

The Complete Technical Guide for Double Sided Tape

In this comprehensive guide to all things double-sided tape, we're giving you all the information you need to know about choosing and using double-sided tape in seaming, splicing, bonding and beyond.

- What is Double Sided Tape?
- How is Double-Sided Tape Used?
- Which Double Sided Tape is Best?
- What is Acrylic Foam Tape?
- 4 Steps to Choosing the Right Double-Sided Tape

What is Double Sided Tape?

Created by applying a thin adhesive layer to each side of a carrier substrate material, double-sided tape, also known as double-coated tape or double-faced tape, is widely used by a vast array of industries for applications such as bonding, holding, mounting, splicing, and packaging. Obviously, it is most often used to stick two surfaces together; typically in a way not visible in the end product. This is due to it being installed "in-between" rather than "overlaying upon" in use. This specific application allows for a neater look and better craftsmanship.



Double-sided tape can be either thin (such as paper-based) or thick (such as foam-based), coated with rubber, acrylic, or a modified version of these sometimes with differential properties. Double-sided tapes with thick bonding systems are usually better able to bond to unusual, non-uniform, or highly patterned and textured surfaces. Thick bonding systems usually involve a foam carrier layer and may vary significantly in strength. Thin bonding systems are, as the name suggests, much thinner — sometimes so thin that they consist of nothing but pure adhesive on a silicone liner. And yes, much like everything else on a job site or at a manufacturing facility, choosing the right double sided tape for the specific application is paramount.

How is Double-Sided Tape Used?

Did you know that in auto manufacturing, double-sided tape has been replacing rivets and fasteners for years and is used to attach everything from dashboards to specialty car appliqués? Or that RV and truck manufacturers use specialized double-coated tape to bond panels together and fasten exterior mirror glass to the mirror housing bezel? Here are just a few other applications where double-sided tape plays a major role:

House Wrap and <u>Vapor Barrier</u> Seaming. Use double-sided tape to overlap house wrap seams so water does not migrate behind it. To reduce labor, use a <u>high-performance double-sided</u>



tape to attach vapor barriers to walls in crawlspaces instead of using screws for a more air-tight seal. Learn more about this <u>increasingly important</u> process with our <u>guide</u>.

Acoustics and Sound. With more buildings becoming airtight, sound is becoming a big issue. Double-sided tape is often used in manufacturing to attach foam to wall panels or flooring underlayment to floors.

Graphic Arts & Signage. When it comes to bonding, double-coated tape is the go-to tool of choice for this industry. Choose from a variety of adhesion levels based on what you need to stick together.

Convention or Expo Events. Every exhibition hall that lays down temporary carpet uses a very special double-sided carpet tape which is removable after the trade show and leaves no residue. When securing and holding (think red carpet) carpets in place for major events or trade shows, it's double-sided fabric tape to the rescue. These tapes typically feature a medium adhesion and tack, which allow for removal without residue.

<u>Splicing</u> and <u>Tabbing</u>. For paper mills and paper corrugators, double-sided tapes are paramount to virtually every core-starting, splicing, or tabbing requirement.



What is Acrylic Foam Tape and Why Is It So Popular?

Acrylic Foam Tape (a.k.a. <u>ECHOtape's Ultra Bond Tape</u>) is comprised of a layer of foam core that is coated with acrylic adhesive on each side, and covered by a red liner. It is stronger and will last longer, particularly in harsh conditions such as exposure to direct sunlight or extreme cold than most other tapes. Two key benefits of this adhesive tape are its strength and durability.

Indeed, acrylic foam tape has replaced screws, rivets, adhesives, and bolts in automotive, as well as other vehicles in transportation. Previously, manufacturers were forced to use metal fasteners, however, these had a number of drawbacks including the probability of rusting over time. As an alternative, this adhesive tape, which is water-tight/air-tight and rust-free, solves two problems with one solution.

The simplicity of the design is what makes acrylic foam tapes in general so easy to handle, but actually, each component — core, adhesive, liner — is carefully selected and engineered to perform under a range of conditions.

Foam Core: Foam is at the core of the functionality; it helps distribute the load. Available in a range of thicknesses and weights, it provides bonding between dissimilar, and uneven



surfaces. Keep in mind: The holding strength of the bond is determined by the surface area available for taping.

Adhesive: Here, it's the acrylic adhesive that delivers strength and durability, allowing it to meet more demanding holding requirements.

Liner: Release liners are specifically engineered to provide an easy release from the adhesion of the acrylic foam tape itself. Our red liner exists to maintain the integrity of the "stickiness" while keeping the adhesive layer protected from environmental elements during shipment, storage, and use.

