Designation: ~~D3475 – 13~~ D3475 – 14

Standard Classification of Child-Resistant Packages[1]

This standard is issued under the fixed designation D3475; 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 (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This classification covers various types of child-resistant packages.

1.2 The examples for each type of child-resistant packaging are not intended to be all-inclusive, but are included only as an aid in the understanding and comprehension of each type of classification.

1.3 Listings are not to be considered endorsements or approval of the package by ASTM.

2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *child-resistant package—as defined by the Poison Prevention Packaging Act*, packaging that is designed or constructed to be significantly difficult for children under five years of age to open or obtain a toxic or harmful amount of the substance contained therein within a reasonable time, and not difficult for normal adults to use properly, but does not mean packaging which all such children cannot open or obtain a toxic or harmful amount within a reasonable time.[2]

2.1.2 *unit dose package*—an immediate product container/package designed and labeled in such a manner that each individual product package is intended to be opened or used one time in a generally non-reclosable or non-resealable manner, separately from the other individual product units in the package, or the entire contents of a single unit package intended for use in one application.

[1] This classification is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.32 on Consumer, Pharmaceutical, Medical, and Child Resistant Packaging.

Current edition approved ~~April 1, 2013~~April 1, 2014. Published ~~September 2013~~May 2014. Originally approved in 1976. Last previous edition approved in ~~2012~~2013 as ~~D3475 – 12.~~D3475 – 13. DOI: ~~10.1520/D3475-13.~~10.1520/D3475-14.

[2] Code of Federal Regulations, Title 16, Part 1700 and Title 40, Part 157. Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, http://www.access.gpo.gov.

2.1.2.1 *Discussion*—

Normally used for pharmaceutical, human healthcare, and nutritional products in dry solid, topical, transdermal, or liquid form. A unit of sale package may contain one or more individual unit dose packages, that is, individually wrapped transdermal patches, pre-filled syringes and syringe cartridges, blister cards with multiple tablets or capsules, and so forth. Unit dose packages may or may not be child-resistant in accordance with the regulatory requirements of the package contents.

2.1.3 *unit use/single use package*—an immediate product container/package, which may include label directions for use, designed in such a manner that each individual product package is intended to be opened or used one time separately from the other individual product units in the package, or the entire contents of a single unit package intended for use in one application.

2.1.3.1 *Discussion*—

These packages are generally non-reclosable or non-reusable. A unit of sale package may consist of one or more non-reusable individual packages. Generally used for household, automotive, chemical, pesticide, veterinary, garden and other products not intended for human ingestion. Package styles may include some aerosol, that is, foggers, soluble film, canisters, pouches, and so forth, filled with liquids, dries, powders, and other product forms. Packages may or may not be child-resistant in accordance with the regulatory requirements of the package contents.

3. Significance and Use

3.1 This classification scheme defines the type of motions, skills, or tools required for a particular type of child-resistant package and provides examples of current packaging within that type.

3.2 Reference to a particular package in this classification is not intended in any manner to denote endorsement or approval of the package by ASTM.

3.3 Packages have been included as examples based on manufacturers' claims of child-resistance. Child-resistant package functionality for any specific product type must be determined by the packager/manufacturer following the guidelines of the PPPA of 1970 and the most current version of the CFR Title 16 Part 1700 and Title 40 Part 157.[2] The listing of a package in this classification is not an indication of whether or not it has been successfully tested in accordance with the aforementioned guidelines.

3.4 Additions or deletions to the examples should be reported to Committee D10 on Packaging, for incorporation into this classification during the next revision.

