



10. Drop Test

1. Objective

To determine the resistance of **tin cans, carton boxes (3 & 5 ply,7 ply), and aluminium foil pouches** against impact during handling, storage, and transportation.

2. Scope

Applicable to **Coconut Milk tin cans (400 ml / 200 ml / 3L / as per SKU), outer corrugated boxes (3 ply & 5 ply,7 ply), and aluminium foil pouches** used for coconut milk packaging.

3. Materials & Equipment

- Flat rigid surface (e.g. concrete floor)
- Drop test stand (if available)
- Measuring scale

4. Procedure

4.1 Drop Test for Tin Can

1. Select **3 cans per batch**
2. Ensure cans are **filled and sealed** as per normal process.
3. Drop the can **from a height of 1 meter** onto a rigid surface:
 - Drop on **base**,
 - Drop on **side**,
 - Drop on **top lid**.
4. **Inspect cans** for:
 - Leakage
 - Denting (acceptable if no leakage or seam damage)
 - Seam integrity
5. Record results.

4.2 Drop Test for Carton Box (3 ply and 5 ply)

1. Take a **filled carton** as per packing configuration.
2. Ensure carton is sealed normally with strapping/taping.
3. Drop from **1.2meter height** onto a rigid surface:
 - **Flat drop** on bottom
 - **Flat drop** on top
 - **Flat drop** on longest side
 - **Flat drop** on shortest side
 - **Corner drop** on one corner
- 4.



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5. Inspect for:

- Burst or tear
- Deformation affecting stacking
- Damage to inner products

6. Record results.

4.3 Drop Test for Aluminium Foil Pouch

1. Select **3 pouches** filled and sealed.

2. Drop from **1meter height** onto a rigid surface:

- Drop on **face side**
- Drop on **back side**
- Drop on **each edge**

3. Check for:

- Leakage
- Seal failure
- Pinhole formation

4. Record results.

5. Acceptance Criteria

- **Tin Can:** No leakage or seam failure. Dents acceptable within product specification.
- **Carton Box:** No significant damage affecting stacking, no rupture causing product exposure.
- **Aluminium Foil Pouch:** No leakage, no seal failure.

6. Reference Standard

- IS 7028 (Part 4): Packaging – Drop Test

- ASTM D5276: Standard Test Method for Drop Test of Loaded Containers