



# Standard Safety Specification for Chests, Door Chests, and Dressers<sup>1</sup>

This standard is issued under the fixed designation F2057; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## INTRODUCTION

The Consumer Product Safety Commission (CPSC) estimates that there were 8100 emergency room treated injuries associated with the tipover of furniture in 1994.

In addition, the CPSC received reports of about six deaths each year associated with furniture tipover. Approximately two thirds of the deaths were said to have involved items with drawers, such as dressers, bureaus, and chests of drawers. Approximately 80 % were to children under the age of five.

## 1. Scope

1.1 This safety specification is intended to reduce injuries and deaths of children from hazards associated with tipover of clothing storage units.

1.2 This safety specification covers chests, dressers, door chests, chest-on-chests, tall chests, lingerie chests, bureaus, and armoires.

1.3 This safety specification does not cover shelving units, such as bookcases or entertainment centers, night stands, or under-bed drawer storage units.

1.4 This safety specification does not cover any items 30 in. or less in height.

1.5 This safety specification is intended to cover children up to and including age five.<sup>2</sup>

1.6 This safety specification replaces PS 110–98.

1.7 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

1.8 The following safety hazards caveat pertains only to the test procedure portion, Section 4, of this safety specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

<sup>1</sup> This safety specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.42 on Furniture Safety.

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<sup>2</sup> The majority (approximately 80 %) of deaths relate to children 5 years or younger (see Introduction).

## 2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *chest, n*—a furniture item intended for the storage of clothing typical of bedroom furniture and containing one or more of the following: drawers, doors, stationary shelves, adjustable shelves, or pull-out shelves arranged in varying configurations.

2.1.2 *door chest, n*—a furniture item intended for the storage of clothing and consisting of a case with drawers at the bottom of the unit and drawer or permanent shelves covered by two doors at the top of the case.

2.1.3 *dresser, n*—a furniture item intended for the storage of clothing and consisting of up to nine drawers usually arranged in groups three high and three wide. Dimensions are usually 65 to 72 in. wide and 30 to 35 in. high.

2.1.4 *operational sliding length, n*—in a drawer with stops, the drawer opened to its stops. In the absence of stops, the operational length is length measured from the inside back of the drawer to the inside face of the drawer front in its fully closed position with measurements taken at the shortest drawer depth dimension minus 3.5 in. See Fig. 1 and Appendix X1.

2.1.5 *tipover, n*—the event at which a furniture unit pivots forward to a point beyond which the unit continues to fall.

## 3. Performance Requirements

3.1 With the unit empty, test the unit in accordance with 4.1 and 4.2.

3.2 During the test, the unit shall not tip over or be supported only by an opened drawer, opened door, or opened or unopened flap.

3.3 If a failed component prohibits the completion of the test, the unit is to have the failed component repaired or replaced to the original specifications, or the unit replaced and the test repeated.

