

## 10 Simple Tips to Remove Adhesive Tape Residue



What's the No. 1 reason why [contractors love to use adhesive tape](#) on the job site? Because it sticks in almost any condition. That, of course, is the same reason why we loathe it when it won't come off. Heavy duty construction adhesives and their sticky, gooey tape residue can be a real challenge to remove from surfaces.

Why does this happen, and what can you do about it? Our site did a great job explaining why residue occurs, but what you really want to know is... how can you remove tape residue without damaging the underlying material, right?!

---

## 10 Simple Solutions to Remove Tape Residue

1. **Test first!** Please test your residue remover in an unnoticeable area first to make sure there will be no damage to the surface. This is especially true for wood, painted surfaces and any high gloss finished surface as the agents in some removers can dull the surface and or discolor them!
2. **Make it quick.** Think of tape like a band-aid. Removing it slowly allows flow and separation, creating more stickiness (and pain!), while ripping it off in one motion makes for a clean, less painful removal. This is not necessarily true for all surfaces; this is an ideal technique for tape that has been on for a few days while the tape is still tacky, but if the tape has dried out take a little more time to take it off not to damage the surfaces as the surface may also be affected if the tape has been on too long especially painted walls.
3. **Scrape it.** To remove small amounts of construction adhesives from your paneling, molding, and floor, use a

putty knife to scrape the adhesive off. Just be careful not to drive the edge of the knife too hard on the surface to avoid causing damage. (For stone or mirrored scratch-resistant surfaces, consider using a straight blade to scrape residue away.)

4. **Try warm, soapy water.** For surfaces such as acrylic, plaster, asphalt, copper, enamel, glass, linoleum, marble, pewter, plexiglass, and all things vinyl, all you need is warm, sudsy water. The warm water will soften the tape so it can be removed with a sponge or cloth.
5. **Apply heat.** Much like warm water softens tape, heat can help melt stubborn adhesives without damaging the surface of your floor or wall. Just one minute with a hairdryer, heat gun or even a blow torch will do the trick. Gently scrape off the adhesive while you apply heat on the surface of your floor or wall. Once the surface is cold, the construction adhesive tends to harden, so it becomes difficult for you to remove it without damaging your floor or wall.
6. **Apply pressure.** Stubborn construction adhesives on rocks, bricks, concrete, and other hard materials can be removed by blasting the surface with high-powered water pressure system or through sandblasting. Water pressure and sandblasting work well, but they can also leave some marks on the surface of the rock, bricks, and other hard materials, so keep that in mind.
7. **Brush it off.** Do not use soap on stone surfaces such as bluestone, brick, concrete, granite, limestone,

terrazzo, and masonry tile. It will leave a hard-to-removes scum. Instead, mix together a solution of laundry detergent or baking soda with a little water to form a paste. With a soft brush (a toothbrush is good for small areas) gently spread the solution over the gummy portion until it is removed, and then rinse with clear warm water

8. **Alcohol to the rescue.** Consider using a little rubbing alcohol, which is a non-solvent for pressure-sensitive adhesives. When you apply rubbing alcohol, the adhesive residue will lose its adhesion and will precipitate. This can also work with acetone, or nail polish remover. Keep in mind that alcohol or acetone may damage painted surfaces, so be careful when using these substances.
9. **Commercial products.** Should these methods not work, some contractors we know swear by [Goo Gone](#) or Goof Off.
10. **WD-40.** Use a rag with a bit of texture to it – for example, terry cloth as opposed to an old t-shirt – and soak a small area of it with WD-40, then scrub at the residue. If there is a lot of residue, you can spray the residue and let it sit for just a minute before scrubbing. Obviously, don't do this on anything that the oil in WD-40 would harm! After removing the residue, it's really important to wash off any WD-40 remnants with soapy water and dry before reapplying new adhesive.

---

[echo\_cta]

---

## How To Prevent Tape Residue

First, it helps to know [why tape sticks](#) and what role your surface plays in adhesion. Only then can you choose the correct tape. [Duct tape](#) on drywall? Not a good idea. Some people prefer to use [Gaffer's Tape](#) to duct tape because it leaves far less residue. That's true – it's wonderful tape – but it's also much more expensive than duct tape and it isn't always the right solution for a construction project. All this to say that a little research will go a long way in preventing any sticky issues.

Always, always clean and dry your surface before applying tape. Dirt, grease, lint, old paint, wet paint, plaster... it all increases the probability of extra adhesion (a.k.a. Leftover residue), but more importantly, it's can be [the reason that makes the tape fail](#). You could also consider updating your tape. Removing old tape, cleaning the surface and applying fresh tape reduces the adhesion build-up. This is especially true of [masking tape](#).

Last, but not least, there are specialty tapes specifically designed to leave no residue (i.e. [stucco tape](#)). If residue issues create more work on site, it may be worth considering [a more expensive tape that does the job properly](#) the first time. Sometimes the true cost of the project isn't just the price of the tape, but the labor it saves as well.

Still not sure which tape to choose? Download our PDF, [The Secret to Choosing The Right Tape](#), and browse our selection of

[high-quality tape](#) solutions! To learn more about how [ECHOtape](#) can help you, [contact us](#) with any questions. We love to solve tape challenges!

