



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

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Rubber, unvulcanized - Determinations using a shearing-disc viscometer - Part 3: Determination of the Delta Mooney value for non-pigmented, oil-extended emulsion-polymerized SBR

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1 Scope

This document describes the method of determining the Delta Mooney value for non-pigmented, oil-extended emulsion-polymerized SBR.

This document is applicable to the determination of the Delta Mooney value for non-pigmented, oil-extended emulsion-polymerized SBR.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

ISO 289-1 Rubber, Unvulcanized - Determinations Using a Shear-disc Viscometer - Part 1:

Determination of Mooney Viscosity

ISO 1795 Rubber, Raw Nature and Raw Synthetic - Sampling and Further Preparative Procedures

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 Delta Mooney A values

NOTE: "massed specimen" is called "homogenized specimen" in ISO 1795. Likewise, "unmassed Description of indexes:

X---time, min;

Y---Mooney viscosity;

a The rotor starts to rotate.

Figure 1 -- Mooney Viscosity Curve Graph

5 Test Instrument The instrument shall comply with the stipulations of ISO 289-1.

6 Calibration The equipment shall be calibrated in accordance with ISO 289-1.

7 Specimen Preparation Ensure that there is no residual air in the unmassed specimen and the surface is smooth and flat, so as to prevent air from entering between the specimen and the rotor or mold cavity surface.

The specimen can be prepared by compacting it in a mold at $23 \pm 2^\circ\text{C}$ for 5 min; after taking it out, let it stand for 15 min to relax.

The massed (homogenized) samples shall be prepared in accordance with ISO 1795.

The specimens shall be prepared from the samples in accordance with ISO 289-1.

8 Test Temperature The test temperature is $100 \pm 0.5^\circ\text{C}$, which is the temperature of the closed mold cavity when the rotor of the closed mold cavity is running without load.

9 Test Procedures In accordance with the procedures described in ISO 289-1, carry out the test, using the large rotor. The pre-heating time is 1 min, and the test duration is 7 min or 15 min.

If the equipment cannot continuously record the Mooney viscosity value during the test, a curve graph needs to be drawn in accordance with the stipulations of ISO 289-1.

NOTE: the use of automatic recorders is highly recommended.