

# **ASTM F2057 DISCUSSION**

#### SAFETY SPÉCIFICATION FOR CLOTHING STORAGE UNITS

AUGUST2022 RICK ROSATI

# SUMMARY

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Phase 1 Ballot

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# PHASE 1 BALLOT



### **Labeling Revision**

- Clarify Safety alert symbol provided multiple color combinations to give the option to align with ISO format
- Changed wording from Tipover restraint to Anti-Tip devise
- Wording added about not defeating interlock system
  - DO NOT defeat the interlock system, it is an important stability and safety feature
  - Do not remove interlock system except for maintenance. NEVER use the unit without the interlock installed following the instructions
- Clarification added regarding conspicuousness – 3 in or less from drawer front and 0.5 in or less from top of drawer side. Also provides guidance for units with doors
- Added best practices regarding warningf location in the informative appendix



#### AWARNING

Children have died from furniture tipover. To reduce the risk of furniture tipover: -ALWAYS install Anti-tip device provided. -NEVER put a TV on this product. -NEVER allow children to stand, climb or hang on drawers, doors, or shelves. -NEVER open more than one drawer at a time. -DO NOT defeat the interlock sytem, it is an important stability and safety feature. -Place heaviest items in the lowest drawers. Thie is a permanent label. Do not remove!

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# **Height Adjustment and Measurement**

- Added definations for Height Adjuster and Leveler
- Provides guidance on the use of levelers and adjusters in the set up of the unit for testing
  - Levelers fully retracted, lowest possible height
  - Height Adjusters adjust to the maximum height indicated in the instructions



### **Nightstands and Bins**

The term nightstand has been removed from the standard and replaced with a volume measurement

- Units with ample space to store clothing (3.2 cubic ft.) fall under the scope of the standard, units that do not are outside the scope
  - Enclosed storage volume definition added
- Must be 27 inches in height or greater
- Must be 30 lbs. or greater in mass. This exempts light weight units
- Guidance provided on how to calculate volume

Added an exemption for bins in the definition of extendible elements





### Interlocking element test method

- Interlock definition added controls simultaneous extension of one or more extendable elements
- Requirements providing guidance or requirements when a consumer can disengage the interlock system or has to assemble the interlock system as part of the assemble of the entire unit
- Added a test procedure for interlock system 30 lb. Horizontal force on each interlocked extendable element





### **Test Weight revision**

- Test weights changed from 50 60 lbs. Updated figure to illustrate new weights.
- Provided additional guidance on tollerances
- Provided guidance on alternative construction techniques as well as the use of handles and fasteners in the construction of the test weights
- Added an alternative for 2 30 lb. Test weights (for safety reasons)









### **New Performance Test Methods:**

### **Drawers Loaded – Section 9.2.1**

- All available extendable elements open
- All storage areas loaded with 8.5lb's per cuft of storage space. Exceptions for open shelf space.
- If less than 50% of the volume is extended, conduct the test with the unit empty. (Interlocks)





### **New Performance Test Methods:**

# Simulated Dynamic Force – Section 9.2.2

- All available extendable elements open and unloaded
- Apply the force to the highest reach point not to exceed 56 in.
- Apply a 10 lbf horizontal force, parallel to the direction of outward motion

<sup>3</sup> 56 in. is the 95<sup>th</sup> percentile reach of a of a 5 year old child, averaged between male and female (Pheasant, 1986 p. 140)







### **New Performance Test Methods:**

### Carpet w/ Child Weight – Section 9.2.3

- All available extendable elements open and unloaded
- Place 0.43 in. test block under rear floor supports
- Apply the new 60 lb. Test weight over the extendable element most likely to cause tipover.









1 Auto

# PHASE 2 BALLOT



# **Phase 2 Balloting**

- Labeling Tweak label location and content
- Height adjusters and levelers clarification language
- Revision to F3096 to reflect changes made to F2057
- Interlock system additional clarification and possably conducting test with drawers loaded
- Test weight construction additional consideration to weight construction and alternatives
- New Test methods continue to review and modify for clarification and consistency.



	Casegood or RTA	Weight of the unit		7.1 Loaded	New 7.2	7.3 Dynamic (10 lb)	All 3 tests
Unit description		(lbs)	Interlock	(Pass or Fail)	(Pass or Fail)	(Pass or Fail)	(Pass or Fail)
5 drawer chest	RTA	102	No	Pass	Fail	Fail	Fail
6 drawer dresser	RTA	112	No	Fail	Pass	Pass	Fail
3 drawer chest	RTA	73	No	Pass	Fail	Pass	Fail
9 drawer dresser	Casegood	264	No	Pass	Pass	Pass	Pass
Armoire	Casegood	365	No	Pass	Pass	Pass	Pass
3 drawer chest	RTA	141	No	Pass	х	Х	
2 drawer chest	RTA	79	No	Pass	х	Х	
4 drawer chest	RTA	99	No	Pass	Pass	Fail	Fail
4 drawer chest	RTA	92	No	Pass	Fail	Fail	Fail
4 drawer chest	RTA	102	No	Pass	Pass	Pass	Pass
4 drawer chest	RTA	94	No	Pass	Fail	Fail	Fail
4 drawer chest	RTA	109	No	Pass	Pass	Fail	Fail
6 drawer dresser	RTA	135	No	Pass	Pass	Pass	Pass
5 drawer chest	RTA	71	No	Pass	x	х	
6 drawer dresser	RTA	106	No	Pass	х	Х	
7 drawer dresser	Casegood	199	No	Fail	Pass	Fail	Fail
5 drawer chest	Casegood	153	No	Fail	Fail	Fail	Fail
6 drawer dresser	Casegood	172	No	Pass	Pass	Fail	Fail
5 drawer chest	Casegood	129	No	Pass	х	Х	
2 drawer nightstand	Casegood	96	No	Pass	х	Х	
6 drawer chest	Casegood	169	No	Pass	х	Х	
4 drawer chest	Casegood	134	No	Pass	Fail	Pass	Fail
7 drawer dresser with doors	Casegood	200	No	Fail	Pass	Pass	Fail
3 drawer chest with doors	Casegood	293	No	Pass	Pass	Х	
3 drawer chest	Casegood	143	No	Pass	Pass	Pass	Pass
6 drawer dresser	Casegood	270	No	Fail	Pass	Fail	Fail
5 drawer chest with door	Casegood	252	Yes	Pass	Pass	Х	





# INTER-LABORATORY STUDY (ILS)



# ILS

- Six participating labs Three 3rd party labs and 3 1st party labs
- Eight Manufacturers supplying CSU to each labs for testing
- Three key areas will be evaluated for consistency, understanding and repeatability
  - Section 8.3 volume measurement to determine the loading for test in section 9.2.1
  - Section 9.2.2 Simulated Dynamic Force test. (Labs will be testing to failure)
  - Section 9.2.3 Simulated Reaction on Carpet w/ Child Weight. (Labs will be testing to failure)
- Results will be reviewed at the next sub-committee meeting for approval
- Submitted to ASTM ILS team for review of the data and precision and bais evaluation
- Ballot results for addition to the updated ASTM F2057 standard



### ASTM ILS Study: Precision and Bias – ASTM F 2057 Test Methods





# Interest in joining ASTM and/or the F15.42 Committee

# Contact Molly Lynyak at ASTM mlynyak@astm.org





# TEST DEMO



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