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Second edition  
2012-11-01

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## Immersion suits —

Part 1:

### **Constant wear suits, requirements including safety**

*Combinaisons de protection thermique en cas d'immersion —*

*Partie 1: Combinaisons de port permanent, exigences y compris la sécurité*



Reference number  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 15027-1 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 162, *Protective clothing including hand and arm protection and lifejackets*, in collaboration with Technical Committee ISO/TC 188, *Small craft*, Subcommittee SC 1, *Personal safety equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15027-1:2002) which has been technically revised. The main technical changes are:

- a) addition of "underclothing" under terms and definitions;
- b) addition of "cold shock" under terms and definitions;
- c) revision of requirements for buddy lines;
- d) revision of requirements regarding conspicuity;
- e) addition of Clause 6 "Information supplied by the manufacturer";
- f) revision of consumer information label;
- g) reordering of subclauses;
- h) revision of requirements regarding thermal protection in water.

ISO 15027 consists of the following parts, under the general title *Immersion suits*:

- *Part 1: Constant wear suits, requirements including safety*
- *Part 2: Abandonment suits, requirements including safety*
- *Part 3: Test methods*

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## Introduction

This part of ISO 15027 has been prepared to meet the needs of persons engaged in certain activities on or near water.

The justification for using a constant wear suit would be to provide protection in the event of accidental immersion, to prolong life and to aid rescue. An individual's estimated thermal protection time when wearing this type of equipment will depend upon the water temperature, weather conditions, clothing, the cold tolerance of the person and the person's behaviour. This part of ISO 15027 specifies the minimum levels of insulation provided by the different ranges of suit in particular water temperatures.

This part of ISO 15027 allows for thermal protection to be provided by a variety of methods and materials, some of which may require action when the suit enters the water (e.g. inflation of chambers by gas from a cylinder). The compliance of a constant wear suit with this part of ISO 15027 does not imply that it is suitable for all circumstances. This part of ISO 15027 cannot make detailed provision for all the special uses to which a constant wear suit may be put, such as special working conditions, i.e. slip resistance or fire resistance or special leisure applications.

This part of ISO 15027 is intended to serve as a minimum performance requirement for manufacturers, purchasers and users of constant wear suits by ensuring that they provide an effective standard of performance in use. Designers should encourage the wearing of this equipment by making it comfortable and functional for continuous wear on or near water.

The primary aims in wearing a constant wear suit are:

- a) to reduce the risk of cold shock and to delay the onset of hypothermia;
- b) to enable the user to propel himself in the water and extricate himself from the water without it becoming an encumbrance;
- c) to make the user sufficiently conspicuous in the water so as to aid his recovery.

The performance of the suit may be altered by a number of factors, including wave action or the wearing of additional equipment. Users, owners and employers should ensure that equipment is correctly maintained according to manufacturer's instructions.

A suit system may comprise one or more pieces provided that in all cases it meets the requirements of this part of ISO 15027 as a complete system.

A constant wear suit may often be worn with a lifejacket as it will provide extra flotation and may help to bring a person to a face-up position.