

Institut luxembourgeois de la normalisation de l'accréditation, de la sécurité et qualité des produits et services

ILNAS-EN 14225-3:2017

# Diving suits - Part 3: Actively heated or cooled suit systems and components - Requirements and test methods

Vêtements de plongée - Partie 3 : Vêtements avec système de chauffage ou de refroidissement actif et composants -Exigences et méthodes d'essai

Tauchanzüge - Teil 3: Aktiv beheizte oder gekühlte Anzugssysteme und Anzugsteile - Anforderungen und Prüfverfahren

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# EUROPEAN STANDARD ILNAS-EN 14225-3:2017 **EN 14225-3**

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# **English Version**

# Diving suits - Part 3: Actively heated or cooled suit systems and components - Requirements and test methods

Vêtements de plongée - Vêtements avec système de chauffage ou de refroidissement actif et composants - Partie 3 : Exigences et méthodes d'essai

Tauchanzüge - Teil 3: Aktiv beheizte oder gekühlte Anzugssysteme und Anzugsteile - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 7 June 2017.

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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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# **European foreword**

This document (EN 14225-3:2017) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", 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 June 2018, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 14225-3:2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Regulation (EU) 2016/425.

For relationship with Regulation (EU) 2016/425, see informative Annexes ZA and ZB, which are an integral part of this document.

Annex B provides details of significant technical changes between this European Standard and the previous edition.

EN 14225 consists of the following parts, under the general title *Diving suits*:

- Part 1: Wet suits Requirements and test methods;
- Part 2: Dry suits Requirements and test methods;
- Part 3: Actively heated or cooled suit systems and components Requirements and test methods.

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, 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# Introduction

This document for actively heated or cooled diving suits systems and components has been prepared to meet the needs of persons engaged in underwater activities where the user is breathing underwater, and where the water temperature and exposure duration are such that the person's thermal status only can be maintained at a safe level by means of active heating or cooling.

Actively heated suits and actively cooled suits are designed to reduce the risk of the diver suffering hypothermia and hyperthermia, respectively.

The performance of the suit can be altered by a number of factors including any additional equipment carried by the diver.

A suit may be comprised of one or more pieces.

# 1 Scope

This European Standard specifies the construction and performance of actively heated suits and actively cooled suits or components thereof, for wear by divers for underwater activities where the user is breathing underwater. Marking, labelling, information meant to be provided at the point of sale and instructions for use are also specified.

Laboratory and practical performance tests are specified.

### 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 250, Respiratory equipment — Open-circuit self-contained compressed air diving apparatus — Requirements, testing and marking

EN 1809:2014+A1:2016, Diving equipment — Buoyancy compensators — Functional and safety requirements, test methods

EN 14126:2003, Protective clothing — Performance requirements and tests methods for protective clothing against infective agents

EN 14225-1:2017, Diving suits — Part 1: Wet suits — Requirements and test methods

EN 14225-2:2017, Diving suits — Part 2: Dry suits — Requirements and test methods

EN 16523-1, Determination of material resistance to permeation by chemicals — Part 1: Permeation by liquid chemical under conditions of continuous contact

EN ISO 3758, Textiles — Care labelling code using symbols (ISO 3758)

EN ISO 13934-1, Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1)

EN ISO 15027-3:2012, *Immersion suits — Part 3: Test methods (ISO 15027-3:2012)* 

ISO 1817:2015, Rubber, vulcanized or thermoplastic — Determination of the effect of liquids

IMCA D 045<sup>1</sup>), Code of practice for the safe use of electricity under water (October 2010)

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

<sup>1) &</sup>lt;a href="https://www.imca-int.com/login/?download=/publication/295/code-of-practice-for-the-safe-use-of-electricity-under-water.pdf">https://www.imca-int.com/login/?download=/publication/295/code-of-practice-for-the-safe-use-of-electricity-under-water.pdf</a>.