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Third edition
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Rubber, vulcanized or thermoplastic — Determination of tendency to adhere to and corrode metals

*Caoutchouc, vulcanisé ou thermoplastique — Détermination de la
tendance à adhérer aux métaux et à les corroder*



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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 6505 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This third edition cancels and replaces the second edition (ISO 6505:1997), which has been extended to include a specification for a "wet" atmosphere and to cover the testing of O-rings.

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Introduction

In assemblies which include both metallic and rubber components, it is essential to avoid unintentional adhesion of rubber to metal, and corrosion of the metal by the rubber. Adhesion occurs only where there is direct contact between the metal and the rubber, but corrosion may also arise, within a closed system, on metal components remote from the rubber, such corrosion being due to volatile materials emanating from the rubber.

Since some metals corrode more readily than others, it is not possible to specify optimum test conditions for assessing the resistance to corrosion of all metals and alloys. Furthermore, the ranking of a metal's susceptibility to corrosion will depend upon the environment in which it is exposed to the rubber, e.g. in the presence of high humidity the effects on steel, in particular, can be severe.