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Petroleum products — Fuels (class F) classification —

Part 1: Categories of marine fuels

Produits pétroliers — Classification des combustibles (classe F) **iTeh STPartie 1: Catégories des combustibles pour la marine (standards.iteh.ai)**

ISO 8216-1:2010 https://standards.iteh.ai/catalog/standards/sist/89b1277e-ae2f-455a-8f71-4b7800994d1b/iso-8216-1-2010



Reference number ISO 8216-1:2010(E)

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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 8216-1 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 4, *Classifications and specifications*.

This fourth edition cancels and replaces the third edition (ISO 8216-1:2005), which has been technically revised. (standards.iteh.ai)

ISO 8216 consists of part 1, with the title *Petroleum products* — *Fuels* (*class F*) *classification* — *Part* 1: *Categories of marine fuels* together with the following parts under the general title *Petroleum products* — *Fuels* (*class F*) — *Classification*: ds.iteh.ai/catalog/standards/sist/89b1277e-ae2f-455a-8f71-4b7800994d1b/iso-8216-1-2010

- Part 2: Categories of gas turbine fuels for industrial and marine applications
- Part 3: Family L (Liquefied petroleum gases)
- Part 99: General

Introduction

The classification in this part of ISO 8216 was prepared in co-operation with ship owners, ship operators, shipping associations, national standards bodies, classification societies, fuel testing services, engine designers, marine fuel suppliers and the petroleum industry to meet the requirements for marine fuels supplied on a world-wide basis for consumption on board ships. Crude oil supplies, refining methods, ships' machinery, environmental legislation and local conditions vary considerably. These factors have led historically to a large number of categories of residual fuels being available internationally, even though locally or nationally there can be relatively few categories available.

The subcategories (M) for middle distillate fuels and (H) for heavy distillate fuels of ISO-F-D described in ISO 8216-99 have not been used in this part of ISO 8216 to avoid misunderstanding with M as used in 3.2 of this part of ISO 8216.

Specifications of marine fuel categories are given in ISO 8217. This fourth edition of this part of ISO 8216 reflects the following important changes to the rationalization of categories of both Distillate and Residual fuels:

- a) Changes to distillate fuel categories include the following.
- ISO-F-DMZ has been added with a minimum viscosity of 3,000 mm²/s at 40 °C, but is otherwise identical in its characteristics to the DMA.
- ISO-F-DMC of ISO 8217:2010, which is a blend of residuum and distillate, has been reclassified as a residual fuel. It has been given the new designation ISO-F-RMA 10, with a maximum viscosity of 10,00 mm²/s at 50 °C. https://standards.iteh.ai/catalog/standards/sist/89b1277e-ae2f-455a-8f71-
 - Changes to residual fuel categories include the following.8216-1-2010
- b)
- The previous ISO-F-RMA 30 and ISO-F-RMB 30 have been consolidated into a new ISO-F-RMB 30 principally reflecting the characteristics of the previous ISO-F-RMA 30.
- The previous ISO-F-RMF 180 has been deleted.
- ISO-F-RMG has been expanded to include ISO-F-RMG 180. ISO-F-RMG 500 and ISO-F-RMG 700.
- The previous ISO-F-RMH 380 and ISO-F-RMH 700 have been deleted.
- ISO-F-RMK has been expanded to include ISO-F-RMK 500.

Petroleum products — Fuels (class F) classification —

Part 1 **Categories of marine fuels**

1 Scope

This part of ISO 8216 establishes the detailed classification of marine fuels within class F (petroleum fuels). It is intended to be read in conjunction with ISO 8216-99.

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 ARD PREVIEW

ISO 8216-99:2002, Petroleum products -- Fuels (class F) -- Classification -- Part 99: General

ISO 8217:2010, Petroleum products — Fuels (class F) — Specifications of marine fuels

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4b7800994d1b/iso-8216-1-2010 Explanation of symbols used

3

The detailed classification of marine fuels into categories of products has been established by defining 3.1 the main applications and characteristics of the products from two families of fuels given in ISO 8216-99: "D" for distillate fuels and "R" for residual fuels.

3.2 In accordance with ISO 8216-99:2002, the products are designated by a symbol consisting of a group of letters which together constitute a code.

This code consists of the following:

- a) the initials "ISO":
- b) the letter "F" for the class of fuel;
- c) the category of fuel, consisting of three letters:
 - 1) the family letter, "D" for distillate or "R" for residual,
 - 2) "M", designating the application "Marine", for which the family of fuels is being used,
 - 3) a letter, e.g. "A", "B",..., "Z", which taken separately has no significance, but has meaning in relation to the particular properties in accordance with the product specification, ISO 8217:2010;
- d) a number that corresponds to the maximum kinematic viscosity of the residual fuel, in square millimetres per second (mm²/s) at 50 °C.

3.3 In this classification system, products, commonly referred to as grades, are designated in a standard format. A product or grade may be designated in the complete form or in abbreviated form.

EXAMPLE Complete form: ISO-F-RMG 380; Abbreviated form: RMG 380.

4 Detailed classification

The detailed classification of marine fuels is given in Table 1.

	Designation code ISO-F-		
Family Subdivision according to type of fuel	Category Subdivision according to application and properties	Maximum kinematic viscosity at 50 °C mm ² /s	Remarks
	DMX		Emergency purposes external to the machinery spaces
Distillate	DMA		General purpose, shall contain no residuum
			General purpose, shall contain no residuum
	DME	1 STANDA	General purpose, may contain a trace of residuum
Residual	RMA	(standar	ds.iteh.ai)
	RMB	30 150 8	16-1:2010
	RMDps://stand	ards.iteh.a 80 atalog/star	dards/sist/89b1277e-ae2f-455a-8f71-
	RME	467800994dT 180	b/iso-8216-1-2010
	RMG	180	
	RMG	380	General purpose residual fuels
	RMG	500	
	RMG	700	
	RMK	380	
	RMK	500	
	RMK	700	

Table 1 — Classification of marine fuels

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