



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

GB/T 14837.3-2018

**Rubber and rubber products -- Determination of the composition of vulcanizates
and uncured compounds by thermogravimetry -- Part 3: Hydrocarbon rubbers,
halogenated rubbers and polysiloxane rubbers after extraction**

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Foreword

GB/T 14837 Rubber and Rubber Products - Determination of the Composition of Vulcanizates

and Uncured Compounds by Thermogravimetry consists of the following 3 parts:

--- Part 1: Butadiene, ethylene-propylene copolymer and terpolymer, isobutene-isoprene, isoprene and styrene-butadiene rubbers;

--- Part 2: Acrylonitrile-butadiene and halobutyl rubbers;

--- Part 3: Hydrocarbon rubbers, halogenated rubbers and polysiloxane rubbers after extraction.

This Part is Part 3 of GB/T 14837.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part uses translation method to equivalently adopt ISO 9924-3:2009 Rubber and Rubber

Products - Determination of the Composition of Vulcanizates and Uncured Compounds by Thermogravimetry - Part 3: Hydrocarbon Rubbers, halogenated Rubbers and Polysiloxane Rubbers after Extraction.

The Chinese documents that have a consistent correspondence with the international documents

referenced in this Part are as follows.

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

--- GB/T 3516-2006 Rubber - Determination of solvent extract (ISO 1407:1992, MOD).

This Part was proposed by China Petroleum and Chemical Industry Federation.

This Part shall be under the jurisdiction of General Test Methods Sub-Committee of National

Technical Committee on Rubber and Rubber Products Standardization Administration of China

(SAC/TC 35/SC 2).

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Rubber and Rubber Products

- Determination of the Composition

of Vulcanizates and Uncured Compounds

by Thermogravimetry - Part 3: Hydrocarbon Rubbers,

Halogenated Rubbers and Polysiloxane Rubbers after Extraction

WARNING: Persons using this Part should be familiar with normal laboratory practice.

This Part does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices to ensure compliance with any regulatory conditions.

CAUTION: Certain procedures specified in this Part may involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

This Part of GB/T 14837 specifies a thermogravimetric method for the determination of the main constituents of rubber compounds such as elastomer(s), carbon black and mineral filler.

This method establishes the "fingerprint" of the tested material. However, the result does not

always correspond exactly to the theoretical formula of the rubber.

This Part applies to raw or compounded rubbers, vulcanized and unvulcanized, after preliminary extraction.

This Part applies to rubbers with hydrocarbon backbones (NR, BR, SBR, IIR, EPDM, ACM, AEM, etc.) used alone or as mixtures. For the mixtures, the polymer content corresponds to the

total rubber, and it is not usually possible to identify individual polymers.

This Part applies to rubbers with halogenated hydrocarbon backbones (CR, CSM, FKM, CM,

CO, ECO, etc.) or containing nitrogen (NBR, HNBR, NBR/PVC, etc.), as well as to their mixtures. However, these rubbers often form carbonaceous residues which interfere with the

analysis. Application of an appropriate procedure minimizes these interferences.

This Part also applies to rubbers with a polysiloxane backbone (VMQ, etc.) and to rubbers not

listed above.

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