

# DIN EN ISO 23537-1:2022-10 (E)

Requirements for sleeping bags - Part 1: Thermal, mass and dimensional requirements for sleeping bags designed for limit temperatures of -20 °C and higher (ISO 23537-1:2022)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		3
Foreword .....		4
Introduction .....		5
<b>1</b>	<b>Scope .....</b>	<b>6</b>
<b>2</b>	<b>Normative references .....</b>	<b>6</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>6</b>
<b>4</b>	<b>Requirements .....</b>	<b>8</b>
4.1	Thermal properties for lower temperature limits .....	8
4.2	Water vapour permeability index .....	8
4.3	Inside dimensions .....	9
4.3.1	Inside length .....	9
4.3.2	Maximum inside width .....	9
4.3.3	Inside foot width .....	9
4.4	Total mass .....	9
<b>5</b>	<b>Test methods .....</b>	<b>9</b>
5.1	Testing of the thermal properties .....	9
5.1.1	Principle .....	9
5.1.2	Thermal manikin .....	9
5.1.3	Climatic room .....	10
5.1.4	Artificial ground .....	10
5.1.5	Test samples and pre-treatment .....	10
5.1.6	Thermal resistance for posture 1 $R_{c(1)}$ .....	10
5.1.7	Test procedure .....	11
5.1.8	Calculation of temperatures of the range of utility .....	11
5.2	Testing of the water vapour permeability index .....	11
5.3	Measurement of inside dimension .....	12
5.3.1	Inside length .....	12
5.3.2	Maximum inside length .....	12
5.3.3	Inside foot width .....	12
5.4	Testing of the total mass .....	12
<b>6</b>	<b>Test report .....</b>	<b>12</b>
<b>7</b>	<b>Labelling .....</b>	<b>13</b>
7.1	Graph for the range of utility .....	13
7.2	Marking .....	13
7.3	Information supplied to the consumer .....	14
<b>Annex A (normative) Reference values of thermal resistance for calibration of thermal manikin .....</b>		<b>16</b>
<b>Annex B (informative) Precision of test results .....</b>		<b>18</b>
<b>Annex C (normative) Physiological model for calculation of range of utility .....</b>		<b>19</b>
<b>Annex D (informative) Warning of misuse of temperature rating .....</b>		<b>24</b>
<b>Annex E (informative) Rationale .....</b>		<b>25</b>
<b>Annex F (informative) Test method for maximum temperature .....</b>		<b>27</b>