While acrylic foam tapes can perform a variety of functions, it isn't the only double-sided tape on the market. And it may not be the right tape for your job. Here's how to find out:

4 Steps to Choosing the Right Double-Sided Tape



Most tape failures can be avoided by following one simple rule: Choose the right tape for the application. Sounds easy enough, but we find there's a "one tape fits all" approach lurking on job sites and it's wreaking havoc with your results. Tape is a tool, just like a hammer, just like a saw.

In fact, you wouldn't choose a reciprocating saw for a project that calls for a circular saw, so why use duct tape when the project calls for outdoor double-sided tape?

Speaking of double-sided tape, there are many different options available on the market. Before you just reach for the first one you see, ask yourself these 3 questions first:

Step 1: What are the two surfaces you are bonding?

Choosing the right double-sided tape begins by evaluating the surface characteristics of the two substrates you're trying to stick together. For example, the flatter and smoother the surfaces are, i.e. glass, aluminum, PVC, the thinner the tape can be. Conversely, the rougher the surface is, i.e. wood, cement, brick, stucco, the thicker the rough surface adhesive tape needs to be to provide adequate contact.

Step 2: What is your surface energy?

All surfaces have a property known as surface energy, the



degree of attraction or repulsion force of a material surface exerts on another material. Substrates with a high surface energy form very good surfaces for bonding, like glass, glazed tile, and bare metals. Plastics can vary from reasonably easy to very poor. For example, polypropylene and polyethylene are very hard to stick to and call for a higher adhesion and a very tacky adhesive.

Conversely, a material like silicone has such "low surface energy" that conventional adhesives won't stick to it at all. Working with this material would, therefore, require an incredibly tacky and/or silicone adhesive.

It's also important to take treated surfaces into consideration. For example, if a surface is coated with paint, the tape might stick well to the coating, but it there is a weak bond (low surface energy) underneath, the tape and the paint might peel off.

Step 3: What temperature resistance do you need?

Next, take your environment into consideration and choose a temperature-resistant tape. The tackiness of the adhesive tape is very temperature-dependent, and the colder the conditions, the poorer the bond will be. If you must work at lower temperatures, then use a double-sided tape specifically designed for <u>colder climates</u>. The same holds true for extremely hot or wet conditions.

Humidity, dirt, and UV conditions all play a role. Choosing the correct <u>temperature-resistant tape</u> for the climate



variables at hand is very important!

Step 4: What other conditions should I consider?

When choosing the best double-faced tape for your project, it's worth asking yourself these other key questions:

- How long do you need the tape to hold? Meaning, do you need a temporary or permanent solution?
- If you need to remove the tape, do you need it to be clean removal?
- What will the tape be exposed to while you are applying it, and afterward? Consider moisture, heat, cold, water, UV, and dirt.
- Does the tape need to be a certain thickness for the application to work?
- What width do you need?
- Is there any heat involved in the application process, i.e. in manufacturing?
- Are there any specifications you need or are required for the job at hand (i.e., EPA codes, UL approval, etc.)?

What it all boils down to is knowing these three things: your job, your materials, and your field conditions. Only then can you match the right adhesive with your project and decide if you need heat-resistant, extra wide, or specialty outdoor double-sided tape. By thinking about and answering these questions in regards to the adhesive, you can increase the longevity and success of your projects.



Take a look at <u>ECHOtape's double-sided tape solutions here</u>. And if you still have questions about double-sided tapes and how to leverage them on your next job, please <u>contact us:</u> here at ECHOtape, we've made it <u>our passion</u> for more than <u>40 years</u> to help professionals with their <u>sticky issues!</u>

Paper Mills — Pivoting to Meet Market Demands

If you thought the paper and pulp industry was going to disappear, think again. True, there has been a marked decline in traditional paper industries like newsprint. However, global trends are driving the need for new and innovative paper products, putting pressure on paper mills and corrugators to innovate and change.

4 Trends Driving Change In the Paper Industry

As a company that's served the paper, pulp, and corrugate industries for four decades, we're keenly aware of how the



digital revolution has wreaked havoc on the market. And while there were substantial downturns in the late 1990s and early 2000s, paper mills are not disappearing—far from it. We would argue that the industry is going through the most substantial transformation it has seen in many decades. Consider these four statistics as proof:

- 1. In 2020, the global production of pulp and paper reached 490 million tons, up from 390 million tons in 2018.
- 2. Global shipping volume surpassed 100 billion parcels in 2020, up from 74 billion parcels in 2017 according to Pitney Bowes.
- 3. More than 15% of pulp and paper product sales in the United States will occur online, driven by higher demand for raw materials and corrugated boxes.
- 4. A goal of collecting and recycling 55% of all plastic packages has been set by the European Union and is expected to be reached by 2030. This will impact the pulp and paper industry, in a good way. North America and Asia do not have such governmental standards in place, however in the U.S. particularly, anti-plastic consumer sentiment is expected to drive legislative change.