---

## Why Doesn't Adhesive Tape Stick in the Cold?

Why doesn't your adhesive tape stick in the cold weather? Why does it become dry, brittle, and offers little-to-no tack? Why does it lift and peel within days?

To fully understand the reason why adhesive tape doesn't stick in the cold requires consideration of the variety of different types of adhesives available and the way they are created. Some are applied as a liquid and then they transform into a solid. Depending on their function, they are engineered accordingly.

---

## What Exactly Happens to Tape in the

---

## Cold?

What makes [adhesive tape](#) different from other adhesives is that they have the properties of *both a liquid and a solid*. The liquid component is needed to provide the “wetness” (tack or stickiness) for good initial contact, and the solid component is critical to resist any forces (AKA sheer strength) that could threaten to remove the application.

Yet when cold temperatures occur, the liquid component of the adhesive tape hardens, similar to what happens to butter in the refrigerator. The tape loses its natural form and its overall tackiness. It can therefore no longer make the adequate contact needed for good adhesion. If the temperatures continue to drop, the tape will eventually freeze, turning the liquid component into a tack-free solid.

[echo\_cta]

---

## When Does Tape Freeze in the Cold?

So at what temperature does this happen? It depends on the type and design of the adhesive. Typical adhesive tapes will freeze long before the freezing temperature of water is reached; while other specially designed tapes will continue to stick below freezing temperatures.

When the tape won't stick because it's too cold, you have two

options:

- Increase the temperature of the tape and the surface the tape is applied to; ideally to around 20 degrees Celsius.
- Get a tape that is specifically engineered and designed to work in cold weather

Bottom line is that when you are working on a tape application in cold weather, you will need a cold-weather tape that's right for the job. Not all tapes are designed to work in this type of weather. ECHOtape's global head office is in Canada, so we have been attuned to this issue since the inception [of the company.](#) Look to us when you need a cold-weather tape that can work!

For more information about tape visit [The Complete Technical Guide to Adhesive Tape.](#) or [contact us](#) with any questions you may have about your cold weather tape requirements.

---

## **Why Adhesive Tape Doesn't Stick (And How To Make Tape**



## Stick Better)

No matter the situation, ***“it won’t stick”*** is the single most common complaint we hear about any adhesive. And the tape gets all the blame.

But after four decades of investigating tape complaints and perfecting sticky formulas for many applications, we’ve found that **the problem is rarely the tape alone**. Here’s why your tape doesn’t stick, and a checklist to help you troubleshoot your sticky issues

---

## Why Your Tape Doesn’t Stick – A Checklist

According to Risa Edelstein, ECHOtape’s Director of Marketing:

*“Nine out of 10 times, when customers say, ‘Your tape is not working,’ the problem is not the tape. Usually, the wrong tape is being used – be it one that is not engineered to adhere in extreme temperatures or remove easily from stucco. Temperature, weather, surface conditions, chemistry and application all play vital roles in sticky success – or failure as the case may be.”*

Since there are so many factors that go into the effectiveness

---

of tape, we created a checklist to help you troubleshoot your sticky issues.

## Has The Same Tape Worked Before?

If you used the same type of tape before and it worked, but now it doesn't, then consider what has changed. Are the conditions different – colder, wetter, hotter? Did you apply it differently?

This should be the first step in diagnosing why your tape isn't sticking.

## Is The Tape New?

If the tape is new and it isn't sticking, it might be the wrong tape for the job. Visit [The Complete Technical Guide to Adhesive Tape](#) to find a downloadable infographic on the subject.

## Was The Surface Clean?

Ideally, the surface must be **clean, dry, and oil free**. When in doubt, wash the surface with rubbing alcohol and dry it thoroughly with a soft cloth.

## Was It The Surface Texture?

Do you have a flat, smooth surface that makes good contact with the tape's adhesive? Or do you have a rough surface that leads to minimal contact and requires a thick adhesive? Try

testing the tape on a flat, clean surface (metal or glass always works well), and see if your tape adheres well there. If so, your problem may be a rough surface.

## **Could It Be Chemistry?**

Some surfaces like polyethylene or PVC or concrete are especially hard to adhere. A tacky tape will help, but if not, try a different roll and see if the trouble persists. Or as described above, try the tape on a flat, clean glass or metal surface. If it sticks well, chances are the problem is the surface and not the tape.

## **Are You Trying To Stick To Cardboard?**

If so, remember that cardboard is sometimes made from recycled material, which tends to have many small fibers on the surface that break away very easily. You may need a tape that is designed explicitly for recycled cardboard.

## **Could The Tape Be Too Old?**

Like most products, adhesive tapes will deteriorate over time and lose their adhesive properties. Does your problem disappear when a fresh roll of tape is used? If not, it's time to toss out that old tape.

## **Could It Be The Temperature?**

Most tapes won't stick if the roll or the surface is too cold. Learn more about [cold weather issues here](#).

