



ISO 8068

Lubricants, industrial oils and related products (class L) — Family T (Turbines) — Specifications for lubricating oils for turbines

Lubrifiants, huiles industrielles et produits connexes (classe L) — Famille T (Turbines) — Spécifications pour les huiles lubrifiantes pour turbines

**Third edition
2024-04**



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

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

This is a preview of ISO 8068:2024. [Click here to purchase the full version from the ANSI store.](#)

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	3
4 Sampling	3
5 Requirements for turbine oils	4
6 Specific environmental requirements for THCH and THCE grades	4
6.1 General.....	4
6.2 Biodegradability.....	5
6.3 Acute daphnia or copepods toxicity.....	6
7 Specification tables	6
7.1 General.....	6
7.2 Specification for TSA and TGA turbine oils.....	6
7.3 Specification for TSE and TGE turbine oils.....	6
7.4 Specification for TGB and TGSB turbine oils.....	6
7.5 Specification for TGF and TGSE turbine oils.....	6
7.6 Specification for THA and THE turbine oils.....	6
7.7 Specification for TGCH turbine oils.....	6
7.8 Specification for TGCH (EP) turbine oils.....	7
7.9 Specification for TGCE turbine oils.....	7
7.10 Specification for THCH turbine oils.....	7
7.11 Specification for THCE turbine oils.....	7
7.12 Specification for TSD and TGD turbine oils.....	7
Bibliography	19

This is a preview of ISO 8068:2024. [Click here to purchase the full version from the ANSI store.](#)

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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*, Subcommittee SC 4, *Classifications and specifications*.

This third edition cancels and replaces the second edition (ISO 8068:2006), which has been technically revised. It also incorporates the Amendment ISO 8068:2006/Amd 1:2019.

The main changes are as follows:

- updating of the environmental requirements for environmentally acceptable products;
- introduction of steam demulsibility for steam and combined cycle single shaft turbine grades;
- precision with respect to the stage of the filterability tests, wet and dry;
- addition of new viscosity grades for TGCH and THCH categories;
- addition of an EP category for TGCH.

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.

This is a preview of ISO 8068:2024. [Click here to purchase the full version from the ANSI store.](#)

New requirements for steam and gas turbine lubricants have arisen from technological changes including the increased efficiency of turbines, more severe operating conditions (cycling, peaking duty) and the increased use of alternative fuels. In addition, the simultaneous operation of gas and steam turbines with the same lubrication circuit means that lubricants are expected to satisfy the requirements for both steam and gas turbine lubrication.

The growing concern over environmental protection has led to the use of lubricants that show minimum toxicity towards flora and fauna. Lubricants used in hydraulic power plants, showing risks of leakage either on surface or ground water, are of particular concern. Therefore, minimum aquatic toxicity is required for these lubricants. In addition, biodegradability is desired to respect the ecosystem.