



National Standards Authority of Ireland

CORRIGENDUM

**I.S. EN 1947:2002+A1:2007**

ICS 13.220.10  
23.040.70

**FIRE-FIGHTING HOSES - SEMI-RIGID  
DELIVERY HOSES AND HOSE ASSEMBLIES  
FOR PUMPS AND VEHICLES**

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800  
Fax: +353 1 807 3838  
<http://www.nsai.ie>

**Sales**

<http://www.standards.ie>

*This Corrigendum was  
published under the authority  
of the National Standards  
Authority of Ireland and  
comes into effect on:  
24 July 2007*

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

© NSAI 2007

**Price Code L**

Údarás um Chaighdeáin Náisiúnta na hÉireann

*This page is intentionally left BLANK.*

English Version

## Fire-fighting hoses - Semi-rigid delivery hoses and hose assemblies for pumps and vehicles

Tuyaux de lutte contre l'incendie - Tuyaux de refoulement  
semi-rigides et flexibles pour pompes et véhicules

Feuerlöschschläuche - Formstabile Druckschläuche und  
Einbände für Pumpen und Feuerwehrfahrzeuge

This European Standard was approved by CEN on 7 April 2002 and includes Amendment 1 approved by CEN on 12 March 2007.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, 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.....	4
Introduction.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	7
4 Classification.....	7
4.1 General.....	7
4.2 Classification by types (hose construction).....	7
4.3 Classification by class (materials for lining and cover).....	8
4.4 Classification by category.....	8
5 Dimensions, tolerances and maximum mass.....	8
5.1 Inside diameter and maximum mass.....	8
5.2 Length and tolerances on length.....	9
5.3 Concentricity.....	9
6 Performance requirements of finished hose.....	9
6.1 Hydrostatic requirements.....	9
6.1.1 Deformation under maximum working pressure.....	9
6.1.2 Deformation under proof pressure.....	10
6.1.3 Minimum burst pressure.....	10
6.1.4 Kink pressure.....	10
6.2 Adhesion.....	10
6.3 Accelerated ageing.....	10
6.4 Abrasion resistance.....	11
6.4.1 Abrasion resistance of class 5 and class 6 hoses.....	11
6.4.2 Abrasion resistance of classes 1, 2, 3 and 4 hoses.....	11
6.5 Low temperature flexibility.....	11
6.6 Hot surface resistance.....	11
6.7 Ozone resistance.....	12
6.8 Bending and crush resistance.....	12
6.9 UV-resistance (xenon arc lamp).....	12
6.10 Loss in mass on heating.....	12
6.11 Deformation under crushing (type C only).....	12
7 <b>A<sub>1</sub></b> Frequency of testing.....	12
8 Marking.....	12
9 Hose assemblies.....	13
Annex A (normative) Kink pressure test.....	14
A.1 Principle.....	14
A.2 Test piece.....	14
A.3 Apparatus.....	14
A.4 Procedure.....	14
A.5 Test report.....	14
Annex B (normative) Accelerated ageing test.....	15
B.1 Test piece.....	15
B.2 Procedure.....	15
Annex C (normative) Surface abrasion resistance test.....	16

C.1	Test piece .....	16
C.2	Apparatus .....	16
C.3	Procedure .....	18
Repeat the procedure with the remaining four test pieces .....		18
C.4	Test report .....	18
<b>Annex D (normative) Point abrasion resistance test .....</b>		<b>19</b>
D.1	Test piece .....	19
D.2	Apparatus .....	19
D.3	Procedure .....	21
D.4	Test report .....	21
<b>Annex E (normative) Hot surface resistance test .....</b>		<b>22</b>
E.1	Test piece .....	22
E.2	Apparatus .....	22
E.3	Procedure .....	25
E.4	Test report .....	25
<b>Annex F (normative) Bending and crush resistance test .....</b>		<b>26</b>
F.1	Test piece .....	26
F.2	Procedure .....	26
F.3	Test report .....	28
<b>Annex G (normative) Deformation under crushing test .....</b>		<b>29</b>
G.1	Test piece .....	29
G.2	Apparatus .....	29
G.3	Procedure .....	29
G.4	Test report .....	31
<b>Annex H (normative) Test for hose assemblies .....</b>		<b>32</b>
H.1	Test piece .....	32
H.2	Procedure .....	32
<b>Annex I (normative)  Frequencies of testing (type test and production test) .....</b>		<b>33</b>
<b>Annex J (informative)  Frequencies of testing (batch test) .....</b>		<b>34</b>
<b>Bibliography .....</b>		<b>35</b>

## Foreword

This document (EN 1947:2002+A1:2007) has been prepared by Technical Committee CEN/TC 192, "Fire service equipment", the secretariat of which is held by BSI.

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 2007 and conflicting national standards shall be withdrawn at the latest by October 2007.

This document includes Amendment 1, approved by CEN on 2007-03-12.

This document supersedes EN 1947:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**

At present there is no existing ISO Standard on the same subject but ISO 4642:1978 "Rubber products - Hoses, non-collapsible, for fire-fighting service" is under revision by ISO/TC 45. Requirements for semi-rigid hoses for use with fixed systems are given in EN 694; those for non-percolating layflat hoses are given in prEN 1924 (pumps and vehicles) and prEN 14540 (fixed systems).

**A1** *deleted text* **A1**

Users of this European Standard are advised to consider the desirability of independent certification of product conformity with this European Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality system against EN ISO 9001.

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

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

## **I.S. EN 1947 : 2002 : EN : COMBINED PDF**

- 
- ⊙ Looking for additional Standards? Visit SAI Global Infostore
  - ⊙ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
- 

Need to speak with a Customer Service Representative - Contact Us