4. Basis of Classification

4.1 The basis for classification for child-resistant closure, and the classifications themselves, appear in Table 1.

TABLE 1 Classification of Child-Resistant Packages

	Description	Example
	TYPE I RECLOSABLE PACKAGING—CONTINUOUS THREAD CLOSURE	
A	Random push down while turning; no orientation of the push down force necessary	Kerr CR-I, II, III, IV and CRTE; Rexam Healthcare Clic-Loc and Clic-Loc III, Argus-Loc, Ultra-Loc, Ultra-Loc "C"; Alcoa Tot-Gard III; Van Blarcom metal-on-metal, Saf-Cap I, II, III, and IIIA; Ferdinand Gutman; Poly Seal Corp.; Reliable Products; Rexam Healthcare F.G. (Final Generation), Carow-Turnloc; Comar-Secure Cap; Reike-FS652; CCL Container Corporaton (tube) & RPC Containers Ltd. (closure) Tube Secure; Van Blarcom Closures Inc. Dropper Closure, Saf-Cap Convertible, 1-1/8 Beta Closure; Bericap North America, Bericap SK28/26 CR Slitband; Sanner of America, Child Resistant Screw Cap; Mold-rite Plastics CRC Pictorial Screw Cap, PDT Push Down & Turn Screw Cap; Drug Plastics & Glass Co., Inc. SecuRx; Gerresheimer Boleslawiec S.A. NG 38C; Berry Plastics Corporation CR-I/TEIII; Berry Plastics Corporation CR-III; Berry Plastics Corporation CR3A/LR; Berry Plastics Corporation CR5; Berry Plastics Corporation CR4; Berry Plastics Corporation MAC Duma
B	Localized squeeze force while turning; the force must be applied to a designated location on the closure skirt	Econo-Lok, DOT, Dougherty Brothers; Fastex; Rexam Healthcare Squeeze and Turn; Berry Plastics-Squeeze & turn jigger-Lite-touch; Weatherchem-Top Squeeze; Kerr-Tab II Squeeze & Turn; Rieke FS633, HZ43CR, HZ24CR; US Can-Screw top; Squeeze Lok Low Profile, FG; Rieke Corporation Stolz HZ32CR; Val-Pak Products, 63-400 Squeeze Cap; Berry Plastics Corporation DOT Series DCR; Berry Plastics Corporation DOT Series DCR-TI; Berry Plastics Corporation Drain Back System; Berry Plastics Corporation Jigger; Berry Plastics Corporation Quarter-Turn; Berry Plastics Corporation Snap-Lok II; Berry Plastics Corporation Squeeze and Turn; Berry Plastics Corporation SQL; Berry Plastics Corporation Tab II
C	Random squeeze while turning; no orientation of the squeeze force is necessary	
D	Holding a fitment while turning; two-handed operation is normally required	Thomas Closure Moldcraft; M & M Industries, Inc.-Life Latch; Berry Plastics Corporation Lite-Touch
E	Key or device required to open	Research and Devices; Ben King Associates Baby Safe; Tredegar
F	Random lift while turning; no orientation of the lift force is necessary	
G	Localized lift of cap skirt or tab on closure while turning	Charles A. Breskin; Alcoa Tot Gard II
H	Localized push down while turning; force must be applied to a designated place on the top of the closure	Mack Wayne Plastics; Anchor Hocking Mold Craft; Rexam Healthcare
I	Set combination before turning	None at this time
J	Pull tab then turn	Intermova Gate Lok, Lefty Lok
K	Align arrows, then push tab down, then turn	
L	Turn closure until stops, then lift and continue trying to open	Berry Plastics Corp.-pail; Berry Plastics Corporation ZH05SQ; Berry Plastics Corporation T05SCR(B) & L05SCR; Berry Plastics Corporation ZH05SQ; Berry Plastics Corporation ZH50SQ
M	Localized push in while turning, force must be applied to designated place on closure	Bway Corporation Screw Top
N	Localized push back lever while turning, force must be applied to designated place on closure	None at this time
O	Turn the top cap until stops, then push down and turn	M & M Industries, Inc
	TYPE II RECLOSABLE PACKAGING—LUG FINISH CLOSURE	
A	Random push down while turning	Eyelet Specialty; Pac-Tec Inc.-Palm-N-Turn; Rexam Healthcare Screw Loc; Kerr CR-V; Berry Plastics Corporation Friendly and Safe; Thornton Plastics Tot-Lok; Child Related Research, Inc. Push-Palm; Design Consultant Plastics; Inventive Packaging Corp., Clarke Container Push & Turn; Cebal Americas (tube) & Rexam Healthcare (closure) TubeLok; Rexam Healthcare Purse Pak; Rexam Healthcare, Spring-Loc; Rexam Healthcare PursePak; Rexam Healthcare Tube-Loc
B	Hold fitment down while turning closure	Rexam Healthcare Snap-Lok, Econo-Lok; Rexam Healthcare-1-Clic
C	Unlock outer ring to release lugs	Thornton Plastics
D	Depress fitment and slide to one side	Plastic box with sliding lug lock (manufacturer unknown); Creative Packaging Lok-Pak

