

ISTA TESTING: SHOCK IMPACTS

ISTA 1A / FedEx 6A

ISTA 1A & FedEx 6A Testing Protocols both require the same sequence of shock testing displayed below, in addition to other testing steps. Drop testing is critical in determining how packaging will perform during transit.

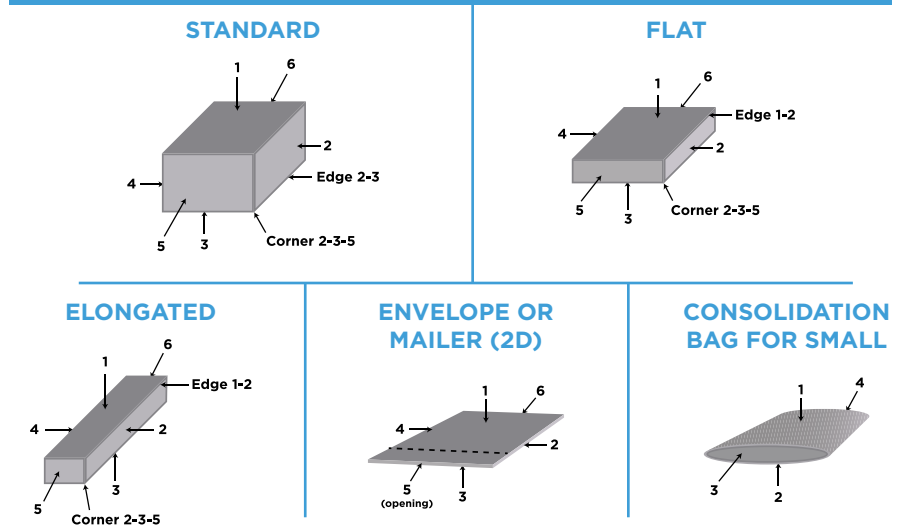
- 1  **Most Fragile Corner**
- 2  **Shortest Edge from the Most Fragile Corner**
- 3  **Medium Edge from the Most Fragile Corner**
- 4  **Longest Edge from the Most Fragile Corner**
- 5  **Flat on Small Face**
- 6  **Flat on Other Small Face**
- 7  **Flat on Medium Face**
- 8  **Flat on Other Medium Face**
- 9  **Flat on Large Face**
- 10  **Flat on Other Large Face**

Drop Heights Based on Weights

Product Weight (lbs)	ISTA 1A - Drop Height (in)	Product Weight (lbs)	FedEx - Drop Height (in)
0 - 20	30	0 - 75	30
21 - 40	24	75 - 100	24
41 - 60	18	100+	18
61 - 100	12		

ISTA 3A

Package Types



Drop #	Orientation	2D Orientation
1	Edge 3-4	Edge 4
2	Edge 3-6	Edge 6
3	Edge 4-6	Edge 5
4	Corner 3-4-6	Corner 4-6
5	Corner 2-3-5	Corner 2-5
6	Edge 2-3	Edge 2
7	Edge 1-2	Edge 5
8	Face 3	Face 3
9	Face 3	Face 1

Drop #	Orientation	2D Orientation
10	Edge 3-4	Face 4
11	Edge 3-6	Face 1
12	Edge 1-5	Face 2
13	Corner 3-4-6	Face 3
14	Corner 1-2-6	Face 1
15	Corner 1-4-5	Face 2
16	Most Critical or Damage-Prone Orientation	Face 4
17	Standard: Face 3 on Hazard Flat or Elongated: Face 2 on Hazard	-

PRE-VIBRATION

POST-VIBRATION

- Packages that weigh less than 70 pounds are dropped at a height of 18 inches.
- Packages that weigh between 70 - 150 pounds are dropped at a height of 12 inches.
- Small Packages in bags are dropped at a height of 24 inches.

The **ISTA 3A** test protocol simulates transit conditions for standard, small, flat, or elongated packages of 150 pounds or less with various shocks and vibrations. The shock impact sequences displayed above show the drop testing experienced by a package before and after its vibration sequences.