
**Ski-poles for alpine and touring
skiing — Requirements and test
methods**

*Bâtons de ski alpin et de ski de randonnée — Exigences et
méthodes d'essai*



This document is a preview generated by ELS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	1
5 Parts and categories of ski-poles	2
5.1 Parts of a ski-pole.....	2
5.2 Categories of ski-poles.....	2
6 Requirements and test methods	3
6.1 Materials.....	3
6.2 Test conditions.....	3
6.3 Test sampling.....	4
6.4 Total length.....	4
6.4.1 Requirement.....	4
6.4.2 Testing.....	4
6.5 Outward design.....	4
6.5.1 Requirement.....	4
6.5.2 Testing.....	4
6.6 Anti-catching design.....	4
6.6.1 Requirement.....	4
6.6.2 Testing.....	4
6.7 Release mechanism.....	4
6.7.1 Function.....	4
6.7.2 Temperature and ice conditions.....	5
6.7.3 Testing.....	5
6.7.4 Fatigue conditions.....	5
6.8 Grip.....	5
6.8.1 Shape.....	5
6.8.2 Impact area.....	6
6.8.3 Edges.....	6
6.8.4 Piercing resistance.....	6
6.8.5 Pulling-off force.....	7
6.8.6 Strapless grips.....	8
6.9 Straps.....	8
6.9.1 Width.....	8
6.9.2 Minimum strain in support direction.....	9
6.9.3 Release function.....	9
6.10 Shaft.....	10
6.10.1 Minimum compressive force.....	10
6.10.2 Point of buckling.....	11
6.11 Clamping force.....	11
6.12 Basket.....	12
6.12.1 Dimensions.....	12
6.12.2 Resistance.....	12
6.12.3 Basket fixing.....	13
6.12.4 Anti-catching design of basket.....	14
6.13 Tip.....	15
6.13.1 Minimum area.....	15
6.13.2 Gripping power on ice.....	16
6.13.3 Hardness.....	17
7 Test report	17
8 Marking	17

8.1	General.....	17
8.2	Standard reference.....	17
9	Information supplied by the manufacturer.....	17

This document is a preview generated by EVS

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 4, *Snowsports equipment*.

This fifth edition cancels and replaces the fourth edition (ISO 7331:2011), which has been technically revised. The main changes compared to the previous edition are as follows:

- editorial changes;
- addition of requirements and test methods for adjustable poles;

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Ski-poles for alpine and touring skiing — Requirements and test methods

1 Scope

This document defines the minimum requirements for safety in poles for alpine and touring skiing. It specifies test methods to check conformity with these requirements.

It is applicable to ski-poles for alpine and touring skiing in the following ranges of total length, l_T :

- group A, $l_T \geq 1\ 050$ mm (adults' poles);
- group B, $1\ 050$ mm $> l_T \geq 700$ mm (junior poles);
- group C, $l_T < 700$ mm (children's poles).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 6508-2, *Metallic materials — Rockwell hardness test — Part 2: Verification and calibration of testing machines and indenters*

ISO 6508-3, *Metallic materials — Rockwell hardness test — Part 3: Calibration of reference blocks*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Symbols

The following symbols are used in the document.

A_G	is the upper surface, expressed in square centimetres, of the grip (impact area).
F_{-Z}	is the compressive force, expressed in newtons, in the axis of the ski-pole.
F_{+Z}	is the tensile force, expressed in newtons, in the axis of the ski-pole.
l_T	is the total length, in millimetres.