

# Lubricants, industrial oils and related products (class L) — Classification —

## Part 99: General

ICS 75.100

## National foreword

This British Standard reproduces verbatim ISO 6743-99:2002 and implements it as the UK national standard. It supersedes BS 6413-0:1983 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/7, Lubricants and process fluids, which has the responsibility to:

- aid enquirers to understand the text;
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This British Standard, having been prepared under the direction of the Materials and Chemicals Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 20 December 2002

### Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii and iii, a blank page, pages 1 to 3 and a back cover.

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products (class L) — Classification —**

Part 99:  
**General**

*Lubrifiants, huiles industrielles et produits connexes (classe L) —  
Classification —*

*Partie 99: Généralités*



Reference number  
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## Foreword

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International Standard ISO 6743-99 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 4, *Classifications and specifications*.

This first edition cancels and replaces ISO 6743-0:1981, which has been technically revised.

ISO 6743 consists of the following parts, under the general title *Lubricants, industrial oils and related products (class L) — Classification*:

- Part 1: Family A (Total loss systems)
- Part 2: Family F (Spindle bearings, bearings and associated clutches)
- Part 3: Family D (Compressors)
- Part 4: Family H (Hydraulic systems)
- Part 5: Family T (Turbines)
- Part 6: Family C (Gears)
- Part 7: Family M (Metalworking)
- Part 8: Family R (Temporary protection against corrosion)
- Part 9: Family X (Greases)
- Part 10: Family Y (Miscellaneous)
- Part 11: Family P (Pneumatic tools)
- Part 12: Family Q (Heat transfer fluids)
- Part 13: Family G (Slideways)
- Part 14: Family U (Heat treatment)
- Part 15: Family E (Internal combustion engine oils)
- Part 99: General



# Lubricants, industrial oils and related products (class L) — Classification —

## Part 99: General

### 1 Scope

This part of ISO 6743 establishes a general system of classification, which applies to lubricants, industrial oils and related products, designated by the prefix letter “L”.

Within class L, 18 families of products are defined, according to the application areas of each, so as to cover, as much as possible, all the applications where lubricants, industrial oils and related products are used.

The detailed classification of each family is given in other parts of ISO 6743.

The classification only applies to new products.

### 2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 6743. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this part of ISO 6743 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3448:1992, *Industrial liquid lubricants — ISO viscosity classification*

### 3 Explanation of symbols

**3.1** The principle of the detailed classification of a family is based on the definition of a given number of categories of products needed for the main applications in which the said family is used. Table 1 gives the list of the 18 families defined for class L.

**3.2** Each category is designated by a group of letters, which together constitute a code.

NOTE The first letter of this code identifies the family of the product considered, but the following letters, taken separately, have no significant meaning.

The designation of each product can be completed, for example, by the addition of the viscosity class in accordance with ISO 3448 for liquid lubricants or to the NLGI<sup>1)</sup> class of penetration for the greases.

**3.3** In the present system of classification, the designation of the products is carried out in a uniform way. For example, a particular product can be designated under its complete form, i.e. ISO-L-AN 32, or under its abbreviated form, i.e. L-AN 32, the number designating, in accordance with ISO 3448, the viscosity class.

**Table 1 — Classification of lubricants, industrial oils and related products — Subdivision into families according to application**

Code letter related to family	Application	Reference to the part giving the detailed classification
A	Total loss systems	ISO 6743-1
B	Mould release	—
C	Gears	ISO 6743-6
D	Compressors	ISO 6743-3
E	Internal combustion engine oils	ISO 6743-15
F	Spindle bearings, bearings and associated clutches	ISO 6743-2
G	Slideways	ISO 6743-13
H	Hydraulic systems	ISO 6743-4
M	Metalworking	ISO 6743-7
N	Electrical insulation	IEC 61039
P	Pneumatic tools	ISO 6743-11
Q	Heat transfer fluids	ISO 6743-12
R	Temporary protection against corrosion	ISO 6743-8
T	Turbines	ISO 6743-5
U	Heat treatment	ISO 6743-14
X	Greases	ISO 6743-9
Y	Miscellaneous	ISO 6743-10
Z	Cylinders of steam machines	—

1) NLGI: National Lubricating Grease Institute (USA). This Institute has classified the greases according to their consistency measured in the conditions defined by the depth of penetration of a normalized cone (this method of determination of the penetration is dealt with in ISO 2137). This classification is as follows:

NLGI class	Penetration on greases worked 60 strokes
000	445 to 475
00	400 to 430
0	355 to 385
1	310 to 340
2	265 to 295
3	220 to 250
4	175 to 205
5	130 to 160
6	85 to 115



## Bibliography

- [1] ISO 2137:1985, *Petroleum products — Lubricating grease and petrolatum — Determination of cone penetration*
- [2] ISO 6743 (all parts), *Lubricants, industrial oils and related products (class L) — Classification*
- [3] IEC 61039:1990, *General classification of insulating liquids*

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