



BSI Standards Publication

**Petroleum products — Fuels (class F) —
Considerations for fuel suppliers and users
regarding marine fuel quality in view of the
implementation of maximum 0,50 % sulfur in 2020**

National foreword

This Published Document is the UK implementation of ISO/PAS 23263:2019.

The UK participation in its preparation was entrusted to Technical Committee PTI/2/-/4, Marine fuels.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 539 00173 0

ICS 75.160.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 September 2019.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

First edition
2019-09-17

Petroleum products — Fuel (class F) — Considerations for fuel suppliers and users regarding marine fuel quality in view of the implementation of maximum 0,50 % sulfur in 2020

Produits pétroliers — Combustibles (classe F) — Considérations à l'usage des fournisseurs de combustibles et des utilisateurs pour la qualité des combustibles pour la marine en vue de la mise en application de la teneur maximale en soufre de 0,50 % en 2020

Reference number
ISO 23263:2019(E)

© ISO 2019



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019. Published in Switzerland

All rights reserved. Unless otherwise specified, 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
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.7 Total sediment-aged.....	2
4 General considerations for 0,50 mass % S marine fuels	3
4.1 Overview.....	3
4.2 Sulfur content.....	3
4.3 Flash point.....	3
4.4 Application of ISO 8217:2017 to 0,50 mass % S fuels.....	3
5 Specific considerations for 0,50 mass % S marine fuels	3
5.1 Overview.....	3
5.2 Kinematic viscosity.....	4
5.3 Cold flow properties/Wax formation.....	4
5.4 Stability.....	4
5.5 Ignition characteristics.....	4
5.6 Catalyst fines.....	5
6 Compatibility	5
Annex A (informative) Fuel classification	6
Annex B (informative) Composition of marine fuels — ISO 8217:2017, Clause 5 and Annex B	7
Annex C (informative) Stability	9
Annex D (informative) Commingling of fuel	10
Bibliography	12

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 on 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 the following URL: 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*.

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.

Introduction

This document was developed in cooperation with ship owners, ship operators, classification societies, fuel testing services, engine designers, marine fuel suppliers, traders, fuel additive suppliers and the petroleum industry, in view of the implementation of maximum 0,50 mass % S in marine fuels in 2020 for operation outside Emission Control Areas (ECAs).

The increasing demands of environmental legislation are leading to a transition in the nature of marine fuels. This document takes into consideration the anticipated diverse range of characteristics of these marine fuels.

In view of the implementation date, it was considered that a revision of ISO 8217:2017 was not possible in the given timeframe. As such, the best option for the industry was the development of this document.

MARPOL Annex VI^[1] aims among other things to reduce SO_x emissions from fuel oil combustion on board ships engines. This can be achieved by using fuels with a lower sulfur content or by operating an approved equivalent alternative mean (e.g. exhaust gas scrubber). It is the fuel purchaser's and the user's responsibility to establish applicable requirements and to specify on that basis the corresponding maximum fuel sulfur content required to the supplier.

Petroleum products — Fuels (class F) — Considerations for fuel suppliers and users regarding marine fuel quality in view of the implementation of maximum 0,50 % sulfur in 2020

1 Scope

This document addresses quality considerations that apply to marine fuels in view of the implementation of maximum 0,50 mass % S in 2020 and the range of marine fuels that will be placed on the market in response to the international statutory requirements to reduce exhaust gas emissions. It defines general requirements that apply to all 0,50 mass % sulfur (S) fuels and confirms the applicability of ISO 8217 for those fuels.

It gives technical considerations which might apply to particular fuels for the following characteristics:

- kinematic viscosity;
- cold flow properties;
- stability;
- ignition characteristics;
- catalyst fines.

Additionally, it provides considerations on the compatibility between fuels and additional information on ISO 8217:2017, Annex B (see [Annexes B and D](#)).

NOTE 1 For the purposes of this document, 0,50 mass % S fuels refers to distillate and residual fuels with a sulfur content up to 0,50 mass %.

NOTE 2 For the purposes of this document, “mass %” and “volume %” are used to represent the mass and volume fractions respectively.

NOTE 3 This document can also be used in conjunction with earlier editions of ISO 8217 in the event an earlier edition is referenced in the commercial agreement between parties.

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 8217:2017, *Petroleum products — Fuels (class F) — Specifications of marine fuels*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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