## Was It Installed Properly?

It may seem simple, but knowing how to apply tape properly plays a huge role in whether or not the adhesive sticks. As the name '*pressure sensitive adhesive*' implies, there needs to be an application pressure across the entire width to get the contact necessary for a good bond. If you don't have good pressure, you won't have a good bond.

## Could It Be You?

Are your hands clean, or could you be inadvertently causing contamination? For example, if you recently worked on a car engine or used hand cream, you could be adversely affecting the surface. Clean your hands and try again.

---

## How to Make Tape Stick Better



If you're struggling with duct tape that doesn't stick, or any other type of tape for that matter, there are a few steps you can take.

## **Clean the Surface**

Tape works best when the surface area is clean, meaning 100% free of dirt, oil, and debris. You want to eliminate anything that can get between the surface and the tape in order to create direct contact with the adhesive.

## Use the Right Tape

Tape is extremely versatile, but that doesn't mean that one kind of tape can handle every type of job (although duct tape comes close). When you have a project that requires joining two surfaces, make sure to use the right tape for the job. For instance, if the surface is not very smooth, use a tape with a thick adhesive.

For more information, check out our guide to [choosing the right tape](#).

## Store Your Tape Properly

Store your tape at room temperature, away from light and moisture to prolong its longevity. Tape stored in wet and hot environments will degrade much faster than properly stored tape. Cold temperatures can also dry out the adhesive, rendering the tape virtually worthless.

## Use New Tape

If your old tape wasn't stored properly, or if it's very old, it's time to pick up a new roll. Just like anything, tape isn't invincible to the effects of time. And double-sided tape is twice as susceptible, so it needs to be replaced more frequently.

## Check the Temperature

If the tape or the surface is too hot or too cold, it won't

stick. If it's sweltering outside, wait until the evening when it cools down to apply the tape. If it's too cold, try to warm up the tape and the surface before application.

## Clean Your Hands

If your hands are greasy or dirty, they can disrupt the adhesive bond of tape. If you recently worked with oil or apply lotion, grease can get on the tape and ruin its stickiness.

Likewise, dirt and mud can get between the surface and the adhesive and disrupt the bond.

---

## When In Doubt, Test It Out

Our motto at [ECHOtape](#) is: **When in doubt, test it out!** Start by simply using a different roll of tape – preferably the same kind, but from a different batch – to determine if the problem persists.

It's all about experimenting and problem-solving.

If you've gone through our checklist and tried everything, but your tape still doesn't stick, [contact us](#). We love to solve tape challenges!

## 5 Great Reasons to Choose Foil Tape

Combine the versatility of aluminum and the weather-resistant sealing power of [adhesive tape](#), and you have an extremely versatile product – aluminum foil tape.

Foil tape is so versatile that it is widely used in all kinds of industries, from manufacturing to construction.

Thanks to its moisture and chemical resistance, thermal conductivity, flame resistance, heat and light reflectance, and weatherability... it makes for a tape that has a wide range of applications.

---

### What is Foil Tape, Exactly?

Aluminum foil was first available in 1888, and commercial production in the U.S. started in 1913. Prized for its protective qualities and attractive appearance in containers and packaging, it was widely used in World War II to protect packages, electrical capacitors, and insulation. After the war, it became available for commercial use.

---





---

Foil tapes use a specially-engineered metal-foil backing which contributes to the tape's malleable, conductive, and rugged characteristics. Foil tape carriers include aluminum, aluminum with glass, lead, copper, copper with tin plating, and steel.

That said, **when it comes to building and construction, aluminum foil tape is the most widely used foil tape.** All told, here at [ECHOtape](#), we engineered our foil tapes to have all the qualities of aluminum with the added benefit of an aggressive and long-lasting adhesive.

[echo\_cta]

---

## **Why Choose ECHOtape Aluminum Foil Tape?**

Here are the top five reasons why [our foil tape](#) has become a best seller with so many of our customers:

### **1. UL 723 rated and meets International Building Code standards.**

UL 723 is a test to measure the surface burning properties of building materials. In particular, it looks at the rate of flame spread and the density of smoke developed. To meet the International Building Code's definition of fire-resistant, a composite material must have a flame spread rating no higher

than 50.

ECHOTape's foil tapes are UL723 certified, which is worth noting because not all cloth-backed duct tapes or foil tapes are UL 723 rated.

## **2. Extreme cold and heat temperature versatility.**

Our foil tape works in temperatures ranging from 248°F to -22°F and can be applied in temperatures ranging from 14°F to 104°F. Most tapes do not perform well in cold temperatures. Severe cold hardens the adhesive and diminishes sticking power of the tape. If you are applying the tape under cold conditions, it may not stick at all. Conversely, excessive heat can melt the adhesive on some tapes, rendering it useless.

## **3. Made with an acrylic adhesive.**

ECHOTape's all-weather aluminum foil tape is coated with a superior performance flame-retardant solvent acrylic adhesive, working equally well in extreme hot and cold weather conditions.

Why does this matter?

Well, most duct tapes are made with a rubber adhesive, which is known to delaminate from its backing in high-temperature applications. Other synthetic rubber adhesives may offer a greater range of temperature functionality, but they also have

lower mechanical strength, weak aging resistance, and do not fare well under UV light. By creating a foil tape with an acrylic adhesive, we've achieved superior durability and longevity once they cure and stick to a surface.

