
Road vehicles — Elastomeric cups and seals for cylinders for hydraulic braking systems using a non-petroleum base hydraulic brake fluid (Service temperature 120 °C max.)

Véhicules routiers — Coupelles et joints en caoutchouc pour cylindres de dispositifs de freinage hydrauliques utilisant un liquide de frein à base non pétrolière (Température maximale d'utilisation 120 °C)



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

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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 40421 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 2, *Braking and systems equipment*.

This third edition cancels and replaces the second edition (ISO 4928:1980), which has been technically revised.

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1 Scope

This International Standard specifies performance tests of brake cups and seals for hydraulic braking systems for road vehicles; it does not include requirements relating to chemical composition, tensile strength and elongation of the rubber compound. Disc brake seals are not covered by this International Standard.

This International Standard is applicable to moulded seals (cups or double-lipped type gland seals), 60 mm in diameter and smaller, compounded from high temperature-resistant rubber, for use in hydraulic actuating cylinders using road vehicle non-petroleum base hydraulic brake fluid conforming to the requirements of ISO 4925.

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.

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 188:1998, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1250, *Mineral solvents for paints — White spirits and related hydrocarbon solvents*

ISO 4925, *Road vehicles — Specification of non-petroleum-base brake fluids for hydraulic systems*

ISO 4926, *Road vehicles — Hydraulic braking systems — Non-petroleum base reference fluids*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

sloughing

release of carbon black on the surface of the rubber

3.2

scoring

formation of grooves in the rubber parallel to the direction of travel of the piston or seal

3.3

scuffing

visible erosion of the outer surface of the rubber