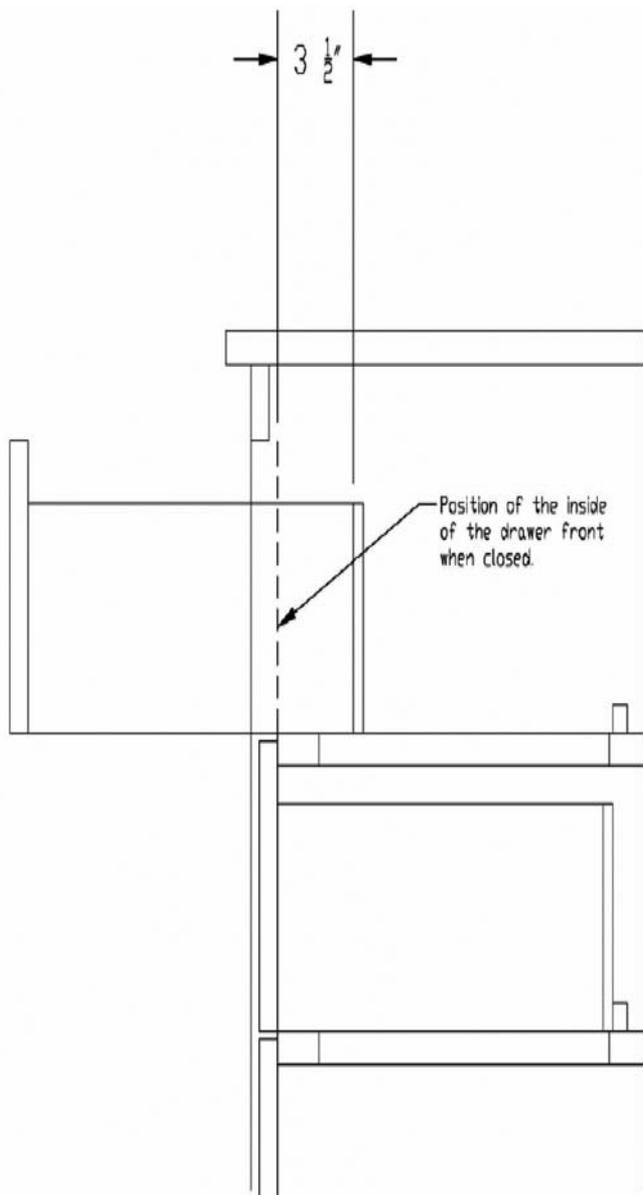


FIG. 1 Operational Length, Drawer without Stops

3.4 Tip over restraints shall be included with each item of furniture covered under the scope of this standard for attachment by the consumer to the interior wall, framing, or other support and the case good to help prevent tipover.

3.5 If a cable or strap type restraint is used, the strap must be tightened with no slack allowed when installed between the wall and case.

3.6 The tip over restraint provided and recommended method of attachment shall withstand a pull force of 50 lb.

3.7 Instructions shall be supplied with each unit providing clear and complete installation instructions.

3.8 A permanent warning label (see Fig. 2) shall be attached to the case good in a conspicuous location when in use such as inside of a drawer or door.

#### 4. Test Procedure

##### 4.1 Stability of Unloaded Unit:

4.1.1 Position the unit on a level flat surface composed of either concrete, wood flooring, or  $\frac{1}{8}$  in. vinyl over concrete. If the unit has leveling glides, these glides shall be installed and be in contact with the floor, and the units shall be level during testing.

4.1.2 Open all doors to  $90^\circ$  (see Fig. 3) and extend all drawers and pullout shelves to two thirds of their operational sliding length or to the stop, whichever is shorter (see 2.1.4 and Fig. 4). Open flaps or dropfronts to their horizontal position or as near horizontal as possible.

##### 4.2 Stability with Load:

4.2.1 Position the unit on a level flat surface composed of either concrete, wood flooring, or  $\frac{1}{8}$  in. vinyl over concrete. If the unit has leveling glides, these glides shall be installed and be in contact with the floor, and the units shall be level during testing.

