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BSI Standards Publication

Petroleum products and lubricants — Determination of rust-prevention characteristics of lubricating greases

Part 2: Method with water wash-out

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National foreword

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Part 2: Method with water wash-out

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Partie 2: Méthode avec lavage à l'eau

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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).

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 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*.

This second edition cancels and replaces the first edition (ISO/TS 11007-2:2021) which has been technically revised.

The main changes are as follows:

— normative references have been updated;

— 6.2 has been updated.

A list of all parts in the ISO 11007 series can be found on the ISO website.

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.

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Introduction

ISO 11007-1 specifies a method for the evaluation of the corrosion protection properties of lubricating grease in the presence of non-flowing water; the test bearing is immersed partially in the test fluid.

In some industries (e.g. wet sections of paper mills, roll neck bearings of rolling mills) the bearings are submitted to the flow of water, rolling emulsions, paper treatment liquors, etc. In case of seal damage of the bearings, the corrosion inhibitors present in the grease may be potentially washed out, hence impairing the corrosion protection properties.

This document describes a procedure using the flow of test fluid (wash-out) instead of the non-flow conditions described in ISO 11007-1.

This test method is commonly known as Emcor (Emulsion corrosion) test in the industry.

A rolling bearing grease may be not suitable to lubricate plain bearings or gears.

The precision of the method described in this document has not yet been determined by an interlaboratory study.

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TECHNICAL SPECIFICATION **ISO/TS 11007-2:2023**

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WARNING — The use of this document can involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of users of this document to take appropriate measures to ensure the safety and health of personnel prior to the application of the document, and to determine the applicability of any other restrictions for this purpose.

1 Scope

This document specifies a method for the determination of the rust prevention characteristics of lubricating grease in the presence of a flow of an aqueous test fluid.

This test method is used to assess the ability of a grease to prevent corrosion in rolling bearings operated in presence of water, synthetic sea water or any industrial aqueous pollutant, under wash out conditions.

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 648, *Laboratory glassware — Single-volume pipettes*

ISO 1998-1, *Petroleum industry — Terminology — Part 1: Raw materials and products*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 3838, *Crude petroleum and liquid or solid petroleum products — Determination of density or relative density — Capillary-stoppered pyknometer and graduated bicapillary pyknometer methods*

ISO 7120, *Petroleum products and lubricants — Petroleum oils and other fluids — Determination of rust-preventing characteristics in the presence of water*

ISO 23572, *Petroleum products — Lubricating greases — Sampling of greases*

DIN 630, *Rolling bearings - Self aligning ball bearings - Double row with cylindrical or tapered bore*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1998-1 and the following apply.

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/

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