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

GB/T 8656-2018

Replacing GB/T 8656-1998

**Emulsion and solution -- Polymerized styrene-butadiene rubber
(SBR) -- Evaluation procedures**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 8656-1998 "Evaluation method for emulsion and solution polymerization type styrene-butadiene rubber (SBR)". versus

Compared with GB/T 8656-1998, the main technical changes are as follows.

- Revised the normative reference document (see Chapter 2, Chapter 2 of the.1998 edition);
- Increased requirements for compounding agents (see Table 2);
- Added an open mill mixing procedure for oil-filled test formulations (see 5.3.2.2);
- Added a single-stage mixing procedure for the method B laboratory internal mixer (see 5.3.3);
- Removed the method C small mixer mixing operation steps, and moved the contents of the initial mixing mixer and the final mixing mill
Into the text (see 5.3.4, 5.3.3 of the.1998 edition);
- Move the relevant content of the method A mixer in the precision into the appendix (see A.2);
- Removed the precision method C small mixer mixing (see 8.2 of.1998 edition);
- Increased the precision of the mixing mill and the mixing precision of the mixer obtained by the ITP in.2003 and the density obtained by the.2017 ITP.
The initial mixing of the mixer and the final mixing precision of the mill (see A.3, A.4);
- Removed the Precision Results User Guide and adjusted the description of the precision results to Appendix B (see Appendix B,.1998 Edition)

Appendix B, Appendix C).

This standard uses the redrafting method to modify the use of ISO 2322.2014
"styrene-butadiene rubber (SBR) emulsion and solution polymerization type

Evaluation method.

The technical differences between this standard and ISO 2322.2014 and their reasons are as follows.

---About the normative reference documents, this standard has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory References", and the specific adjustments are as follows.

- * Replace ISO 37 with GB/T 528 equivalent to the international standard;
- * Replace ISO 289-1 with GB/T 1232.1 equivalent to the international standard;
- * Replace ISO 23529 with GB/T 2941 equivalent to the international standard;
- * Replaced ISO 247.2006 with GB/T 4498.1 modified to adopt international standards;
- * Replace ISO 2393 with GB/T 6038 modified to international standards;
- * Replace ISO 3417 with GB/T 9869 equivalent to the international standard;
- * Replace ISO 1795 with GB/T 15340 equivalent to the international standard;
- * Replace ISO 248-1 with GB/T 24131.1 modified to adopt international standards;
- * Replace ISO 248-2 with GB/T 24131.2 modified to international standards;
- * Replace ISO 6502 with GB/T 25268 equivalent to the international standard;
- * Added ASTM D3185.

--- Increased the requirements for compounding agents to make the evaluation results comparable (see Table 2).

--- Increased the mixing ratio of the open mill and small mixer to facilitate the implementation of the standard (see Table 3).

--- Added an open mill mixing procedure for oil-filled test formulations to meet the needs of our users (see 5.3.2.2).

This standard has made the following editorial changes.

--- Modified the standard name;

--- Appendix A adds "the precision of the initial mixing of the mixer and the final mixing of the mill in.2017" (see A.4).

This standard was proposed by the China Petroleum and Chemical Industry Federation.

This standard is under the jurisdiction of the National Rubber and Rubber Products Standardization Technical Committee (SAC/TC35).

This standard was drafted. China Petroleum and Natural Gas Co., Ltd. Jilin Petrochemical Company, China National Petroleum Corporation Stone

Oil Chemical Research Institute, China National Petroleum Corporation Dushanzi Petrochemical Company, Shenhua Chemical Industry Co., Ltd., Yiwei Rubber

Research Institute Co., Ltd., China Petroleum and Chemical Corporation Qilu Branch, Yikai New Materials Co., Ltd., China National Petroleum Corporation

Lanzhou Petrochemical Company, China Petrochemical Co., Ltd. Beijing Yanshan Branch, Double Star Group Co., Ltd.

1 Scope

This standard specifies.

---Physical and chemical test methods for raw rubber;

---Standard materials used to evaluate the vulcanization characteristics of emulsion and solution polymerized styrene-butadiene rubber (SBR) (including oil-filled rubber),

Standard test formula, equipment and operating procedures.

This standard applies to the rubbers listed in Table 1. These rubbers are usually used in the form of vulcanized rubber.

Table 1 Styrene-butadiene raw rubber type

rubber

(oil-filled or not oil-filled)

Copolymer type

Styrene

Total content

(quality score) /%

Block content

(quality score) /%

A series

Milk poly SBR

Soluble SBR

Soluble SBR

Random

Random

Partial block

≤ 50

≤ 50

≤ 50

≤ 30

B series

Milk poly SBR

Soluble SBR

Soluble SBR

Random

Random

Partial block

> 50

> 50

≤ 50

> 30

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 528 Determination of tensile stress-strain properties of vulcanized rubber or thermoplastic rubber (GB/T 528-2009, ISO 37.2005,

IDT)

GB/T 1232.1 Determination of non-vulcanized rubber - Part 1 . Determination of Mooney viscosity

(GB/T 1232.1-2016, ISO 289-1..2014, IDT)

GB/T 2941 Rubber physical test method General procedure for preparation and adjustment of specimens (GB/T 2941-2006, ISO 23529.2004,