

# International Standard



# 8216/1

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

## Petroleum products — Fuels (class F) — Classification — Part 1 : Categories of marine fuels

*Produits pétroliers — Combustibles (classe F) — Classification — Partie 1 : Catégories des combustibles marine*

First edition — 1986-06-15

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[ISO 8216-1:1986](https://standards.iteh.ai/catalog/standards/sist/023351b6-3cdd-4cb9-b85a-27262cccc576/iso-8216-1-1986)  
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UDC 665.75 : 629.12

Ref. No. ISO 8216/1-1986 (E)

Descriptors : petroleum products, fuels, marine fuels, classification.

Price based on 2 pages

ISO 8216/1-1986 (E)

## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8216/1 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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# Petroleum products — Fuels (class F) — Classification — Part 1 : Categories of marine fuels

## 0 Introduction

This classification was prepared in co-operation with the marine and petroleum industries to meet requirements for marine fuels supplied on a world-wide basis for consumption on board ships. Crude oil supplies, refining methods, ships' machinery and local conditions vary considerably: this has led historically to a large number of categories of residual fuels being available internationally, even though locally or nationally there may be relatively few categories. Consequently it has not been possible during the preparation of this classification to find sufficient common characteristics in order to limit the number of categories. Several of the residual fuel categories are unique in origin to one country or area but are nevertheless included because of their importance in the international marine fuel market.

## 1 Scope and field of application

This part of ISO 8216 establishes the detailed classification of marine fuels within Class F (Petroleum fuels). It should be read in conjunction with ISO 8216/0.

All fuels for marine applications may be used for many similar but differing purposes in ships. Many marine fuels, being based on crude oil residue, defy specific definition but nevertheless may be categorized within the scope of this part of ISO 8216.

This part of ISO 8216 does not imply the availability of all the categories of fuel at all ports.

## 2 References

ISO 8216/0, *Petroleum products — Fuels (Class F) — Classification — Part 0: General*.<sup>1)</sup>

ISO 8217, *Petroleum products — Fuels (Class F) — Specifications of marine fuels*.

## 3 Explanation of symbols used

**3.1** The detailed classification of marine fuels in categories of products has been established by defining the main applications and characteristics of the products from two families of products (D and R) defined in the general classification (D for distillate fuels or mainly distillate fuels and R for residual fuels).

**3.2** In accordance with ISO 8216/0, the products are designated by a symbol consisting of a group of letters, which together constitute a code.

This code consists of

- the initials ISO;
- the letter F (for the class fuels);
- the category of fuel, consisting of 3 letters, the first letter of this category being always the family letter (D for distillate, R for residual fuel). The second letter, M, designates the application "Marine" for which the family of fuel is to be used. The third letter, X, A, B, C, ..., L, taken separately, has no significance and has only a meaning in relation to the particular properties in the product specifications (ISO 8217);
- the number, which corresponds to the maximum kinematic viscosity, in millimetres squared per second<sup>2)</sup>, at 100 °C, for the category of product within the family of residual fuels.

**3.3** In this classification system, products are designated in a uniform manner. For example a product may be designated in the complete form, e.g. ISO—F—RMA 10 or in the abbreviated form, e.g. —F—RMA 10.

1) At present at the stage of draft.

2) 1 mm<sup>2</sup>/s = 1 cSt

4 Detailed classification of marine fuels

Family: Subdivision according to the type of fuel	Designation symbol ISO-F		Remarks
	Category: subdivision according to application and properties	Maximum viscosity	
Distillate fuel	DMX		Emergency purposes external to the main machinery spaces
	DMA		General purpose, shall contain no residuum
	DMB		General purpose, may contain a trace of residuum
	DMC		General purpose, may contain some residuum
Residual fuel	RMA	10	Maximum limit for density specified in ISO 8217
	RMB	10	
	RMC	10	
	RMD	15	
	RME	25	
	RMF	25	
	RMG	35	
	RMH	35	
	RMH	45	No density limit
	RMH	55	
	RMK	35	
	RML	35	
	RMK	45	
	RML	45	
RML	55		

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