#### **4. A great alternative to mastic.**

Our aluminum foil tape products are not messy (the biggest drawback of mastic), and they use less equipment (no need for old clothes, eye protection, gloves, paint brushes, drop cloths, etc.) It doesn't need additional fasteners such as sheet metal screws, scrap metal, and drywall mesh to seal large areas and it can be used to seal holes in a furnace or air handler.

#### **5. Able to hold up over time.**

In construction, pressure-sensitive tapes are often used in areas that are concealed (like housewraps or foil-faced insulation). Which means they cannot be easily repaired or replaced. Due to its acrylic adhesive technology, aluminum foil tape offers better cohesion, adhesion, and thermal stability than a tape with a rubber adhesive.

To put it another way, ECHOtape's line of [foil tape products](#) are designed to hold up to temperature fluctuations, exposure to UV light and other solvents that would typically impact and breakdown the adhesive effectiveness of different types of tape, making them the ideal choice for both construction and industrial applications.

## How to Insulate and Seal HVAC Ducts: An Example of a Foil Tape Application

According to the U.S. Environmental Protection Agency, “In typical houses, about 20% of the air that moves through the duct system is lost due to leaks, holes, and poorly connected ducts. The result is higher utility bills and difficulty keeping the house comfortable, no matter how the thermostat is set.”

Like a leaky faucet that slowly and steadily wastes water, your HVAC system’s ducts can prove a sure place to lose dollars, waste energy, and sacrifice air quality. Insulating ducts with insulation can help with this issue, and ensuring the insulation is sealed well is the place to use foil tape.

Follow these steps to insulate and seal ducts with aluminum foil tape:

1. Inspect all the ducts for holes and to ensure seams between the ducts and joints are tight. Seal any leaks/breaches with foil tape.
2. Consult with the insulation manufacturer’s instruction on how to measure the length of insulation required so it will encircle each duct well and neither be too

tight so it compresses the duct nor too loose so it is ineffective.

3. For an excellent fit, you can trim away about 2 inches of the insulation from the backing to fashion a flap that can overlap the end of the wrapped piece and provide a smooth surface on which to place the tape.
4. Wrap the insulation around each duct, allowing the vapor barrier backing to face out.
5. Carefully seal every seam with the foil tape.
6. Continue along the length of each duct, ensuring that every roll of insulation is securely taped to the adjacent strip of insulation.
7. Besides cost savings and system efficiency, air quality is improved when an HVAC system works as designed. A home's duct system, once compromised, can serve as a transport method to disperse particles like dust which can easily exacerbate respiratory and allergy conditions.

Furthermore, we believe it's a good idea to inspect your ductwork periodically, especially in the following scenarios:

- After an installer or repair person has worked in your attic. A simple misstep can cause duct damage. Even an accidentally dropped tool may create a small hole that can add up to significant energy loss. (A foil tape patch will save the day!)
- If you are upgrading your air conditioning system and don't wish to spend the money to have the ductwork

replaced, an inspection and a little foil tape can go a long way to more reliable ductwork for an optimally functioning and energy-efficient system. The most highly rated HVAC units are nothing without adequately sealed ducts.

- If you are seeing an unsubstantiated rise (one not the result of a provider's cost increase) in your utility bills
- If specific spaces or rooms seem difficult to heat or cool

Sealing and insulating your ductwork will go a long way to an economical, better climate controlled, and cleaner environment.

At ECHOtape, we offer a full range of specialty tapes that can work in all kinds of circumstances, like the aluminum foil tape solutions listed above.

To learn more about adhesive tape, refer to our [Technical Guide to Adhesive Tape](#). Or, [contact the ECHOtape team](#) with your tape request if you want help determining which product is best for your particular project.

---

# 8 Reasons Double Sided Tape Will Fail

Heavy-duty double-sided tape is useful in a [wide range of construction scenarios](#), but no tool is perfect for every job. Sometimes, adhesive tape doesn't stick.

It's easy to assume the tape itself is to blame, but truth be told, there are some other usual suspects to consider first. Here are the 8 most common reasons your double-sided tape won't stick and how to prevent tape failure.

---

## 1. Failure to Test

We get it. The package label made lofty promises, but generally speaking, adhesive testing should always be done *before* using double-sided tape.

Not all [double-sided tapes](#) are created equal.

Maybe the one you chose isn't aggressive enough and it fell off. Or, perhaps, it's too aggressive and caused damage to the surface it was applied to. When in doubt, test the adhesive first to prevent tape failure.

**Related:** [Tips on Choosing the Right Tape](#)

---

## 2. Temperature Tape Failure

Carefully factor in the temperature. **Are both the tape and the surface at least 18°C/65°F?** The tackiness of the adhesive tape is very temperature-dependent, and the colder the conditions, the weaker the bond will be. And on the flip side, extremely high temperatures can cause the adhesive to melt and lose its strength.

If you must work at lower temperatures, then use a temperature-sensitive double-sided tape specifically designed for [colder climates](#).

