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## Product & Packaging Testing

**Packaging is designed to protect your product, but how can you be sure whether or not it will do the job before you start shipping?**

**How can you reduce the risk of damaged products being returned from the field?**

We offer a product and packaging test service which involves testing the performance of packaging and evaluating what level of protection it really provides. In addition to testing the product's packaging, the product fragility level can be determined to enable you to decide the level of protection your packaging actually needs to deliver.

The range of tests on offer include:

- Random vibration testing to replicate the motion of product and packaging when being transported by road, rail, sea or air
- Sinusoidal vibration testing across a broad range of frequencies, including resonance measurements
- Shock testing with multi-channel data capture
- Compression testing to determine the strength of packaging and ensure the safety of stacked loads
- Side impact testing - carton or palletised, replicating loading, unloading and shunting
- Tilt testing to evaluate stability
- Environmental stress testing to accelerate failure mechanisms including accelerated thermal cycling, temperature and humidity

These tests can reduce both your packaging costs and the risk of damaged products being returned from the field. Our product fragility testing can also help rectify product problems at the development stage rather than during or after production. In particular, shock, vibration and extremes of temperature are daily hazards for most cargo, and we can replicate extreme conditions and then advise on how to eliminate damaged products.

Testing can be performed to national and international standards including Def Stan, ISO, ASTM, MilStd, ISTA, ETSI and EN.

Our specialist equipment includes:

- MTS 840 Hydraulic vibration system 2 to 200Hz.  
Test sample up to 1360kg and 1.22m x 2.13m
- MTS 846 Shock table. Test sample up to 1360kg and 1.22m x 2.13m
- MTS 842 Compression system - load up to 13,600kgf
- Electro magnetic vibration systems up to 30,000lb thrust with slip table
- Bounce - Packaged transportation tests in either synchronous and non-synchronous modes to cover all world-wide test specifications
- Drop - Free fall drops onto steel plate or concrete
- Shock - Half sine, trapezoidal and terminal peak sawtooth shock pulses using shock tables
- Tilt - Turns loads through 90° max to find unit's centre-of-gravity, test sample up to 1360kg