TABLE 1 *Continued*

	Description	Example
E	Holding of fitment while turning; two-handed operation is normally required and no orientation of holding force is specified	None at this time
	TYPE III RECLOSABLE PACKAGING—SNAP CLOSURE	
A	(*1*) Align two points then push up on tab or lip	Bristol-Myers; Calmar Snap Safe; Stull; Plastic Research; Henlopen Snap Cap; Lermer CR Snap; Central States Can Co.; Boyle Midway; Clarke Container Snap Lok; VH Technologies-virtual hinge
	(*2*) Rotate then lift	Continental Carlisle Co. Unikon; Magenta Corp.-Pillpack
B	Localized downward pressure to open	Polymold; Basic Products Poly Mold
C	Downward pressure on top with simultaneous upward pull on edges	Versatile Ind. Products
D	(*1*) Press to release and then lift hinged tab (dispensing cap)	Magenta Corp.; Lumlite PopLok; MeadWestvaco (MWV): Slatersville, LLC; PS 194 Toggloc, PS 211 Toggloc, PS 355 Toggloc.
	(*2*) Press to release, follow by lifting force on tab (removable cap)	Wheaton Industries Ryles Closure; Magenta Corp. Pop-Lok Plug
	(*3*) Push up to release	Stull Easy Flip 2008 captive hinge; Stull Technologies, Pry Open Closure
	(*4*) Push in or up, or both, to release	Shellvick Industries, Inc.
	(*5*) Pull to release and lift hinged lid (dispensing cap)	Stull Technologies: StullSURE
	(*6*) Push in and flip up	CSP Technologies, ACTIV-VIAL; Ropak Packaging EZ STOR® (UC2G)
	(*7*) Push in and up then flip up	CSP Technologies, Mini Cooper Vial
E	(*1*) Squeeze and lift two specific points simultaneously	Pennwalt-Lye; J. L. Clark; Rexam Healthcare Flip-Lok; Berry Plastics Corporation Series CR FlipLok
	(*2*) Squeeze and lift one specific point simultaneously	
	(*3*) Squeeze two points simultaneously to open	Berry Plastics Corp.; FTCR 19000, FTCR 19100, FTCR 19500; Philips Rx Packaging LLC, Rx Squeeze Vial
F	Squeeze two specific points simultaneously to unlock sides, then squeeze specific point on third side while lifting lid	Shaw-Clayton Press N Pop; Norman J. Larus
G	Requires key device or fingernail or coin or other tool to open	Skilcraft; Continental Plastics Med Guard; Plastic Container Corp. Prex Con; Polytop Corp. LokTop; Myco Corp. Surelock, Vicap; Rexam Healthcare Snap Cap; Pin Lock, Inc. Pin Lock; Kerr Glass Pry Off; Genpak Corp. Pry Off; Cin-Made Corporation (container) CMI (closure) Tec Loc; Continental Fibre Drum Leverpak; Berry Plastics; Plastican, Inc. Lever/Toggle Band on Pail; Container Products Inc. Lever Lok; Cin Made Corp. Friction Fit Plug; Silgan Plastics Corporation 28MM-410 CR Dispensing Nozzle Closure; ; Berry Plastics Corp. T02CR, L02S, T16CR(B) and L16CR, MeadWestvaco (MWV): Slatersville, LLC: PS 186 Loctop.
H	Lift locking tab then push up	Internova Corp. Flap Lok
I	Random squeeze while turning and pulling up	Stull Snap On/Twist Off
J	Align two points, push down outer ring, then push up tab or lip	Robert Linkletter Associates
K	Rotate cap to a first index, then counterrotate cap to a second index, then lift cap	Yellowstone Environmental Science, Inc. WiseCap
	TYPE IV UNIT NON-RECLOSABLE PACKAGING—FLEXIBLE (STRIP/POUCH)	
A	Internal (hidden) tear notch	Sharp; Reynolds Aluminum (Safety Pak 101); PCM Corp.; Cardinal Health; West Pharma-Services; Reed-Lane, Inc.
B	Oriented tear	Schering Corp.; Sharp; American National Can Co.; Reed-Lane, Inc.
C	Requires tool	Hargo Flexible Packaging (Pos-I-Pak); Sharp; Hach Chemical Co.; American National Can Co.; Cardinal Health; Paco; Reed-Lane, Inc.; Pactech Packaging LLC
	TYPE V UNIT NON-RECLOSABLE PACKAGING—RIGID	
A	Requires tool	All metal can
B	Requires localized force	None at this time
C	Peelable backing or coating Package is not opened or activated to expose contents: (*1*) One piece plastic unit with multiple holes to allow use of product without human contact; and (*2*) Two piece plastic unit with multiple holes to allow use of product without human contact	Standard packaging
D	Push down while turning – closure is not removed; contents are exposed through hole in closure tip.	Neopac Twist 'n' Use (on tube)
	TYPE VI UNIT RECLOSABLE PACKAGE	
A	Metered device	None at this time
	TYPE VII AEROSOL PACKAGES	
A	Localized squeeze while lifting removes overcap (actuates normally)	Knight Engineering; Berry Plastics; Cobra Plastics Inc. 65 mm NICR; Berry Plastics Corporation 202SP & 211SP; Berry Plastics Corporation 211NSR; Berry Plastics Corporation 211SRC
B	Hold fitment still while turning (actuates normally)	Thomas Closure
C	Hold fitment still while lifting (actuates normally)	None at this time
D	Requires use of a key or device to open (actuates normally)	Newman Green, Shellvick Answer Cup 200 TR/CR
E	Directional overcap-actuator must be oriented, then pressed	
F	Directional overcap-actuator requires sequential simultaneous pushing of locking device and actuator	Union Carbide; Seaquist; Rexam Healthcare CR Aerosol
G	Directional overcap-actuator which requires a finger longer than that of a child	Shell Chemical
H	Press to release, lift hinged tab at center of the closure followed by an upward force on the tab to remove overcap (actuates normally)	None at this time
I	Directional overcap-actuator that requires the lifting of a hinged tab to reveal the actuator	None at this time
J	Random push down while turning; no orientation of the downward force is necessary	ITL (Hayes-Albion)