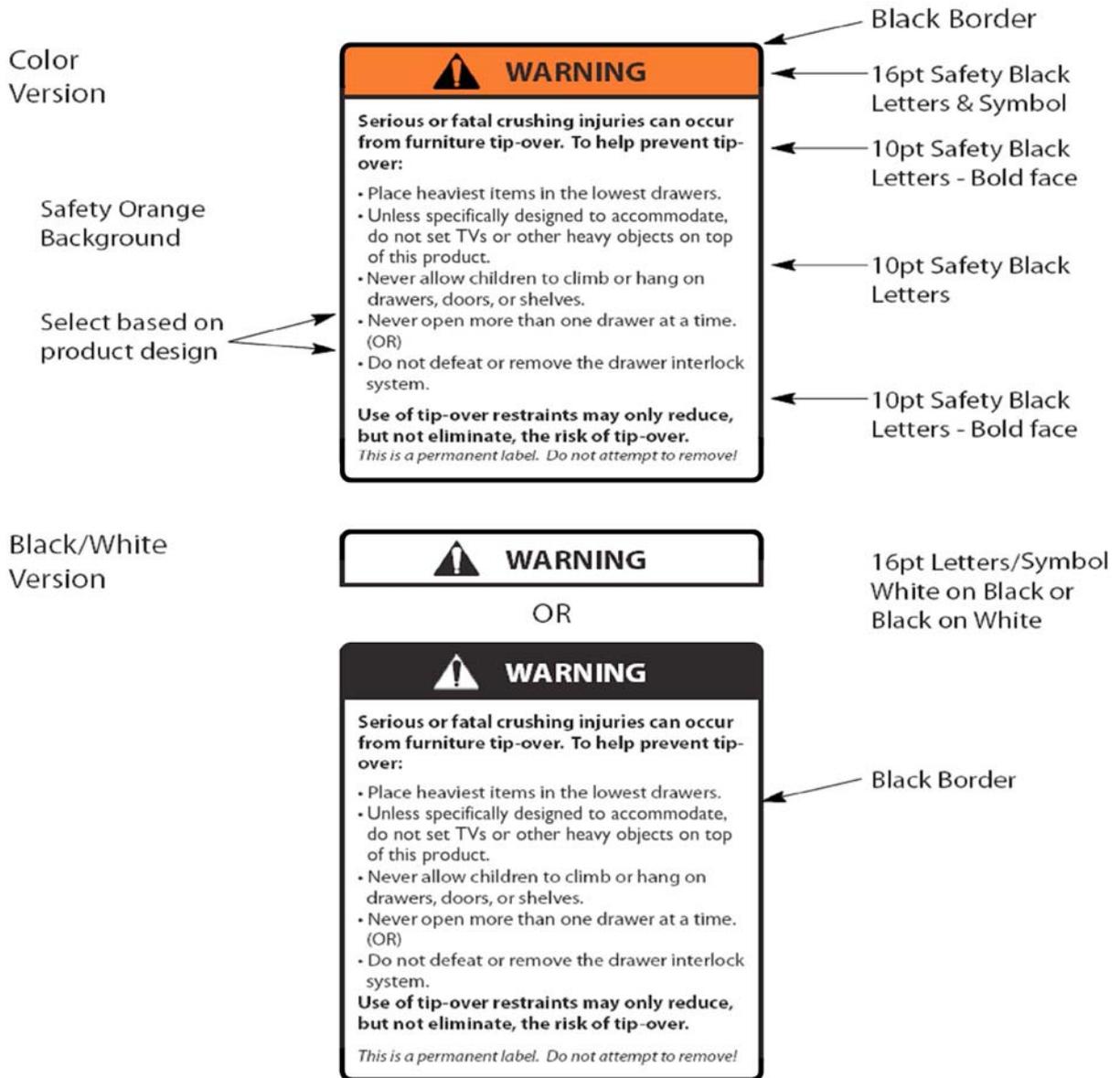
4.2.2 One drawer or door after another shall be opened/extended in accordance with 4.1.2, tested in accordance with 4.2.3, and then closed. Drawers and doors not undergoing testing shall be in the closed position unless they must be open to access other components behind them.

4.2.3 Gradually apply dual weights of  $25 \pm 1$  lb each (see Fig. 5) over the center of the front of each drawer (see Fig. 4). Each weight shall be individually wrapped in 2 to 4 mil thick polyethylene film and sealed (by heat, tape, or otherwise) to reduce contamination. For odd shaped drawers, apply weights to the front edge that protrudes the farthest. For doors, apply the weights to each door so that the center of the outer weights is 3 in. from the outermost edge of the door (see Fig. 6).

NOTE 1—The total weight of 50 lb is equal to the 95th percentile 5 year old child.

#### 5. Keywords

5.1 chests; door chests; drawers, children; dressers; furniture, tipover



- Sans Serif letters (Arial, Helvetica, etc.)
- Outside edge of label should have rounded corners
- Letter height may be larger. However, signal word letter height must be at least 50% larger than lettering in the message panel.

NOTE—This label is not to scale.

