LINDUM
packed with innovation

Guide to Improving Pallet Stability

For reducing goods damaged due to movement in transit

www.lindumpackaging.com

Stable pallets
save millions of pounds

The problem with pallet instability

Movement in Transit (MIT) due to pallet instability is a critical issue within the supply chain, but many organisations are unaware of the extent of the problem.

When an upright pallet of wrapped goods leaves your production line or warehouse it may look secure. But unexpected changes in road conditions or driver behaviour could cause slippage or tilting in transit. This can lead to crushed packaging, damaged goods and injuries during unloading. You may even be experiencing these issues without realising what's causing them.

> We estimate that 82.5 million pallets arrive at their destination with some damage every year, costing businesses millions of pounds.

The true cost of pallet instability

In addition to the obvious loss of damaged goods, the indirect costs of MIT and consequences can be costly.

- Rejected loads
- Brand reputation
- Loss of customer loyalty
- Rectification and rework costs
- Customer credits
- Spill and clean up costs
- Environmental impact
- Injuries to workers
- Additional labour costs

Causes of pallet instability

- Force of impact
- Product stacking and weight distribution
- Movement between product layers
- Primary and secondary packaging strength
- Too much or too little tertiary packaging
- Pallet packaging strength, tension and durability
- Changes to packaging materials

Do any of these issues sound familiar?

Follow our 8 steps to improving pallet stability overleaf or get in touch and our team of experts will be able to help you.

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8 Steps to improve pallet stability

Stable pallet loads not only reduce the risk of goods being damaged in transit and save you money, but also reduce injuries in the supply chain. Follow these 8 steps to improve the stability of your pallet loads.

1. Identify the root cause

Testing to understand the root cause of problems you are experiencing will help you choose the best solution. Crushing, tilting, collapsing and leaning are some of the most common issues.

2. Check your pallet stack plan

Column or brick? Are you using the most effective configuration to prevent crushing or movement between layers. Is your pallet plan optimised for maximum stability?

3. Stay within the limits of the pallet

Make sure your goods don't overhang the edges of the pallet. Goods that overhang the pallet are liable to crushing and or damage in transit from scuffs and bangs.

4. Assess your primary and secondary packaging

Check your cartons BCT is sufficient. Make sure you are using the right thickness and sturdiness of cartons or other packaging to protect your product and prevent crushing.

5. Secure pallet layers

To reduce moment between layers try using anti-slip sheets, cardboard sheets or anti slip adhesives.

6. Reinforce pallet corners

Use corner posts or cardboard edges to prevent edge crushing and protect the and corners of your pallet and keep goods upright.

7. Use the most effective pallet wrap

Are you using the correct thickness and the right amount of stretch tension to hold your goods securely onto the pallet? Check you are not using too much or too little wrap per pallet and optimise your machine wrap settings.

8. Test in transit conditions

To identify the root cause of pallet instability or test the effectiveness of any changes you make to your pallet packaging, you can test your pallet with simulated transit conditions, g-force and load impact tests.

Put your pallet to the test

Testing isn't just the last port of call to prove pallet stability. It should be used to diagnose the root cause of unstable pallets. If you don't know why your pallets are moving in transit, or why your goods are getting damaged, you can arrange for your problem pallets to be tested. Not only will we diagnose the problem, our testing protocols will also identify the best solution with scientific accuracy.

> With the Innovation Centre and Mobile Pallet Stability Test Lab, we can show our customers exactly what they need to do to ensure that their products get from their factory to their customer in the best condition.

Innovation Centre

Driven by our desire to **eliminate goods damaged in transit** due to pallet stability issues, the Innovation Centre has been specifically designed to help customers solve pallet instability and MIT issues. The first of it's kind, the pallet testing centre provides both an offsite and a mobile testing solution.

- Offsite testing and packaging development trials without disruption or operational downtime
- EUMOS accredited diagnostic tests to help you identify why your current packaging is failing or needs improving
- A space where you can test new packaging products and develop specifications in collaboration with our technical team
- Access to a range of pallet wrapping equipment, variety of gauge films, anti-slip sheets and other pallet stabilising and protective tertiary packaging materials.

