



National Standards Authority of Ireland

STANDARD

**I.S. EN 14470-1:2004**

ICS 13.220.40  
71.040.10

National Standards  
Authority of Ireland  
Dublin 9  
Ireland

Tel: (01) 807 3800  
Fax: (01) 807 3838

**FIRE SAFETY STORAGE CABINETS - PART 1:  
SAFETY STORAGE CABINETS FOR  
FLAMMABLE LIQUIDS**

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on:  
May 19, 2004*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2004

**Price Code G**

Údarás um Chaighdeáin Náisiúnta na hÉireann



EUROPEAN STANDARD

**EN 14470-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2004

---

ICS 13.220.40; 71.040.10

English version

## Fire safety storage cabinets - Part 1: Safety storage cabinets for flammable liquids

Armoires de stockage de sécurité incendie - Partie 1:  
Armoires de stockage de sécurité pour liquides  
inflammables

Feuerwiderstandsfähige Lagerschränke - Teil 1:  
Sicherheitsschränke für brennbare Flüssigkeiten

This European Standard was approved by CEN on 2 February 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

---

## Contents

page

Foreword .....	3
Introduction .....	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions .....	5
4 Classification .....	6
5 Construction .....	6
5.1 Fire protection .....	6
5.2 Doors .....	6
5.3 Side and back walls .....	6
5.4 Ventilation .....	7
5.5 Shelves.....	7
5.6 Spill containment sump.....	7
6 Fire resistance .....	7
7 Information to be supplied .....	8
8 Marking and labelling.....	8
<b>Annex A (normative) Type testing to determine protection level, hence classification .....</b>	<b>10</b>
A.1 Principle .....	10
A.2 Testing apparatus and means .....	10
A.3 Test models .....	10
A.3.1 Quantity and description of test models .....	10
A.3.2 Preliminary examination of the test model.....	11
A.4 Preparation of fire test.....	11
A.4.1 Installation of test model.....	11
A.4.2 Temperature measuring device placement in the test model .....	12
A.4.3 Temperature measuring device placement in the furnace .....	12
A.5 Fire testing procedure .....	12
A.6 Test report.....	12
<b>Annex B (normative) Approval following construction alterations.....</b>	<b>16</b>
<b>Bibliography .....</b>	<b>17</b>

## **Foreword**

This document (EN 14470-1:2004) has been prepared by Technical Committee CEN/TC 332 "Laboratory equipment", the secretariat of which is held by DIN.

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 October 2004, and conflicting national standards shall be withdrawn at the latest by October 2004.

Annexes A and B are normative.

This document includes a Bibliography.

EN 14470, *Fire safety storage cabinets*, consists of the following parts:

Part 1 — Safety storage cabinets for flammable liquids

Part 2 — Safety storage cabinets for pressurised gas cylinders (in preparation)

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

## EN 14470-1:2004 (E)

### Introduction

This European Standard describes the design and testing criteria for safety cabinets to be used in laboratories to store flammable liquids in closed containers at normal room temperatures.

Primarily, this European Standard covers the three major safety requirements for storage of flammable liquids, which are:

- a) minimising the fire risks associated with the storage of flammable substances and protection of the cabinet's contents in the event of fire for a known (tested) minimum length of time (fire rating);
- b) minimising the amount of vapour released into the working environment;
- c) retention of accidental spillage within the cabinet.

Testing of the cabinet [see a) above] under fire conditions is a normative part of the standard and the procedures and interpretation of the tests are described in detail.

The fire test [see a) above] provides for four categories of fire protection / ratings. In practice the degree of fire protection/rating allows the user to select, depending on individual circumstances, a cabinet which will allow sufficient time for personnel to leave, and fire fighters to enter the laboratory before it is likely to that the flammables stored turn a possible minor / extinguishable fire into an uncontrollable one. The methods of achieving b) and c) above are sufficiently flexible to allow for local/national needs.

Caution should be exercised when determining the appropriate cabinet fire rating when flammables having auto-ignition temperatures below 200 °C and/or having high vapour pressures at room temperature are involved. When such flammable materials are being stored, expert advice should be sought.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-