FIG. 2 Warning Label

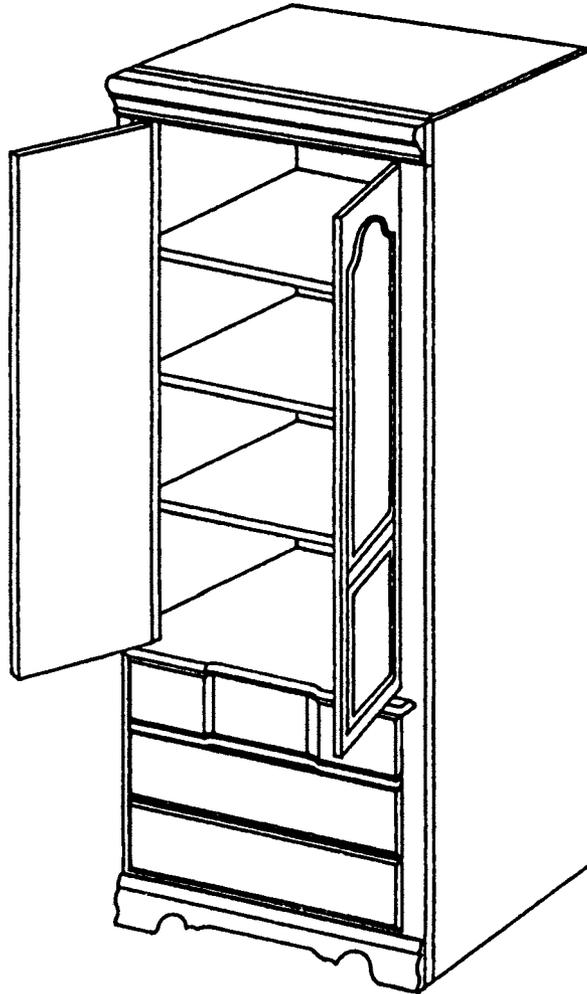
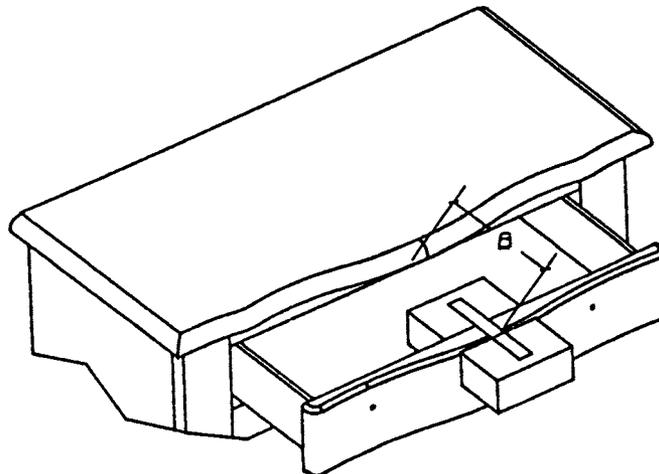
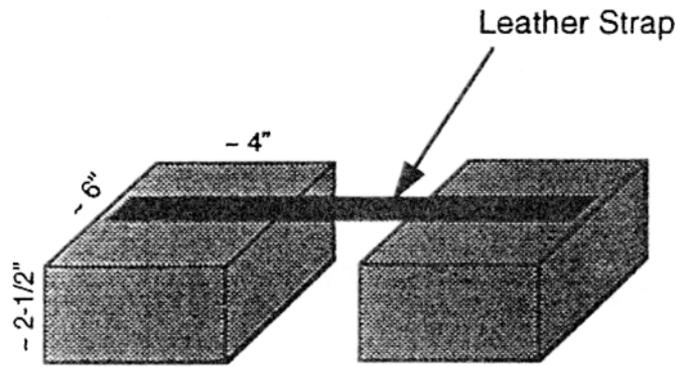


FIG. 3 Doors



NOTE— $B = A \times 0.66$ .

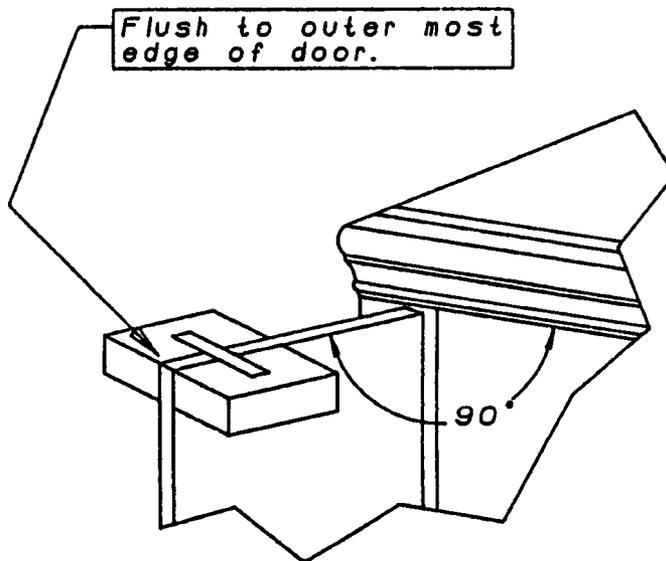
FIG. 4 Drawers and Pullout Shelves



NOTE—

- Two  $25 \pm 1$ -lb weights, made of lead, wrapped in cellophane or similar protective barrier, approximately 6 by  $2\frac{1}{2}$  by 4 in. deep.
- If block is made of steel, change dimension in following from 2.5 to 3.6 in. (adjusting dimensions to accommodate change from lead to steel, keeping width and height the same).
- Inside distance between weights is approximately 6 in.
- Width of leather strap  $\sim 3$  in. or as needed.
- An additional strap may be added to the leather strap to aid in carrying and applying the test weight.

