

BS EN ISO 13127:2012

Incorporating corrigendum December 2012



BSI Standards Publication

Packaging — Child resistant packaging — Mechanical test methods for reclosable child resistant packaging systems

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

raising standards worldwide™



National foreword

This British Standard is the UK implementation of EN ISO 13127:2012. It is identical to ISO 13127:2012, incorporating corrigendum December 2012.

The UK participation in its preparation was entrusted by Technical Committee PKW/0, Packaging, to Subcommittee PKW/0/3, Child Resistant Packaging.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2013.

Published by BSI Standards Limited 2013.

ISBN 978 0 580 81353 5

ICS 55.020

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2013.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD

EN ISO 13127

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2012

ICS 55.020

English Version

**Packaging - Child resistant packaging - Mechanical test
methods for reclosable child resistant packaging systems (ISO
13127:2012)**

Emballages - Emballages à l'épreuve des enfants -
Méthodes d'essais mécaniques pour systèmes d'emballage
refermables à l'épreuve des enfants (ISO 13127:2012)

Verpackung - Kindergesicherte Verpackung - Mechanische
Prüfverfahren für wiederverschließbare kindergesicherte
Verpackungssysteme (ISO 13127:2012)

This European Standard was approved by CEN on 30 September 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 13127:2012) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 122 "Packaging".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Contents

	Page
Introduction	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General requirements	2
4.1 Rationale	2
4.2 Reference data	2
4.3 Package modifications	2
4.4 Testing facilities	4
4.5 Test methods	5
4.6 Test method selection	5
4.7 Component verification	5
5 Samples	5
5.1 Sample selection	5
5.2 Sample preparation	5
6 Testing	5
6.1 Applicability of tests	5
6.2 Specific tests	6
6.3 Assessment of test results	6
7 Test report	6
7.1 General	6
7.2 Test facility (name and address)	6
7.3 Applicant (name and address)	6
7.4 Report number	7
7.5 Date	7
7.6 Manufacturer	7
7.7 Packaging description	7
7.8 References	7
7.9 Test description and results	7
7.10 Signature	7
Annex A (normative) Torque release test	8
Annex B (normative) Squeeze test	9
Annex C (normative) Non-squeeze torque test	10
Annex D (normative) Press down and turn engagement test	11
Annex E (normative) Push and turn test	12
Annex F (normative) Reverse ratchet torque test	13
Annex G (normative) Disassembly test	14
Annex H (normative) Rotational torque test	17
Annex I (normative) Push-off force	18
Annex J (normative) Application force	19
Bibliography	20

Introduction

A significant number of suspected cases of ingestion by children of products used about the home is reported to the medical profession each year. Most are not serious and those that are associated with more serious side effects involve products known to be hazardous, e.g. certain medicinal products, liquid fuels and solvents, strongly acid or alkaline preparations and some garden products. Most commonly used household detergents, cleaning agents and maintenance and care products are not known to have caused injury. However, whether ingestion (actual or suspected) causes injuries or not, such incidents can have traumatic effects on both the child and its parents.

The use of potentially hazardous agents in certain products is necessary to achieve effectiveness; consequently steps have to be taken to limit the occurrence of accidents. One approach has been to try to increase general awareness of hazards associated with various products. Nevertheless, proper labelling and information by the manufacturer is important for the safe use of products in the home.

Another approach has been the use of child resistant packaging to put a physical barrier between the child and the hazardous product. Such packaging should only be used for products as mentioned above since, if used in other circumstances, it could lead to confusion among consumers. It is important to recognize that it is unrealistic to expect that any functional packaging can be totally impossible for a child to open and this type of packaging cannot be a substitute for normal safety precautions. The packaging functions as a last defence if other barriers separating children and hazardous products have failed. Hence, the overall responsibility rests with the parents or other responsible adults.

The aim of this International Standard is to establish mechanical test methods to safeguard child resistance properties of the packaging system.

According to ISO 8317, the panel test is intended for initial type approval but it does not sufficiently cover change management.

NOTE Change management covers, but is not limited to, for example, change of supplier, packaging material, component manufacturing site, material brand or scale up.

Those changes need to be assessed using risk management procedures. Mechanical test methods deliver scientific data which introduce a more scientific means of ensuring compliance with the originally type tested package. The test results are essential for an appropriate risk assessment.

The object of this International Standard is to permit the comparison, by mechanical testing, of the physical parameters of the packaging system under test with those of the individual units tested for certification purposes. It is the responsibility of the component manufacturer to provide access to test methods and test data to the customer.

Packaging — Child resistant packaging — Mechanical test methods for reclosable child resistant packaging systems

1 Scope

This International Standard specifies test methods for mechanical testing of reclosable child resistant packaging. The data generated by these mechanical test methods are suitable for comparing child resistant characteristics of related reclosable packaging systems.

This International Standard is not intended for routine quality assurance purposes.

NOTE The use of children and adults for testing in accordance with ISO 8317 is an essential feature of that standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8317, *Child-resistant packaging — Requirements and testing procedures for reclosable packages*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8317 and the following apply.

3.1

mechanical testing

documented and reproducible methods intended to measure the resistance of the relevant features of a child resistant packaging system

3.2

essential characteristics

those elements of the container/closure system that are critical for maintaining the child resistant functionality

NOTE See 4.3 for examples of essential characteristics.

3.3

thread system

child resistant packaging system having a combination of container and closure that is reliant on having compatible threads in order to maintain the child resistance functions and sealing integrity

3.4

squeeze and turn system

child resistant packaging system which requires the user to squeeze the closure at designated points while simultaneously applying a torque to unscrew the closure from the container

3.5

push and turn system

press and turn system

child resistant packaging system which requires the user to apply a downward force while simultaneously applying a torque to unscrew the closure from the container