



NSAI
Standards

Irish Standard
I.S. EN 1765:2016

Rubber hose assemblies for oil suction and discharge services - Specification for the assemblies

I.S. EN 1765:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 1765:2016

Published:

2016-08-17

This document was published under the authority of the NSAI and comes into effect on:

2016-09-03

ICS number:

23.040.70

75.200

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 1765:2016 is the adopted Irish version of the European Document EN 1765:2016, Rubber hose assemblies for oil suction and discharge services - Specification for the assemblies

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

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 1765

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 23.040.70; 75.200

Supersedes EN 1765:2004

English Version

Rubber hose assemblies for oil suction and discharge services - Specification for the assemblies

Flexibles en caoutchouc pour chargement et déchargement des produits pétroliers - Spécifications pour les flexibles

Gummischlauchleitungen für das Ansaugen und Fördern von Öl - Anforderungen an die Schlauchleitungen

This European Standard was approved by CEN on 25 June 2016.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
European 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 End – use.....	7
4.3 Pressure ratings and designations	8
5 Materials and construction.....	9
5.1 Materials.....	9
5.1.1 Lining.....	9
5.1.2 Reinforcing plies.....	9
5.1.3 Wire helices.....	9
5.1.4 Internal and armouring wire helices	9
5.1.5 Cover	9
5.2 Construction.....	9
5.2.1 Type R: Electrically continuous.....	9
5.2.2 Type A: Electrically continuous.....	10
5.2.3 Type S: Electrically continuous or electrically discontinuous.....	10
5.2.4 Type L: Electrically continuous or electrically discontinuous.....	11
6 End connections.....	12
6.1 Nipples and flanges.....	12
6.2 Method of attachment of end connections to the hose	12
6.3 Electrical discontinuous assemblies	12
6.4 Electrical continuous assemblies with built-in nipples	13
7 Dimensions and tolerances	13
7.1 Diameters.....	13
7.2 Length.....	13
8 Physical properties.....	14
8.1 Rubber compounds	14
8.2 Finished hose assemblies.....	14
9 Test report.....	16
10 Type testing.....	16
11 Frequency of testing.....	16
12 Marking.....	16
Annex A (informative) Information to be supplied by the purchaser.....	18
Annex B (informative) Recommendations for packaging and transportation of oil suction and discharge hose assemblies.....	19
B.1 National.....	19

B.2	International	19
	Annex C (informative) Masses.....	20
	Annex D (normative) Wet adhesion test	21
D.1	Scope	21
D.2	Terms and definitions.....	21
D.3	Principle.....	21
D.4	Apparatus	21
D.5	Test specimens	21
D.6	Procedure	22
D.7	Report	22
	Annex E (normative) Hydrostatic test for suction and discharge hose assemblies.....	23
E.1	Principle.....	23
E.2	Apparatus	23
E.3	Test medium.....	23
E.4	Procedure	23
E.5	Calculation	24
E.6	Test report	24
	Annex F (normative) Minimum bend radius test.....	25
	Annex G (normative) Burst test.....	27
	Annex H (normative) Test frequency for type testing and routine test.....	28
	Annex I (informative) Test frequency for production acceptance tests.....	29

EN 1765:2016 (E)**European foreword**

This document (EN 1765:2016) has been prepared by Technical Committee CEN/TC 218 “Rubber and plastics hoses and hose assemblies”, 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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

This document supersedes EN 1765:2004.

Compared to EN 1765:2004 the following changes have been made:

- a) Clause 2: the normative references have been updated;
- b) Subclause 4.2: hose assemblies type S and L were subdivided into two grades Grade M (electrically bonded) and Grad Ω (electrically conductive);
- c) Subclause 5.2.3.2: one type of hose assembly assembled with hose nipples in accordance to EN 14420-2 and swaged or crimped ferrules has been added;
- d) Table 4: for the electrical properties (continuity) the maximum electrical resistance 10^6 per assembly for grade Ω was added;
- e) Clause 12: the requirements for marking have been amended.

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.

Introduction

This document specifies minimum requirements for the satisfactory performance of wire or textile reinforced rubber hose assemblies of both smooth and rough bore types for oil suction and discharge services. The hoses are commonly used for transferring crude oil and liquid petroleum products, other than liquefied petroleum gas and natural gas, to and from tanker and bunkering vessels or for similar duties ashore.

Specific details of the construction of hoses are not rigidly defined in this document since it is felt that this could restrict the introduction of improved methods of construction. The hose assemblies have been classified and designated in terms of service pressure, which includes an allowance for surge pressure and which equates to the factory test pressure. To keep this specification in line with other documents this factory test pressure is also defined as the maximum working pressure (see Table 1). It is the responsibility of the user to determine the appropriate working pressure, which will depend on the severity of the user's operating conditions and on the service life that is expected of the hose assembly.

It is essential that the purchaser provides certain information about the hose assembly and its intended use at the time of enquiry and/or order; this information is listed in Annex A (informative). Recommendations concerning packaging and transportation are given in Annex B (informative) and expected masses of hoses, in kilograms per metre of free length, are given in Annex C (informative).

EN 1765:2016 (E)**1 Scope**

This European Standard specifies the characteristics of four types of oil suction and discharge hose assemblies used for the conveyance of petroleum, including crude oils and other liquid petroleum products containing a maximum aromatics content of 50 % (v/v). It is not suitable for liquefied petroleum gas and natural gas.

Hose assemblies to this document can be used in the temperature range $-20\text{ }^{\circ}\text{C}$ to $82\text{ }^{\circ}\text{C}$.

The hoses specified are in the size range of nominal bore 50 to 500 and may be smooth bore, rough bore or armoured rough bore.

Hoses for use with petroleum products having an aromatic content greater than 50 % (v/v) are outside the scope of this document but the requirements may be used as a basis for such hoses on request to the manufacturer.

2 Normative references

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

EN 14420-2, *Hose fittings with clamp units - Part 2: Hose side parts of hose tail*

EN 14420-3 *Hose fittings with clamp units - Part 3: Clamp units, bolted or pinned*

EN 14420-4, *Hose fittings with clamp units - Part 4: Flange connections*

EN ISO 1402, *Rubber and plastics hoses and hose assemblies - Hydrostatic testing (ISO 1402)*

EN ISO 1460, *Metallic coatings - Hot dip galvanized coatings on ferrous materials - Gravimetric determination of the mass per unit area (ISO 1460)*

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461)*

EN ISO 7233, *Rubber and plastics hoses and hose assemblies - Determination of resistance to vacuum (ISO 7233)*

EN ISO 8031:2009, *Rubber and plastics hoses and hose assemblies - Determination of electrical resistance and conductivity (ISO 8031:2009)*

EN ISO 8033, *Rubber and plastics hoses - Determination of adhesion between components (ISO 8033)*

EN ISO 8330:2014, *Rubber and plastics hoses and hose assemblies - Vocabulary (ISO 8330:2014)*

EN ISO 15614-1:2004, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (ISO 15614-1:2004)*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

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](#)
-