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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7757-2009

Replacing GB/T 7757-1993

**Rubber, vulcanized or thermoplastic -- Determination of
compression stress-strain properties**

硫化橡胶或热塑性橡胶 压缩应力应变性能的测定

(English Translation)

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Foreword

This standard is equivalent to using ISO 7743:2007 (E) "vulcanized rubber or thermoplastic rubber --- compression stress strain properties" English Text version.

This standard replaces GB/T 7757-1993 "Rubber, vulcanized or thermoplastic - Determination of compression stress-strain properties." this standard is equivalent translation ISO 7743:2007 (E).

For ease of use, this standard also made the following editorial changes.

- a) "this International Standard" be replaced by "this standard";
- b) use a decimal point instead of a decimal comma " , " . " , " ;
- c) Remove the International Standards Preface;
- d) remove the reference.

This standard compared with the previous version, the main changes are as follows.

--- Increased for the product of Test Method C (1993 Edition Chapter 1, Chapter 1 of this edition).

--- Increased the provision of the sample (1993 Edition Chapter 1, Chapter 5, Chapter 6 Chapter 1 edition).

--- Increased demands on the test machine (1993 version 4.4, this version 5.4).

--- Increasing the normative Appendix B calibration (Excerpts Appendix B).

Appendix A of this standard is an informative annex, Annex B normative appendix.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee and rubber products and chemical physics at the Technical Committee rubber.

This standard Central Rubber Group in Shenyang Rubber Research and Design Institute is responsible for drafting.

1 Scope

This standard specifies the use of a standard sample, or a number of products - Determination of vulcanized rubber or thermoplastic rubber measured compressive stress-strain properties Setting Method.

This standard specifies three methods.

- Using standard samples and the metal plate (Method A) by the lubricant lubrication;
- Using standard samples and the sample and the metal plate are bonded together (Method B);
- Use part of the product or products and the metal plate by Lubricate (Method C).

The results of three methods are not the same. For lubricated by the sample, if it reaches sufficient lubrication, the test results only to rubber mold for the amount, regardless of the shape of the specimen. However, effective lubrication is often difficult to achieve, it should be the same test sample, the difference comparative test results to represent different lubrication conditions. For samples with a metal plate bonded together, the modulus of the rubber and the test results of the sample shape.

Sample shape a greater impact on the test results, therefore, the test results and the results by Lubricate the specimen obtained is not significant with. For the product, depending on the results of the test specimen geometry, but the product is mainly used in the test for comparison purposes, it is acceptable.

Note: For clearly defined shape of the product, such as O-rings, the test results may be associated with hardness values. However, with respect to a predetermined size and shape of the different samples Thus, the obtained results can not be extrapolated to other sizes and shapes of the test.

Appendix A gives the size and shape of the adhesive or lubricant guidelines impact on the results of the sample.

This method is not permanent deformation of the material used.

Appendix B gives a list of this type of calibration measurements.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2941 rubber physical test method for sample preparation and conditioning General

Procedure (GB/T 2941-2006, ISO 23529.

2004, IDT)

Geometrical product specifications ISO 4287 term surface structure contour method of surface structure, definitions and parameters ISO 5893 Rubber & Plastics stretching, flexing and compression testing machine (constant speed) technical performance ISO 18899 rubber test equipment calibration guide

3 Terms and definitions

The following terms and definitions apply to this standard.

GB/T 7757-2009/ISO 7743:2007