FIG. 5 Weights



- NOTE—Door shall be open to  $90^\circ$  to the case. Weight is to be placed such that the center of the brace is 3 in. from the outermost edge of door.

FIG. 6 Door Weight Placement

APPENDIX

(Nonmandatory Information)

X1. OPERATIONAL LENGTH EXAMPLES

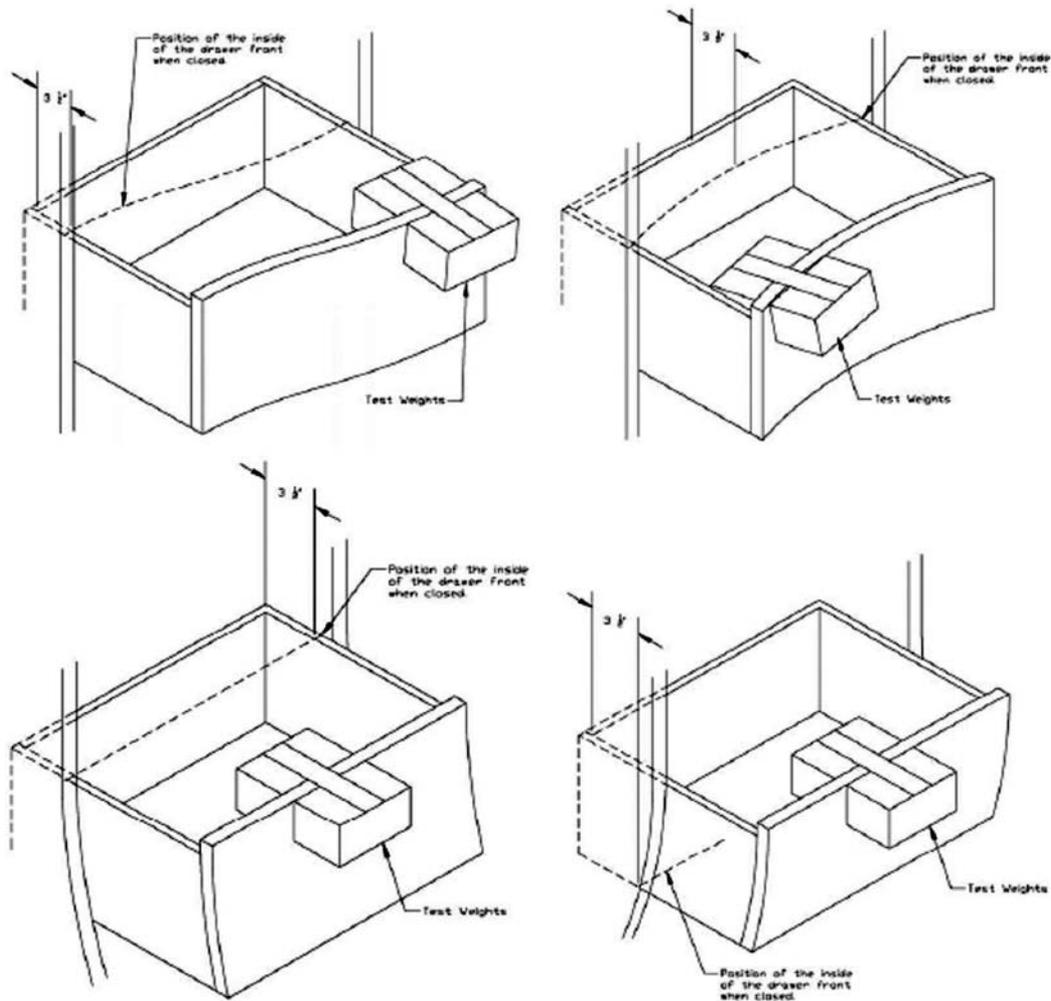


FIG. X1.1 Operational Length Examples

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