

SLOVENSKI STANDARD SIST ISO 3547-4:2008

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BUXca Yý U. SIST ISO 3547-4:2002

Drsni ležaji - Zvite puše - 4. del: Materiali

Plain bearings - Wrapped bushes - Part 4: Materials

Gleitlager - Gerollte Buchsen - Teil 4: Werkstoffe

iTeh STANDARD PREVIEW Paliers lisses - Bagues roulées - Partie 4: Matériaux (standards.iteh.ai)

Ta slovenski standard je istoveten 23TISOISO-3547-4:2006 https://standards.iteh.ai/catalog/standards/sist/bf5ab189-9dff-46fb-8bba-

<u>ICS:</u>

21.100.10 Drsni ležaji

Plain bearings

SIST ISO 3547-4:2008

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INTERNATIONAL STANDARD



Second edition 2006-10-15

Plain bearings — Wrapped bushes —

Part 4: Materials

Paliers lisses — Bagues roulées —

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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.

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 3547-4 was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 3, *Dimensions, tolerances and construction details*.

This second edition cancels and replaces the first edition (ISO 3547-4:1999), which has been technically revised. (standards.iteh.ai)

ISO 3547 consists of the following parts, under the general title *Plain bearings* — *Wrapped bushes*:

- Part 1: Dimensions://standards.iteh.ai/catalog/standards/sist/bf5ab189-9dff-46fb-8bbab680760b5f1d/sist-iso-3547-4-2008
- Part 2: Test data for outside and inside diameters
- Part 3: Lubrication holes, grooves and indentations
- Part 4: Materials

The following parts are under preparation:

- Part 5: Checking the outside diameter
- Part 6: Checking the inside diameter
- Part 7: Measurement of wall thickness of thin-walled half-bearings and thin-walled bushes

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Plain bearings — Wrapped bushes —

Part 4: Materials

1 Scope

This part of ISO 3547 gives specifications for solid and multi-layer bearing materials, such as are used for wrapped bushes in accordance with the other parts of ISO 3547.

2 Normative references

The following referenced documents are indispensable for the application 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 A RD PREVIEW

ISO 3547-1:2006, Plain bearings - Wrapped bushes - Part 1: Dimensions

ISO 3547-2, Plain bearings — Wrapped bushes — Part 2: Test data for outside and inside diameters

ISO 3547-3, Plain bearings - Wrapped bushes - Part 3: Lubrication holes, grooves and indentations

ISO 4378-1, Plain bearings — Terms, definitions and classification — Part 1: Design, bearing materials and their properties

ISO 4382-2, Plain bearings — Copper alloys — Part 2: Wrought copper alloys for solid plain bearings

ISO 4383, Plain bearings — Multilayer materials for thin-walled plain bearings

ISO 4384-1, Plain bearings — Hardness testing of bearing metals — Part 1: Compound materials

ISO 4384-2, Plain bearings — Hardness testing of bearing metals — Part 2: Solid materials

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4378-1 apply.

4 Requirements

4.1 Chemical analysis

Chemical analysis shall be definitive for the acceptance of the bearing metals. Arbitrary analyses or random sampling operations shall be performed in accordance with recognized methods and agreed between the supplier and user.

4.2 Hardness values

The hardness values indicated in Tables 1 and 2 are typical for each of the materials concerned. In practice, composition and processing variables can result in significant variations in hardness. Hardness specifications shall be agreed between the supplier and user.

Key	Designation ^a	Hardness ^b (guide values) HB 2,5/62,5/10	Notes relating to use	Wall thickness limit deviation series ^c				
Z1	Steel (hardened)	—	Suitable for secondary applications with lightly loaded sliding characteristics.	А				
Y1	000.	120	Very high load capacity, good antifrictional	A, C, W				
Y2	CuSn8P	150	conveyor systems and agricultural machinery.					
W1	0 7 040	110	High load capacity, good antifrictional properties,					
W2	CuZn31Si	140	e.g. for textile machinery, motor vehicles and agricultural machinery and lifts.					
^a Steel composition shall be agreed between supplier and user. It will normally have a carbon content of less than 0,25 %; composition of bearing material in accordance with ISO 4382-2.								
^b Hardness testing in accordance with 18043842.TANDARD PREVIEW								

In accordance with ISO 3547-1:2006, Tables 5 and 6 and ards. iteh.ai)

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Key	Designation ^a		Hardness ^b (guide values)		Notes relating to use	d	
	Backing material	Bearing material	Backing material ^c	Bearing material	Notes relating to use	u	
T2	Steel	SnSb8Cu4	130	17 HV to 24 HV	Very good emergency running characteristics, fair load capacity, e.g. for pumps, compressors, automatic transmissions, starters and camshafts.		
S1	Steel	CuPb24Sn (cast)	125	55 HB to 80 HB	High load capacity, with hardened		
S2	Steel	CuPb24Sn (sinter)	125	40 HB to 60 HB	shafts being necessary as a rule, e.g. for automatic transmissions, steering assemblies, camshafts and pumps.		
S3	Steel	CuPb24Sn4 (cast) 125		60 HB to 90 HB	As for the material with keys S1 and	nd lg A, C, W y,	
S4	Steel	CuPb24Sn4 (sinter)	CuPb24Sn4 (sinter) 125 45 HB to 90 HB S2; more suitable for the embo		of grooves. Very high load capacity,		
S5	Steel	CuPb10Sn10 (cast)	125	70 HB to 130 HB	with hardened shafts being necessary		
S6	Steel	CuPb10Sn10 (sinter)	125	60 HB to 90 HB	rocker arm bearings, transmission shafts, steering assemblies and pumps. Available with greater Brinell hardness for special applications.		
R1	Steel	iTeh ST AlSn6Cu (st	ANDA 170 andai	ARD PRE 35 HB to 45 HB ds.iteh.a	High load capacity, with hardened shafts being necessary as a rule, e.g. for transmissions and hydraulic pumps.		
R2	Steel	ht AISn20Cu rds.iteh. b68	<u>SIST ISC</u> ai/ca 1a70 g/sta 0760b5f1d/	<u>) 3547-4:2008</u> m 30(HBito)49,HB 89 sist-iso-3547-4-2008	Good emergency running characteristics, fair load capacity, e.g. for refrigeration plant, compressors and pumps.		
R3	Steel	AlSn12SiCu	170	40 HB to 60 HB	High load capacity, good seizure resistance, e.g. for transmissions camshafts and hydraulic pumps.	A, C, W	
R4	Steel	AlZn5	185 HB	60 HB to 100 HB	Higher load capacity.		
P1	Steel		140	_	Low friction; for vehicle suspension struts, gear levers, pivot bearings, pumps and lifting magnets; operating range from – 200 °C to + 280 °C, but not suitable for machining in the bearing bore; suitable for use as a dry bearing material.	В	
B1	Bronze	With porous sintered bronze, filler and surface coating (running-in coating) of PTFE with additives.	100				
P2	Steel		140	_	High load capacity, greased on assembly, e.g. for cranes, hoists, lifts, packaging machinery and agricultural machinery, some temperature limitation. ^e	D, E	
B2	Bronze	With porous sintered bronze coated with thermoplastic.	100				

Table 2 — Multi-layer materials