ISO 7148-2:2026-02 (E)

Plain bearings - Testing of the tribological behaviour of bearing materials - Part 2: Testing of polymer-based bearing materials

Contents

Page

Foreword ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Symbols and units **1**

5 Special features for the tribological testing of polymer-based materials **3**

6 Test methods **3**
6.1 General 3
6.2 Test method A — Pin-on-disc 6
6.3 Test method B — Block-on-ring 7
6.4 Test method C — Rotation under thrust load 8
6.5 Test method D — Sphere-on-prism 9
6.6 Test method E — Plain bearing-on-shaft 9
6.7 Test method F— Linear guidance system 10

7 Test specimens **11**
7.1 Data required 11
7.2 Polymer-based plain bearing materials 11
7.3 Materials of mating component 11
7.4 Dimensions of test specimens 12
7.4.1 General 12
7.4.2 Disc 12
7.4.3 Ring 12
7.4.4 Pin 12
7.4.5 Block 12
7.4.6 Sphere 13
7.4.7 Prism 13
7.4.8 Plain bearing 15
7.4.9 Shaft 15
7.4.10 Sleeve 15
7.4.11 Plate 16
7.4.12 Slider 16
7.5 Preparation of the test specimens 17

8 Test methods and test equipment **17**
8.1 General 17
8.2 Test method A — Pin-on-disc 18
8.3 Test method B — Block-on-ring 18
8.4 Test method C — Rotation under thrust load 19
8.4.1 General 19
8.4.2 Test method C1 19
8.4.3 Test method C2 19
8.5 Test method D — Sphere-on-prism 19
8.6 Test method E — Plain bearing-on-shaft 20
8.6.1 General 20
8.6.2 Test method E1 20
8.6.3 Test method E2 20
8.6.4 Test method E3 20
8.7 Test method F— Linear guidance system 20

9 Lubrication **20**
9.1 General 20
9.2 Dry (dr) 21
9.3 Grease (gr) 21
9.4 Oil (oi) 21
9.5 Solid lubricant (so) 21
10 Designation **21**
11 Test conditions **21**
11.1 Environmental conditions 21
11.2 Mounting of the test specimens 22
11.3 Test variables 22
12 Test procedure **24**
12.1 Running-in 24
12.2 Carrying out the tests 24
13 Test report **24**
13.1 General 24
13.2 Test results 24
Annex A (informative) **Test report** **26**
Bibliography **28**