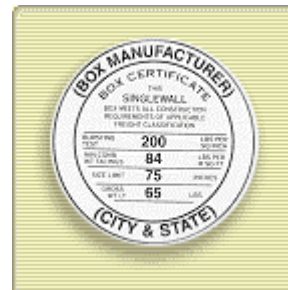


## UPS box strength guidelines

**After years of testing and analysis, the packaging engineers at UPS Professional Services (PSI) have developed the first ever box strength guidelines for the small parcel environment.**

This is critical considering that the only guidelines for the last 90 years have been for palletized freight shipments. Box strength guidelines for the small parcel environment have never existed...until now.

When looking at a Box Maker's Certificate (found on the bottom of most shipping containers) it specifies the strength of the box (200 pounds per square inch) and the associated weight limit of the box (65-pounds). However, the weight limit specified is only applicable for palletized freight shipments. Based PSI's research and findings, a 40-pound weight limit for that same 200 pound box has been established.



The UPS box strength guidelines also take into consideration the strength differences between bursting strength and edge crush strength containers. In the palletized freight environment, a 200-pound burst strength and a 32 edge crush strength box each have a weight limit of 65-pounds. However, our research (along with documented studies from the corrugated industry) has proven that edge crush boxes have approximately 25 percent less tearing and containment strength than burst strength boxes.

Taking this strength difference into consideration, PSI's guidelines specify a 30-pound weight limit for a 32 edge crush box as opposed to the 40-pound weight limit for a 200-pound box.

Note these are only guidelines. PSI encourages customers to submit any packaging changes to PSI's lab for performance testing before any packaging material or methods is finalized. This is the only way to ensure that their packaging provides the right level of product protection. Implementing packaging changes without pre-shipment performance testing can have significant implications, including excessive packaging costs, increased damage risks, high damage-related costs, dissatisfied customers and potential lost sales.

For more details or assistance, contact the Packaging Engineers at UPS Professional Services by emailing [package\\_testing@ups-psi.com](mailto:package_testing@ups-psi.com) or calling (atlas) 385-3700 (outside: 630-628-3700).

### UPS BOX STRENGTH GUIDELINES

<b>A</b> <b>Maximum</b> <b>Weight of</b> <b>Contents (lbs.)</b>	<b>B</b> <b>Size Limit of</b> <b>Box (inches)</b> <b>L + W + H</b>	<b>C</b> <b>Bursting Test</b> <b>(lbs. per sq. in.)</b>	<b>D</b> <b>Edge Crush</b> <b>Test (ECT) (lbs.</b> <b>per in. width)</b>
<b>SINGLE WALL CORRUGATED CONTAINERS</b>			
30	75	200	32
40	75	200	40
50	85	250	44
65	95	275	55
80	105	350	NA
<b>DOUBLE WALL CORRUGATED CONTAINERS</b>			
60	85	200	48
80	95	275	51
100	105	350	61
120	110	400	71
140	115	500	82
150	120	600	NA