

Bundesanstalt für Materialforschung und -prüfung

Reference Material

BAM-E028

Compound for curemeter (MDR)

Values

property	Value [unit]	Range [unit]
M _L	2.5x dNm	0.10 dNm a)
ts ₁	0.5x min	0.06 min a)
ts ