
**Plain bearings — Bearings containing
dispersed solid lubricants**

Paliers lisses — Paliers contenant des lubrifiants solides dispersés



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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.

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).

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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 123, *Plain bearings*, Subcommittee SC 7, *Special types of plain bearings*.

This second edition cancels and replaces the first edition (ISO 20054:2016), of which it constitutes a minor revision.

The main changes are as follows:

- the titles of [5.2](#), [7.3.2](#) and [7.3.3](#) have been changed to more suitable ones;
- changes in the description in [7.1](#) have been made due to the above changes.

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.

Plain bearings — Bearings containing dispersed solid lubricants

1 Scope

This document specifies the characteristics, materials, dimensions, assembly and surface finish for a bearing containing dispersed solid lubricants which is used as a solid lubricant bearing.

NOTE In the solid lubricant bearing among self-lubricating bearings there is a solid type, a coated type, an embedded type and a dispersed type, which is specified by this document.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Symbols and units

See [Table 1](#).

Table 1 — Symbols and units

Symbol	Description	Unit
B	Width of the bush	mm
D_i	Inside diameter of the bush	mm
D_o	Outside diameter of the bush	mm
x	Surface roughness	—

5 Characteristics

5.1 Structure

A bearing containing dispersed solid lubricants is made of sintered composite materials that contain solid lubricants dispersed uniformly in the metal matrix and is manufactured by powder metallurgy (see [Figure 1](#)).

This document includes multi-layered bearings with the sintered layer on a steel backing and both seamless and wrapped bushes (see [Figure 2](#)).

[Figure 3](#) shows a typical microstructure of the bearings containing dispersed solid lubricants. The dispersed solid lubricants in the metal matrix vary in grain size and volume.