the expertise and excellent service to see you through the wide world of hot-melt adhesive, whether you've been using it or want to use it. We not only offer parts and supplies at a reasonable price, we also share information that will help you succeed.

For example, in our [testimonials section](#), our clients talk about reliable, same-day shipping, cost-saving spreadsheets that made the financial picture clear, a nozzle that helped reduce adhesive usage and money saved in parts costs. We strive to be helpful, conscientious and friendly so that our clients have many reasons to return.