---

## 3. Dirty Surface

Traces of dust, dirt, grease, and even the slightest hint of moisture before bonding will contaminate the adhesive surface and act as a barrier between the two.

To prevent tape failure, prepare the surface, give it a quick wash with rubbing alcohol and dry it with a clean cloth.

**Related:** [How to Make Tape Stick Better](#)

---

---



## 4. UV Exposure

Prolonged exposure to ultraviolet light can cause certain chemical materials (such as natural and some synthetic rubbers as well as polyethylene) to become hard and brittle. Absolutely not the qualities you want in a tape that needs to hold for any duration in a particular application.

If the area where you will be using the tape sees above-average UV exposure, you may need to consider a different tool for the job.

---

## 5. Chemical Migration

Liquids such as oils, plasticizers, and dyes are a lighter weight material and can therefore easily “move” from the product (the surface) to be absorbed by any adjacent material (the tape). This movement is known as “migration.”

For example, consider PVC: plasticized to provide flexibility, it is a lower-cost, lower-molecular weight material. If a typical pressure-sensitive adhesive is applied to PVC and allowed to remain in place for a prolonged period, the plasticizer will migrate from the PVC surface into the pressure-sensitive adhesive; making the glue a gummy mess.

When using this type of material, choose a high-quality, double-coated tape specifically designed for PVC applications.

---

This will considerably reduce any tendency to migrate, thereby preventing tape failure.

[echo\_cta]

---

## 6. Improper Calculations

The correct surface contact to weight ratio plays a factor. Think of it this way: Is there a big enough surface of sticky stuff applied to a substrate to hold the weight of the object stuck to the other side of the tape? Likewise, does the “other side” have a large enough surface of sticky stuff applied to it to hold the weight of the object? For example: If you need to adhere poly sheeting to a wall, you need to have a wide enough strip of double-coated tape to be able to hold the weight of the poly sheeting to the wall. In this scenario, 1/4” wide might fall, but 1/2” might do it.

---

## 7. Improper Storage

If you leave milk on the counter overnight, it spoils. The same is true of building supplies. When materials are bought in bulk and stored in dusty, wet or extremely hot or cold conditions for extended periods, the adhesive deteriorates. Read more about [extending the shelf life of your tape here.](#)

---

## 8. Improper Installation

It's not always, "Roll and go".

Did you put enough pressure on the tape?

Did you clean the surface before applying the tape?

Did you remember to remove the liner? (*Yes, that happened!*)

Sometimes preventing tape failure is as simple as slowing down and paying attention to detail.

---

## How To Use Double-Sided Tape

Now that you've figured out why your tape didn't stick, here are the best ways to ensure success.

Whether you're using general purpose tape for school projects or [permanent double-sided tape](#) for industrial projects, the process is generally the same:

1. Choose the right tape for the job.
  2. Ensure the tape and the surface is warm enough.
  3. Clean the surface with rubber alcohol.
  4. Test the surface.
  5. Apply adequate pressure.
-

6. Avoid sun exposure.
7. Store your tape correctly before use.

For more information about double-sided tape, please visit [The Complete Technical Guide to Double Sided Tape](#).

To learn more about how ECHOtape can help you, read about our [tape obsession here](#).

---

## 4 Quick Tests for Tape in the Field

We get this question a lot: *How do we actually know that it's the right tape for the application and that it's going to last?* And that's totally fair. Almost everyone we know has a tape failure story, but pressure sensitive tape isn't the same as what you grew up with, or even what you used five years ago. BUT... you don't have to take our word for it. When a customer comes to us with a challenge, we actually test the tape for them and with them.



There are two ways we do this: Real-world field testing and lab testing. Ideally, we get to do both, but the bottom line is that the real world test matters most. We explore the most common tape testing variables we use here at ECHOtape in our post, [The Complete Technical Guide to Adhesive Tape](#). Think substrate testing, shear strength, tensile force, and UV exposure. All of which are great; we love a good lab analysis report. But... what do you do when you're on a job site and need to know more about a tape's properties? Try

one, or all, of the following field tests.

## Four Quick Tape Tests to Use In The Field

**Acrylic or Rubber?** Not sure if the tape has an acrylic or rubber adhesive? Try **The Sniff Test**. A colorless transparent adhesive suggests that it might be an acrylic tape, typically providing good adhesion in extreme temperatures. To check, strip a fresh piece from the roll, put your nose close to the fresh surface and smell it. If it smells a little acrid it could be acrylic. If it smells smoky or like rubber, chances are good that the tape is a natural rubber (or hot melt type, see next paragraph) which offers superior holding power in the 45° to 120°F range.

**Hot melt or not?** To determine if your tape is made with a hotmelt adhesive, try the **“Duck’s Foot” test**. Make a little nick in the tape and then very slowly tear the tape and examine what’s happening in the tear itself. Is it separating, or is a web of adhesive like a duck’s foot appearing across the tear? The telltale sign of the duck’s foot tells you that it is most likely a hot melt adhesive tape. (To learn more about adhesives and what they do, visit our [Complete Technical Guide to Tape.](#))

**Is the tape still good? Will it stick?** If you aren’t sure how old the tape is or where it’s been stored, you should start by checking the adhesive levels. Your best bet is to use a flat,

smooth, consistent test surface. We've found that glass works well; just make sure the glass is clean and dry and try to conduct this test in "comfortable" temperatures, since cold weather will lead to poor results, even with good tape.