How Paper Mills Will Pivot and Profit

While traditional markets like commercial print companies and newspapers have declined in recent years because of laser printing and online media, the opportunity for forest-products companies to innovate has never been greater. At ECHOtape, we see the following trends as opportunities for one of our core markets to pivot and profit.

Recyclable Products. At the forefront of this trend is recycling. The movement to reduce waste from plastic packaging is being driven by changing consumer preferences and for good reason. The massive islands of plastic waste floating in the Pacific Ocean have garnered extensive media attention over the past few years, heightening consumer awareness about the excessive plastic pollution both on land and sea. These preferences are spurring brand owners to replace plastic with renewable and recyclable alternatives and to address plastic in their sustainability goals.

As a result, the demand by consumers for more sustainable packaging is driving the need for more and better-recycled products. This has been a challenge in that some products contained coatings that were waterproof and problematic for recycling. Now there is a push to use protective coatings that are recyclable and it's a trend that will further develop in 2020 and beyond. The growing concern over the amount of packaging that could not be recycled has resulted in the involvement of the European Union in the area of plastic



packaging. In North America, seven states in the U.S. have plastic bag legislation, and several cities have banned plastic drinking straws. However, given the nature of the global marketplace, European policies may put pressure on the U.S. to do more.

Either way, this "anti-plastic" sentiment is beneficial to the pulp and paper industry in that it encourages biodegradable alternatives. Simply put, the problems associated with plastic result in a tremendous number of opportunities for paper mills. The development of alternative products will continue well into the next decade, especially as it relates to the banning of single-use plastic products.

Intelligent Packaging. It seems like just about everything is becoming a "smart" version of itself, so why not merge paper with new technology to create products that can do more than just wrap packages? This includes "smart packaging" containing built-in digital sensors. These products are grouped into two types: active packaging and intelligent packaging. Active packaging controls the environment of the product shipped, such as temperature. This could be important in shipping things like food products.

Digital "intelligent" packaging is becoming more important in two ways. First, more kinds of products are being shipped across the globe. Everything from cupcakes to fragile antiques. Being able to control the safe travel of these products and ensure their delivery is becoming more important.

Numbers back this up. U.S. demand for intelligent packaging is



expected to grow 8 percent annually. The market was forecast to top \$3.5 billion in 2017. The two largest markets for this type of packaging are food and beverages, due to new online food ordering and delivery, and pharmaceuticals that are increasing in demand by aging baby boomers.

The second way digital packaging is becoming more crucial is in overall safety. The threat of terrorism is a concern for government and corporation offices receiving packages daily. Having a digital way to identify contents and ensure safety, i.e. tamper-proof packaging, would be of high value. Also, consider money: Embedding traceable chips within "smart" paper money raises the possibility of banks and governments guarding against counterfeiting and fraud.

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Increased Corrugate Demand. Thanks to the explosion of eCommerce, there is a higher demand for raw materials and corrugated boxes, as well as an increase in the number of products that are required immediately with very little lead time. There is also a shift toward more lightweight packaging at all levels, including luxury brands. One of the benefits of lightweight packaging is that it can support the growth of a business by cutting expenses. Lightweight packaging lowers pulp expenses, reduces CO2 emissions and slashes shipping costs, which are just some of the many benefits.

Hygiene Products Packaging. As the middle class grows in developing nations worldwide, so goes the demand for hygiene products such as toilet paper, wipes, tissues, and paper



towels, to name a few. Manufacturers in the pulp and paper industry have exploited this growth in socioeconomic status by producing packaging that accommodates an increasing demand.

Advances in Food Packaging. Packaging for food seems to be in constant development. In recent years, there has been an increasing interest in packaging products that are resistant to grease, yet do not contain any fluorochemicals. Likewise, there is an increased interest in thermal packaging linked to the increase in food delivery services. Specifically, the explosion of third-party delivery service providers, such as GrubHub and UberEats, has created a need for thermal packaging. As long as consumers expect to have hot food delivered to their home expeditiously, there will be a thriving thermal market in pulp and paper. There are many possibilities and opportunities in this area that will emerge as e-commerce continues to evolve.

