



Rubber, vulcanized — Classification — Rubber materials

Caoutchouc vulcanisé — Classification — Matériaux caoutchouc

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ISO/TR 8461 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

The reasons which led to the decision to publish this document in the form of a technical report type 2 are explained in the Introduction.

0 Introduction

Work on the classification of vulcanized rubber was carried out by Working Group 8 of Technical Committee ISO/TC 45, *Rubber and rubber products*, over many years. This resulted in the circulation in 1980 of ISO/DIS 4632, *Rubber, vulcanized — Classification system*. This large document covered both the classification system and an extensive number of tables of rubber materials.

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The comments on DIS 4632 were examined by WG 8 at its 1980 meeting in Dubrovnik. The comment that the document was too complicated for use by industry was accepted and it was resolved by TC 45 that ISO/DIS 4632 be divided into two parts

Part 1: Description of the classification system.

Part 2: Rubber materials.

ISO 4632/1 was published in 1982.

It was agreed that the second part should be issued as a type 2 Technical Report, (TC 45 Resolution 1293) and Working Group 8/TG 2 was formed for the purpose of examining the text of this report. The amended draft was circulated in 1981 and the comments discussed at the 1981 meeting in Boston. Following extensive discussion, many of the comments, including some of those accompanying the United Kingdom disapproval, were taken into account. As a result it was agreed that the second part, as amended by the Task Group and duly edited be submitted to ISO Central Secretariat for issue as a Technical Report. The amendments included a reconsideration by the Czechoslovak, Swedish, United Kingdom and USA national bodies of the standard vulcanizates submitted by them in the light of comments received.

The reasons for publication as a Technical Report are as follows:

- a) the list of rubber materials is complex and extensive. It has already been simplified and it is hoped that during the next 3 years further steps can be taken to eliminate little used grades and combine grades having similar properties;
- b) table 1 contains materials submitted by Czechoslovakia, Sweden and USA only. It is necessary to ensure that the list of materials represents those required in all national standards;
- c) table 1 does not include materials described in documents under the jurisdiction of ISO/TC 45. Consequently WG 8/TG 2 will seek out such materials and solicit further national rubber materials to be included in the proper format for the intended transformation of ISO/TR 8461 into ISO 4632/2.

1 Scope and field of application

This Technical Report contains the list of properties of rubber materials submitted by member bodies of ISO/TC 45. They are classified and designated by the methods described in ISO 4632/1.

NOTE — The tests employed in this system have been chosen for their reproducibility and ability to control the properties of elastomeric materials. They are not intended to simulate service tests which, because of variability in test conditions, may be unsatisfactory for control purposes. It is recommended that the selection of a rubber material for a given application should be discussed between the user and the supplier so that all relevant operating factors may be considered.

2 References

ISO 1433, *Rubber, vulcanized — Preferred gradation of properties.*

ISO 1629, *Rubbers and latices — Nomenclature.*

ISO 4632/1, *Rubber, vulcanized — Classification — Part 1: Description of the classification system.*

3 Outline

3.1 Sources and classification

3.1.1 The properties of certain commercially available solid vulcanized rubber materials based upon various national standards are listed in table 1. These materials are intended to cover the majority of applications. The sources of the standards are indicated in table 1 under the following code:

CS Czechoslovakia

SE Sweden

US United States of America

3.1.2 The classification system, methods of test, test conditions and properties to be tested are specified in ISO 4632/1.