

ICS 13.180
CCS A 25



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44624-2024

**Ergonomics of the thermal environment - Methods for the
assessment of human responses to contact with surfaces**

热环境的人类工效学 接触冷热表面时人体反应评价方法

(English Translation)

Issued on: September 29, 2024

Implemented on: April 1, 2025

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

1 Scope

This document specifies the temperature limits and skin injury risks that may occur when bare human skin contacts cold or hot solid surfaces.

The evaluation method is given, and the evaluation principles and methods for human body sensation when touching solid surfaces at 10°C~40°C are also given.

This document applies to all types of solid surfaces.

This document does not apply to human reactions caused by contact with large areas of exposed skin.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 40233-2021 Ergonomic physical measurement instruments for thermal environments
GB/T 40288-2021 Ergonomic terms and symbols for thermal environments sipationoffloors)

3 Terms and definitions

The terms and definitions defined in GB/T 40288-2021 and the following apply to this document.

surface temperaturesurfacetemperature T_s the surface temperature of the material.

Note: Surface temperature is expressed in degrees Celsius (°C).

Contact time contactperiod Duration of skin contact with surface.

Note: The contact time is expressed in seconds (s).

Burn temperature threshold burnthreshold After the skin contacts the surface at this temperature for a period of time, it is in a critical state between being unburned and having local surface burns.

Note: Burns are divided into three types according to their severity.

a) Superficial burns Only the most superficial layer is burned, the epidermis is completely destroyed but the hair follicles, sebaceous glands and sweat glands are intact.

b) Deep burns