Nanocellulose Disruption. Completely new revenue streams are being developed by traditional paper mills through the extraction of nano-materials from cellulose fibers that can be used to enhance the performance of products unrelated to the paper industry such as paints, coatings, cosmetics, adhesives and video screens. That soft, comfortable rayon shirt or sweater is likely the result of a process that regenerates wood fiber called dissolving pulp into high-quality fabrics used throughout the textile industry.

As with any shifting industry trends and remarkable innovations, we're paying close attention. Our tape is used in



the production and <u>converting processes</u> of all kinds of paper. As the industry develops these new substrates and materials, they will be looking for new kinds of tape to get the coring, tabbing and splicing job done. <u>We're ready</u> to meet that challenge.

Customer Train2Build Robinson

Spotlight: with Bill

Bill Robinson is a nationally known construction trainer and presenter and owner of Train2Build and Train2Rebuild, a company that provides education for the building industry and homeowners. Headquartered in New Orleans, Robinson hosts consulting and training programs that focus on detailing the building envelope in the hot/humid climate, best practices for installing doors and windows, flood hardy building materials and methods, and moisture management in the Gulf Coast region.

And it just so happens that one of his favorite building materials is double-sided tape. Which makes Bill Robinson one of our favorite customers, obviously.



How did you first learn about ECHOtape? Through blogging, actually. Amanda Voss reached out to me when she was researching a series of stories on moisture management and adhesive trends.



When did you start using our products? I had become fascinated with the powers of double-sided tape through my work with <u>JLC</u>, but ECHOtape was new to me. I reached out to Steve Underhill



and he sent a couple of sample rolls for me to try and I was blown away. That was three or four years ago. I've been using ECHOtape ever since.



How many different ECHOtape products have you worked with? Any favorites? Although I have used your seaming tape, I'm mostly interested in double-sided tapes, using them in applications where I need to adhere to a substrate that I can't typically drive nails through. Or even ones where you can, because I



don't like the idea of penetrations. Any hole, no matter how small, has the opportunity to become a problem when there is moisture involved. Double-sided tape allows me to have the same powerful hold, but with the added benefit of keeping things dry. For windows and doors, I am really impressed with the Double Sided Acrylic Foam tapes, <u>UB-F3504</u> and <u>UB-F3557</u>. And I'm a firm believer in <u>seaming housewrap</u> with tape, instead of fasteners or nails. Sure, it takes a bit more time, but the air sealing benefits are worth the extra effort.

What's been the biggest surprise using tape in your construction projects? The surprise is the versatility. The reward is the adhesion level. A nail is a nail; it has one job and does one thing. Caulk, which is something that I use often, is more versatile, but it's still limited. Tape is truly multi-purpose. The different adhesive components allow me to choose the best stick for the job. And it allows me to connect, or adhere to different substrates that were previously huge challenges, such as irregular surfaces. The cool thing is that I can weather strip without fasteners and ensure a moisture-resistant barrier.

What has your customer experience been like? Phenomenal! My go-to guy is Steve Underhill. Mostly because I'm old school; I like talking through my challenges and you can't do that with a chatbot. Steve listens, he's genuinely curious, and what he's doing makes me look good. The results speak for themselves.

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What's next for you and your business? Bottom line: I'm a building envelope guy that lives in the humid Gulf Coast of Louisiana. Moisture issues are what we're trying to solve every day. Building homes to withstand hurricanes and tornadoes is important. But the real challenge is moisture and microbial growth.

Right now, I'm involved in a number of flood recovery and rebuilding projects, including the <u>Disaster Justice Network</u> in Lake Charles and <u>lowernine.org</u> in New Orleans. We're creating training programs and resources — for builders and homeowners alike—to help these areas create durable, healthy, efficient, moisture-resistant homes, to better withstand the next weather event.

As a consultant, I'm also on all kinds of Zoom meetings with building pros, the best of the best. But most of these guys are from the Northeast and Midwest, their concern is insulating houses for heating. In the humid South, we need to focus on air sealing a house for cooling and moisture. Those are two different things. When it comes to hiring a company for a job, whether it's an engineer, architect, or builder, make sure they know your climate challenges. If you don't know, ask me. I'm an educator and a connector, I can find you to the right people.



7 Ways to Use Double-Sided Tape in Construction Applications

Double-sided tape is any tape that is coated with adhesive on both sides. Designed to stick two surfaces together without being seen, these versatile tapes deliver neater-looking projects and better craftsmanship. And unlike screws or rivets — which join materials at a single point — high-strength double-sided tape permanently adheres one substrate to another while spreading the stress load.