Start by removing two or three layers from the tape you're testing (to avoid tape that might have been contaminated), and then tear off several inches. Keep your fingers at the ends of the length of tape, lay it on the glass, and smooth it down with your fingers. Next, take a credit card and use it as a squeegee, sliding it toward you over the tape surface two or three times. If you are comparing your roll of tape with another roll, you may want to repeat this with a sample from that roll.

Take one end of the tape and peel it from the glass at right angles, stripping it at about one inch every five seconds. If it holds pretty well, then you know that both the tack (the tape bonding to the glass) and the adhesion (the tape sticking to the glass) are both satisfactory. You can also check the glass surface for any adhesive residue. A good tape will remove cleanly.

**How good is my general purpose duct tape?** Not all duct tapes are created equal. With hundreds of variations on the market, how do you know you have the right one for your job? Start by looking carefully at the back. Does it have little dimples, or can you see a very strong and distinct cloth pattern? By counting the cloth or dimples, you can determine the weave of cloth being used. Low-end duct tapes can have a count as low

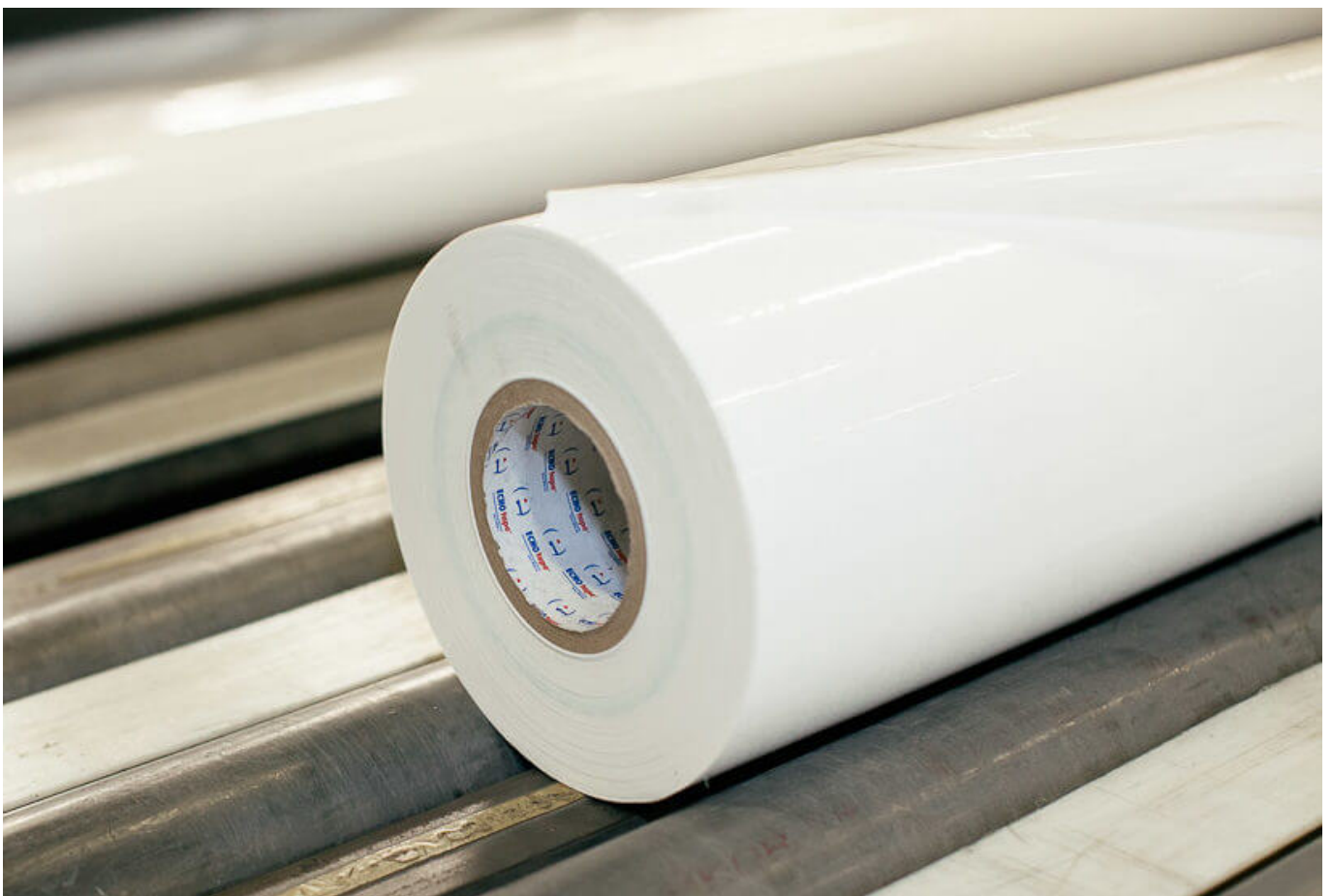
as seven yarns per inch along the tape and 18 yarns per inch across the tape. Just like bed sheets, the higher the count, the higher the quality of tape.

