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

**Part 13:
Family G (Slideways)**

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

Partie 13: Famille G (Glissières)



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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 3.

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 part of ISO 6743 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6743-13 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 4, *Classifications and specifications*.

This second edition cancels and replaces the first edition (ISO 6743-13:1989) 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*

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

Part 13: Family G (Slideways)

1 Scope

This part of ISO 6743 establishes the detailed classification of family G (lubricants for slideways). All the lubricants listed in this classification belong to class L (Lubricants, industrial oils and related products).

This part should be read in conjunction with ISO 6743-99 (see [2] in the bibliography).

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, any of these publications 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 used

3.1 The detailed classification of family G has been established by defining the categories of products required for the various applications of this family.

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

NOTE The first letter of the code (G) identifies the family of the product considered, but the second letter taken separately has no significance of its own.

The designation may be supplemented by a number denoting the viscosity grade of the lubricant in accordance with ISO 3448.

3.3 In the present classification system, products are designated in an uniform manner. For example, a particular product may be designated in a complete form, i.e. ISO-L-GA 150, or in an abbreviated form, i.e. L-GA 150.

4 Detailed classification

The detailed classification is shown in Table 1.

Table 1 — Classification of lubricants, industrial oils and related products (class L) — Family G (Slideways)

Code letter	General application	Particular application	More specific application	Product type and/or performance requirements	Symbol ISO-L	Typical applications	Remarks
G	Slideways	Lubrication	Lubrication of slideways systems in which both contacting surfaces are metallic	Refined mineral oil exhibiting improved properties of anti-wear, corrosion protection, tackiness, and anti-stick-slip	GA	Lubrication of machine-tool parts including plain slideways, nut-screw systems, ball nut-screw systems, plain bearings, in which anti-stick-slip and friction-reduction properties are essential	GA type oils may be substituted by HG type oils ^a of the same viscosity grade, provided that requirements for anti-stick-slip properties are met.
			Lubrication of slideways systems in which one of the two contacting surfaces is constituted by a non-metallic material (pigmented polymer, resin, etc.)	Refined mineral oil exhibiting improved properties of anti-wear, corrosion protection, tackiness, and anti-stick-slip and separation of aqueous fluids	GB	Lubrication of machine-tool parts including plain slideways with non-metallic material sensitive to pollution by aqueous cutting fluids, nut-screw systems, ball nut-screw systems, plain bearings, in which anti-stick-slip and friction-reduction properties are essential	The considered compatibility is between the non-metallic sliding material and the slideways lubricant, in the presence of aqueous coolants.
			Lubrication of slideways systems in which both contacting surfaces are metallic	Synthetic lubricants exhibiting improved properties of wear protection, corrosion protection, and preventing discontinuous or intermittent motion of the slider (stick-slip)	GS	Lubrication of machine-tool parts including plain slideways, nut-screw systems, ball nut-screw systems, plain bearings, in which anti-stick-slip, friction-reduction properties and coolant compatibility are essential	The considered compatibility is between the slideways lubricant and the aqueous coolant; the contamination of the coolant by the slideways lubricant has a minimum impact on the coolant performance (the slideways lubricant is either emulsified or solubilized).

^a See ISO 6743-4 ([1] in the bibliography).