
**Clothing for protection against heat and
flame — Determination of contact heat
transmission through protective clothing
or constituent materials —**

Part 1:

**Test method using contact heat produced
by heating cylinder**

*Vêtements de protection contre la chaleur et la flamme —
Détermination de la transmission thermique par contact à travers les
vêtements de protection ou leurs matériaux constitutifs —*

*Partie 1: Méthode d'essai utilisant la transmission thermique par contact
produite par un cylindre de chauffage*



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Foreword

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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 12127-1 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*.

This first edition of ISO 12127-1 cancels and replaces ISO 12127:1996, of which it constitutes a minor revision.

ISO 12127 consists of the following parts, under the general title *Clothing for protection against heat and flame — Determination of contact heat transmission through protective clothing or constituent materials*:

- *Part 1: Test method using contact heat produced by heating cylinder*
- *Part 2: Test method using contact heat produced by dropping small cylinders*

Introduction

Protective clothing designed to protect against heat and flame can be exposed to direct contact with hot substances or hot surfaces.

The diversity of such contact conditions makes it difficult to evaluate the hazards that can arise from high temperature.

The test method described in this part of ISO 12127 allows this heat transfer to be assessed when a heating cylinder and the clothing material are brought into contact with each other.

This part of ISO 12127 forms part of a series of standards concerned with clothing designed to protect against heat and fire.

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Clothing for protection against heat and flame — Determination of contact heat transmission through protective clothing or constituent materials —

Part 1: Test method using contact heat produced by heating cylinder

1 Scope

This part of ISO 12127 specifies a test method for the determination of contact heat transmission. It is applicable to protective clothing (including hand protectors) and its constituent materials intended to protect against high contact temperatures.

Application of this part of ISO 12127 is restricted to contact temperatures between 100 °C and 500 °C.

2 Terms and definitions

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

2.1

contact temperature

T_c

surface temperature of the contact area of the heating cylinder, this temperature being kept constant

2.2

start of timing

moment when the upper surface of the calorimeter and the bottom edge of the heating cylinder are within 10 mm of each other

2.3

threshold time

t_t

time between the start of timing and the moment when the temperature of the calorimeter is 10 °C above its starting value

2.4

rate of contact

relative speed with which the heating cylinder and the calorimeter with the test specimen are brought into contact with each other

2.5

contact force

force acting on the test specimen and the calorimeter when they have been brought into contact with the heating cylinder