Remember: Not all [adhesives](#) are created equal, so make sure you consider all the facts related to your job, including the surface, the temperature, ultraviolet light, the type of application you are trying to create, and more.

That said, even after more than [40 years testing tape](#) in real life, and in the lab, we are still learning new things every single day. Part of that is thanks to our customers, who are constantly pushing us to innovate products that meet their needs. Did we answer your questions about testing tape in the field or on the job site? If not, [tell us about it](#) and let's see what happens!



# How to Choose the Right Surface Protection Film and Avoid Problems



The name *surface protection film* kind of says it all – it's designed to protect critical surfaces from scratching, marring, abrasions, UV exposure, or dirt and contamination.

Popular and successful due to its strength and durability, protective film is actually an [adhesive tape](#). It's produced from thin film layers bonded together to create a barrier,

guarding everything from a building's glass to anything else requiring under-construction protection. For example, It's the shrink-wrap plastic that comes affixed to your new refrigerator, and it's the roll of material used to cover and protect the surface of fabricated parts, especially in the automotive industry. And it's used extensively by manufacturers of metal and plastic sheets. They are also scratch proof and help reduce the penetration of sunlight and UV rays.

## 10 Questions To Ask Before Choosing the Right Surface Protection Film

To ensure you get the right protective film for you applications make sure and ask these questions.

1. **Will the film be applied to a rough or a smooth surface?** Rougher surfaces have more surface area and require a thicker adhesive.
2. **Is the surface area clean and dry?** Dirty application conditions will likely yield unacceptable results. Embedded materials and unnecessary debris adversely affect a protective film's performance.
3. **Will the surface be painted or have a coating?** Chemical reactions can exist between adhesives and coatings, especially the longer they are in contact with each other.
4. **What type of surface needs to be protected?** Be it wood, stone, metal, glass, plastic, or ceramic; these surfaces

require completely different adhesives to perform successfully.

5. **Will the film be exposed to elevated temperatures?** Most rubber-based adhesives cannot handle temperatures above 150°F. Acrylic adhesives are effective at temperatures up to 350°F, and silicone adhesives up to 500°F.
6. **Will the film be used outdoors? If so, for how long?** The sun's UV rays destroy adhesives over time. Protective film will not only yellow, but will become stiff and brittle, and therefore rendered ineffective. The length of time the film will be exposed to the elements will determine how much UV protection it needs.
7. **What is the scope of the project?** Do you need to protect windows with a PVC film or do you need to provide a moisture and vapor barrier on a slab where a LDPE (Low Density Polyethylene) film is the answer?
8. **Will the film be used in a safety or security application?** On any project, it's safety first. Is the purpose of the film to protect workers from shattering glass or to deter intruders?
9. **How long will the film need to adhere to the surface?** If this is a long-term job, some additional component(s) may need to be added to ensure the bond of the surface to the film for the length of time you need it to hold fast.
10. **Will storage and transportation affect the film?** Your crew may withstand extreme climates better than your materials! Consider their transport to the job site as well as the material's subsequent storage so it doesn't

compromise effectiveness. Keep films and tapes in a cool, dry place.

Once affixed to a clean, dry surface, protective film effectively prevent “damage” to that surface. Although incredibly versatile, use the *wrong* protective film for the job and you’ll jeopardize both your timeline and the always dreaded budget overages.

## 5 Common Problems with Surface Protection Film

Here are the most common challenges we have found during close to 45 years of working with tape and surface protection film.

**Poor Surface Adhesion.** If the film peels off too easily there are multiple things that could have caused it:

- The surface was not clean enough or was contaminated by dust or moisture.
- If the incorrect film for the project was used, it could easily result in an insufficient amount of adhesive or too low a tack for the climate and conditions.
- The film was not stretched uniformly during installation creating a distortion and therefore an ineffectual seal.

**Debonding.** If the film actually separates from the adhesive it leaves a residue on the surface. Adhesive removal is remedied with a clean cloth dipped in an appropriate amount of organic solvent such as ethanol or acetate. Care should be

taken during this step so as not to create an additional cosmetic problem to the protected surface upon removal.

**Edge Lift.** This occurs when ends of the protective film begin to lift off the surface. Common in metal protection where composite protective film is used, it happens especially with aluminum as compared to steel. Again, the right film for the job makes the difference.

**The Film Cannot Be Removed.** The most common reason for this problem is the *quality* of the pressure-sensitive adhesive. Beware of manufacturers who have not mastered the production of this very specialized adhesive technology. Some have only tweaked ordinary adhesives by making some improvements to existing formulations – with disastrous consequences.

Another reason why you'd have difficulty removing the film could be an overexposure to sunlight. This is why the UV rating of the film and the determination of how long you need it to adhere is an essential pre-installation determination.

**Ghosting.** One of the primary objectives of any construction project is to make it a seamless transition, where literally no evidence is left behind. When visual blemishes are apparent on what were supposed to be protected surfaces, the main cause of this "ghosting" is due to residue build up left behind from the markers, cleaners, solvents previously used to clean surfaces. These can be removed with care and diluted solvents.

