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# International Standard



# 8681

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

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## **Petroleum products and lubricants — Method of classification — Definition of classes**

*Produits pétroliers et lubrifiants — Système de classification — Définition des classes de produits*

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**Descriptors :** petroleum products, classification.

## 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 8681 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 and lubricants — Method of classification — Definition of classes

## 1 Scope and field of application

This International Standard

- establishes the general classification system which applies to petroleum products, lubricants and related products;
- defines the classes of petroleum products, lubricants and related products together with their designation.

The rules of this classification system to apply to each class of product concerned will be specified in the relevant International Standard.

## 2 References

ISO 6743/0, *Lubricants, industrial oils and related products (class L) — Classification — Part 0: General*.

ISO 8216/0, *Petroleum products — Fuels (class F) — Classification — Part 0: General*.

## 3 General system of classification — Explanation of symbols used

**3.1** As far as possible, the criterion selected for the establishment of a classification should be the field of application. This criterion was adopted for lubricants (see ISO 6743/0). In certain circumstances, this criterion may not be appropriate; in such cases, a classification may be based on the type of product. This criterion was adopted for the fuels, which were

classified firstly by type and secondly by end use (see ISO 8216/0).

**3.2** The principle of this classification is based on assigning a prefix letter which characterizes the main classes of petroleum products.

In this classification system, products are designated in a uniform manner. The complete designation consists of

- the initials ISO;
- the class of the petroleum product or related product, designated by a letter (see the table in clause 4). This prefix letter shall be clearly separated from the other symbols;
- the category, designated by a group of letters (1 to 4), the first letter of which always identifies the family. Any following letters taken separately may or may not have a significance of their own but will be defined, in each case, in the International Standard giving the detailed classification of the family or category concerned;
- numbers, which may be added to complete the designation. Their significance will be defined in the relevant International Standard.

The code shall be presented in the following general form :

ISO — CLASS — CATEGORY — NUMBERS (if any)

or in the abbreviated form :

CLASS — CATEGORY — NUMBERS (if any).

3.3 Examples derived from particular classifications are given below :

Example 1 :

ISO

CLASS  
L

Lubricants

CATEGORY  
G

Slideways  
G = family of  
lubricants for  
slideways

NUMBER  
68

ISO viscosity  
grade

Example 2 :

ISO

CLASS  
L

Lubricants

CATEGORY  
HL

Refined mineral  
oils with improved  
anti-rust and  
anti-oxidation  
properties  
H = family of  
lubricants for  
hydraulic  
systems

NUMBER  
32

ISO viscosity  
grade

Example 3 :

ISO

CLASS  
F

Fuels

CATEGORY  
DST

Low flash point  
petroleum distillate  
gas-oil type  
D = family of  
distillate  
fuels

NUMBER  
2

Grade  
designation

Example 4 :

ISO

CLASS  
F

Fuels

CATEGORY  
RMB

Residual  
marine fuel-oil  
R = family of  
residual  
fuel-oils

NUMBER  
10

Maximum  
viscosity  
(in mm<sup>2</sup>/s) (cSt)  
at 100 °C

#### 4 General classification of petroleum products and related products

Class	Designation
F	Fuels
S	Solvents and raw materials for the chemical industry
L	Lubricants, industrial oils and related products
W	Waxes
B	Bitumen

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