



TOILET GENERAL PACKAGING SPECIFICATIONS

Purpose: To develop optimum packaging requirements for toilets shipped to Lowe's.

I. TRANSPORTATION TESTING REQUIREMENTS

A. Vibration Test:

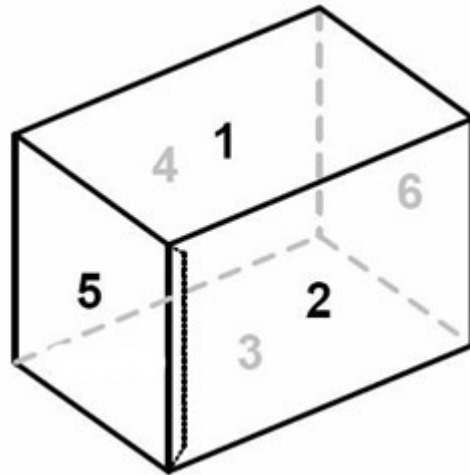
- ◆ ISTA 1A vibration test method without modifications.

B. Drop Test Tanks and Bowls:

- ◆ Modified ISTA 1A drop tests consisting of 1 drop from a **maximum** of **12"** (or less, dictated by weight of product) on flat surfaces 2-6.

Drop Test One Piece Toilets and Toilets to Go:

- ◆ Modified ISTA 1A drop tests consisting of 1 drop from a **maximum** of **8"** on flat surfaces 2-6.



II. COMMON PACKAGING COMPONENTS

A. Corrugated Outer Carton

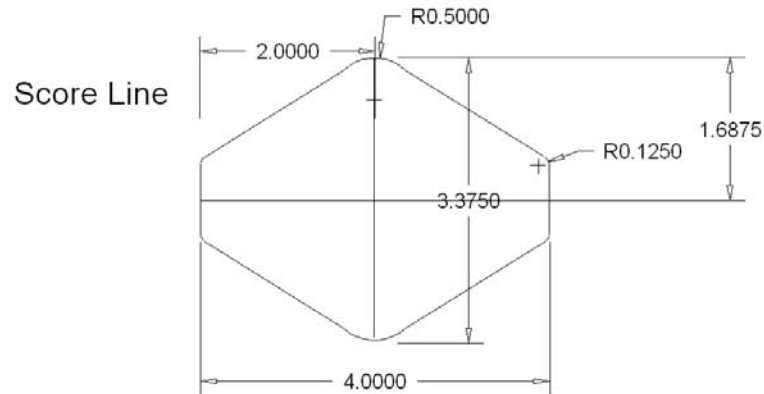
- ◆ Double-Wall B/C Flute with Full Overlap Top and Bottom
- ◆ Burst Strength = 200# (lbs. per square inch) or Greater
- ◆ Edge Crush = 42# (lbs. per inch width) or Greater

B. Interior Padding:

- ◆ Molded polystyrene padding is preferred. However, corrugated pads are acceptable with their design focused on minimizing pressure points and dispersing the energy of impacts over a larger surface area.
- ◆ All components must be adequately secured and protected to prevent movement of product inside master carton.

C. Access Hole:

- ◆ Access holes should be designed per the below diagram. However, alternative designs due to product placement, internal padding, etc. will be considered on an individual basis



III. CARTON SEALING ALTERNATIVES

A. Sealing Tape:

- ◆ Minimum of 2-1/2" wide with biaxially oriented polypropylene backing and pressure sensitive hot melt rubber resin adhesive.
- ◆ The tape must be resistant to aging and tolerate wide climate variations. Smooth and wrinkle-free application is required and the tape must extend at least 3" on the side panels of both the carton top and bottom.

B. Staples:

- ◆ Staples should be evenly spaced and properly sized for the corrugate thickness and must remain secure during transit. Locator marks printed on the carton are recommended to ensure consistent staple location and quantity.

C. Glue:

- ◆ Glue must be evenly applied and moisture resistant.

IV. PALLETIZED GOODS

A. Corner Protection:

- ◆ Rigid angle board or corrugate material should be placed between stretch wrap and product.

B. Pallets:

- ◆ Pallets must be constructed of clean sawn hardwood and be sized to allow minimal overhang of product.