GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

ICS 83.060
G 40

GB/T 528-2009 / ISO 37:2005

Replacing GB/T 528-1998

Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties

(ISO 37:2005, IDT)

Issued on: April 24, 2009 **Implemented on: December 1, 2009**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China;

Standardization Administration of the People's Republic of China.

Table of Contents

Foreword 3

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Principle 9

5 General 9

6 Test pieces 10

7 Apparatus 11

8 Number of test pieces 13

9 Preparation of test pieces 13

10 Conditioning of sample and test pieces 14

11 Marking of dumb-bell test pieces 15

12 Measurement of test pieces 15

13 Procedure 15

14 Temperature of test 17

15 Calculation of results 17

16 Expression of results 20

17 Test report 20

Annex A (informative) Preparation of type B ring test pieces 22

Annex B (informative) Precision 25

Annex C (informative) Analysis of UP data and dumb-bell shape 29

Bibliography 33

Foreword

This Standard identically adopts ISO 37:2005 “Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties” (English version) and its corrigendum ISO 37:2005/Cor. 1:2008.

This Standard replaces GB/T 528-1998 “Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties”.

This Standard is identical to the translation of ISO 37:2005 and ISO 37:2005/Cor. 1:2008.

For easy use, this Standard has the following editorial modifications:

a) “this International Standard” is modified into “this Standard”;

b) USE the decimal point “.” to replace the comma “,” used as decimal point;

c) DELETE the foreword of the International Standard;

d) For easy use, ADD two notes (note in Clause 1 and note 2 in 13.1).

Main differences between this Standard and GB/T 528-1998 are:

- ADD a new dumb-bell test piece named type 1A (6.1 of this edition);
- ADD Annex B, which is about the precision data of type 1, type 2 and type 1A test pieces (Annex B of this edition);
- ADD Annex C, which is about the analysis of UP data and dumb-bell shape (Annex C of this edition);
- DELETE the Annex B in 1998 edition.

This Standard was proposed by China Petroleum and Chemical Industry Association.

Annexes A and B of this Standard are normative annexes, Annex C is an informative annex.

This Standard shall be under the jurisdiction of Subcommittee on Rubber Physical and Chemical Test Methods of National Technical Committee on Rubber and Rubber Products of Standardization Administration of China (SAC/TC 35/SC 2).

Drafting organization of this Standard: Shenyang Research & Design Institute of Rubber Industry of Zhongxiang Group.

Participating drafting organizations of this Standard: Beijing Research & Design

Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties

Warning: Personnel using this Standard shall have practical experience in formal laboratory work. This Standard does not purport to address safety issues that may arise from the use of this Standard. It is the responsibility of the user to take appropriate safety and health measures and to ensure compliance with the relevant national regulations.

1 Scope

This Standard describes a method for the determination of the tensile stress-strain properties of vulcanized and thermoplastic rubbers.

This Standard applies to the determination of rubber, vulcanized or thermoplastic's properties, such as tensile strength, elongation at break, stress at a given elongation, elongation at a given stress, stress at yield and elongation at yield. The measurement of stress and strain at yield applies only to some thermoplastic rubbers and certain other compounds.

NOTE: If necessary, the determination of permanent deformation at break can be added.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 2941 Rubber - General procedures for preparing and conditioning test pieces for physical test methods (GB/T 2941-2006, ISO 23529:2004, IDT)

ISO 5893 Rubber and plastics test equipment - Tensile, flexural and compression types (constant rate of traverse) - Specification

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