With decades of expertise and industry knowledge about the latest packaging innovations, our highly trained specialists provide expert consultations to identify areas for improvement and guide you towards the most effective and cost-saving products and process improvements. Get in touch to find out more or arrange a visit to our Innovation Centre.

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Mobile Pallet Stability Test Lab

The Innovation Centre is equipped with a range of packaging tools to measure, trial and test innovative packaging to solve a wide range of problems. This includes the UK's first Mobile Pallet Stability Test Lab.

- Reproduces transport conditions using G force tests to replicate the stresses of a vehicle braking.
- A camera measures and records the deflection and movements to give scientifically accurate, data-backed results
- Live footage with real time feedback
- Tests to EUMOS 40509:2020 standard
- Test at your premises; we can bring the mobile lab to you to test onsite

> We go beyond highlighting where customers have problems with goods getting damaged in transit and diagnose and treat the root cause to prevent the problem from arising in the future.

Pallet Testing Innovation

We always strive to push boundaries, whether that's with our 30% recycled content pallet wrap, our carbon offsetting scheme or our nano technology for enhanced load stability. In our 20+ years of experience in B2B packaging, there has been no recognised testing method for pallet load stability in the UK – so we set out to change this.

The Innovation Centre brings together our unparalleled knowledge of transit packaging and pallet load stability to offer real-time feedback. Enabling wrapping adjustments to be made and retests to ensure optimal packaging performance. On average our customers see a 27% cost saving and 53% reduction in plastic wate.

To find out how you could save money and improve your pallet stability or to arrange pallet stability testing in our mobile lab please get in touch with our team.

Pallet Stability Solutions

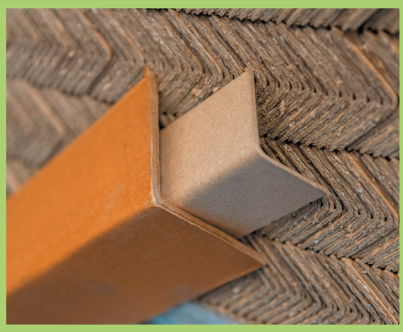
We have an effective range of products to help improve pallet stability and prevent costly damage to goods in transit. Bespoke solutions can also be designed to met your business needs.

Pallet Wrap

Unstable pallets are often overwrapped, the assumption is that more wrap equates to a better wrapped pallet, but this isn't the case. Our high performance wraps are designed to stabilise even the heaviest pallet loads with less wrap.

Caregrip anti-slip pallet liner sheets

Stabilising the product layers on a pallet to create a more solid load can be done with a single sheet of anti-slip paper between each layer. These liners have a unique coating which prevents items sliding even at angles exceeding a 50 degree tilt.



Cardboard corner edge protectors

Creating rigid pallet corners adds reinforcement to your pallet loads. Our corner edge protection is made from 100% recycled card, a simple and effective product to prevent damage to the edges of your pallet and maximise pallet stability.

Free Transit Packaging Audit

Our experts will assess your packaging materials, systems and processes. Identifying optimal practices to make your packaging more stable, cost efficient and sustainable. Simply reviewing how your pallets are stacked and wrapped nearly always results in an improvement.

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Our Clients' Results

We've been using our expertise to save clients' money since 1999, here's some examples of the kind of results our clients experience when working with us.

- Turned a £250,000 loss of goods damaged in transit into an annual transport and efficiency gain of over £1 million by improving the pallet stacking formation and using the right stretch wrap.

- Switching to a pre-stretched film to increase the pallet's holding force and improve overall pallet stability. Reducing the amount of plastic used in by 32% and cost savings of 11%.

> "The results are simple – we will save you money, reduce your plastic usage and carbon footprint, and make your operations more efficient and sustainable."

Free Packaging Audit

Uncover hidden efficiencies and cost savings in your packaging operations

- Up to **66%** cost saving
- Up to **83%** plastic saving
- Up to **83%** CO^2 reduction
- Up to **70%** stability improvement

Our experts will work with you to assess all of your packaging materials, processes and equipment to highlight opportunities to reduce plastic packaging, save money and improve pallet stability.

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Book your Free Packaging Audit to uncover hidden efficiencies and cost savings in your transit packaging

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