Sounds great, right!? Yet, much like everything else on the job site, choosing the right <u>double-sided tape</u> for the specific application is not as easy as it sounds. Whether you're bonding glass, wood, steel, concrete, foam, and/or plastic together, it's important to understand the materials you are bonding. Concrete with a textured surface is going to require more adhesive strength than, say, carpet padding.

Best Uses for Double-Sided Tape in



Construction

Outside of materials, it's also important to understand the field conditions. A product that you used in spring or summer might not work in sub-zero winter. Ice, rain, humidity, heat, UV, and dirt are all factors to consider when choosing the right tape or, more importantly, preventing tape failure. For more on this, check out our infographic, The Secret to Choosing the Right Tape.

That said, we are thrilled to see more and more tape being used in construction applications, especially since adhesive technology has come a long way. As more and more builders start to focus on seaming the building envelope and getting improved HERS scores, tape is fast becoming a way to get the job done well. Here are just some of the construction applications where double-sided tape plays a major role and we expect more and more in the future.

Overlap housewrap seams. Here's the deal: single-sided tape used to seal housewrap may allow water to migrate behind the tape, and ultimately into the structure. Using a roller to bond the tape may help, but the better solution is to use double-sided tape as a housewrap tape so you can overlap seams and ensure no water gets through.

Overlap vapor barrier seams and attach them to cement walls in crawlspaces. More and more builders are putting vapor barriers down in crawlspaces to seam the building envelope as even in the basement there is air leakage. You can also use a high-



performance double-sided vapor barrier tape to attach the barrier to the walls instead of using screws.

Overlap any flooring underlayment including sound attenuation barriers. With more buildings becoming airtight, sound is becoming a big issue. Use double-sided tape for any flooring underlayment including sound attenuation materials.

Permanently attach insulation to walls. Use double-sided insulation tape to attach insulation to the building and ensure it sticks.

Temporarily mount something prior to permanently fastening. Temporary double-sided tape is the perfect solution to hold something in place while you permanently mount it. Examples include light switch junction boxes; electrical panels; electronic thermostats; baseboards; and crown moldings.

Floor protection. Often you need to cover floors or walkways with carpets or floorboards to protect the surface while construction is underway. Our <u>double-coated carpet</u> tape features an aggressive adhesive system that's perfect for carpet hold-down but will leave no residue once removed.

Easy installation of building materials. More and more manufacturers are making their products with double-sided tape for easy installation. As <u>labor shortage</u> becomes a big issue, finding ways to save installation time is becoming critical.

For more information on double-coated adhesive tapes, please visit The Complete Technical Guide to Double-Sided



<u>Tape.</u> And if you still have questions, please <u>contact us</u>! We love solving unique tape challenges.

8 Reasons Double Sided Tape Will Fail

Heavy-duty double-sided tape is useful in a <u>wide range of construction scenarios</u>, 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 <u>double-sided tapes</u> 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: <u>Tips on Choosing the Right Tape</u>

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: <u>How to Make Tape Stick Better</u>

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 aboveaverage 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.

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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 <u>permanent double-sided tape</u> 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.



Green Sun Rising Relies on ECHOtape's Cold Weather Double-Sided Tape

How does Green Sun Rising harvest the sun's power in The Great White North? With solar panels and a little help from ECHOtape's Cold Weather Double-Sided Polyester Tape.

Alaska and Northern Canada are rich in renewable energy resources. In fact, recent estimates indicated that nearly a quarter of Alaska's energy is currently supplied by hydropower and wind energy, with a growing interest in geothermal, tidal, wave, and biofuel energies. But mention solar, and people scoff.

Just ask **Klaus Dohring**, president of **Green Sun Rising**, an Ontario-based company that develops and supplies solar systems to generate clean electricity and heat. "Whenever I suggest using solar energy in Northern communities, the typical response is that there is too little, or no sunshine in the winter months. This is irrefutable. But so is the flip side of that argument: in the summer there is an abundance of sunshine in the far north," he told *The Circle*. Ignoring the naysayers, Green Sun has introduced both solar photovoltaic as well as solar thermal systems into Northwest Territories applications, with great success.



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And what adhesive does he rely on to help with those installations? <u>DC-M194A Cold Weather Double-Sided Polyester tape!</u>

"Finding an adhesive cold weather tape that can mount aluminum profiles in frigid sub-zero temperatures (-25C to -30C) without them falling down prior to fastening them permanently was a challenge," says Dohring. That is until they found ECHOtape. "The extreme cold properties allow us to seal the aluminum profile against the metal façade at the point where the bolt penetrates the metal."

For more information about tape visit The Complete Technical Guide to Adhesive Tape.

To learn more about ECHOtape and how we help customers find the right tape for their job, you can read about us here or contact us with any questions you may have.