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## **Ergonomics of the thermal environment — Cold workplaces — Risk assessment and management**

*Ergonomie des ambiances thermiques — Lieux de travail dans le  
froid — Évaluation et management des risques*



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 15743 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 5, *Ergonomics of the physical environment*.

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## Introduction

This International Standard is one of a series of thermal standards (see Clause 2 and the Bibliography) intended to be used in the assessment and management of work in the cold, i.e. in conditions that cause uncomfortable sensations of cool or cold. In light physical work, these conditions can occur at 10 °C or below.

A number of industries, types of commerce and occupations involve substantial cold exposure, outdoors or indoors, where individual workers can also be exposed to windy and/or wet conditions. Working in cold environments can involve several adverse effects on human performance and health: thermal discomfort, increased strain, decreased performance and cold-related diseases and injuries. Cold can also interfere with several other factors in the workplace, modifying or aggravating the risk of common hazards and increasing the risk of cold-associated injuries.

Due to the negative impact of cold on human health and performance, as well as on work productivity, quality and safety, a comprehensive strategy of risk assessment and management practices and methods is needed for work in cold environments.

Even though some of the standards referred to above describe specific methods (instruments and indices) to be used to assess the required insulation of clothing for different cold exposures (see ISO 11079), or physiological and psychological consequences related to different thermal exposures, an instruction of practical application for cold working environments is lacking.

This International Standard was created to specify methods and practices for assessing and managing occupational health and performance risks in cold work. The choice of when these are to be used is at the discretion of those responsible for occupational health and/or safety.