Our full range of films have been used to protect all kinds of finished surfaces such as polished or painted metals, textured

surfaces, glass and plastics. If you are not sure which type of protective film or adhesive tape is right for your needs, take a look at our [Complete Technical Guide to Adhesive Tape](#), or simply [contact us](#). We will work with you to test various options or customize a solution to fit your needs.

---

## How to Store Adhesive Tape

When it comes to food, refrigeration protects the items from spoilage and “use by” dates help guarantee freshness. If only all products came with such clear guidelines, right? While your metal tools or hammers might be impervious to the elements, building materials like latex paint and adhesive tape can, and will, degrade over time. Tape storage is a key element in longevity. Why? Well... it all comes down to how tape is made.

## A Closer Look at Adhesive Tapes

Pressure sensitive adhesive tapes are only possible by chemistry, which in and of itself is always vulnerable to physical and environmental stressors. (We explain more about the chemistry of tape [here](#).) Materials like natural rubber used in the adhesive, or certain resins utilized in pressure-sensitive adhesives, can have their bonds broken by the effects of oxygen, as well as exposure to extreme heat, and

from natural and artificial light sources. These reactions organically continue over time which can often cause changes to the tape's adhesive properties.

But that's just one example. Adhesive tape degradation comes down to four simple causes:

**Applied Stress:** mechanical, electrical, radiation, or other stresses.

**Temperature:** the higher the temperature, the more rapid the change.

**Environment:** can be the gases, liquids or solids that come in contact with the object.

The overall effects of these three types of changes are governed by how long each condition exists. In other words, they are all dependent upon **Time**, the fourth controlling factor. For tape, aging is particularly impactful as chemical changes gradually occur between the several components of the tape itself.

Makes sense, right?

While tape manufacturers may add antioxidants in addition to heat and light stabilizers into their various formulas to offset the effects of aging, *these do not protect a tape's reliability indefinitely*. Like using sunscreen at the beach, these are temporary measures. Only longer-term solutions will deter the degradation process.

To avoid the natural course of chemistry undermining the

integrity of any tape, the first step is to always follow the manufacturer's suggested storage and use. Proper storage not only extends the shelf life of your tape but ensures its effectiveness and gives you the best value for your dollar.

## The Best Tape Storage Tips

So how can you keep your tape inventory at the same optimal quality as the first day it is delivered to the job site?

1. First, you should store tape somewhere away from the light, particularly windows. *Ultraviolet light can even penetrate the packaging with time.*
2. Then, you should store the tape in a cool place; the cooler the better, preferably 60°F/15°C or cooler.
3. Also, make sure to keep it dry. Even the presence of moisture in the air can contribute to a chemical reaction. *Just take it out of storage a day or two before you need it to let it recover to room temperature.*
4. You should also store your tape in such a way that you know when each lot was delivered so that you can use the oldest tape first.
5. Find out from your supplier what a safe height would be to stack the cases of tape and the skids on top of one another. Certain tapes can be crushed and badly damaged when the boxes are overloaded. Ideally, the storage should be on racks and take up just one skid.
6. Besides proper stacking and cool, dark, and dry storage, best tape storage practices dictate rotation of stock to



yield the best value out of your adhesive tapes.

## 4 Tips for Storing Tape in Your Truck

While certain jobs call for specific tools, it's always useful to keep the basics on-hand. Maybe you have a go-to tool kit or maybe you keep your supplies in your truck box. Either way, it's worth looking into how you store your tape on the go.

**Understand each tape's properties.** Read the manufacturer's specifications and recommended tips for tape storage. Some tapes are designed to stand up to high heat temperatures. Therefore it's adhesive will fare better in your truck over a long summer of 90°+ days than standard duct tape will.

**Avoid exposure to direct sunlight.** Do not leave your tape near the window where it can soak in UV rays for a prolonged period of time. Ultraviolet light can affect the chemistry of a tape's adhesive and cause it to become hard and brittle.

**Be mindful of temperatures.** Try to avoid both extreme heat and cold. High heat can melt a tape's adhesive and cause it to become a sticky mess. At the other extreme, if left in your truck amid freezing temperatures tape's adhesive may become too brittle to work. Ideally, tape should be stored in a cool, dry location. This isn't always possible to try to keep tape stored somewhere else other than your truck when outside temperatures get to extremes. If that is impossible, keep only the amount you will use in a day in the truck and keep

restocking as needed.

**Have a system for cycling your tape.** No matter how well you take care of your tape, you cannot maintain its reliability indefinitely. The best solution is to cycle your tape. Devise a labeling system so that you use the oldest tape first.

If you aren't sure how old your tape is, test it first. There's a great post about [testing tape quickly in the field](#) here.

While tape doesn't get better with age when left to its own devices, paying attention to the variables that maintain a product's integrity will ensure it is ready to use when needed.

*If you have any questions about aging in adhesive tape, or how to minimize it, please [contact the ECHOtape team](#) today. We've been [helping customers](#) find the right tape for more than 40 years. Our friendly, knowledgeable experts are ready for any question – no matter how technical!*