

BS ISO 12493:2011



BSI Standards Publication

Rubber, vulcanized — Determination of stress in tension upon heating

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National foreword

This British Standard is the UK implementation of ISO 12493:2011.

The UK participation in its preparation was entrusted to Technical Committee PRI/22, Physical testing of rubber.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Rubber, vulcanized — Determination of stress in tension upon heating

*Caoutchouc vulcanisé — Détermination de la contrainte en traction
lors du chauffage*



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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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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 12493 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

Introduction

Vulcanized rubber held under a constant stress will contract as the test temperature is raised, while a test piece held under a constant strain will develop an increased stress. These are features of the Gough-Joule effect in rubber and, unless they are taken into account at the design stage, any resulting changes in forces and dimensions can affect the performance of some products, such as rotary seals, used at high temperatures and high strains (see Reference [1] in the Bibliography).

This International Standard describes a test method for the determination of the change in tensile stress that results from an increase in test temperature.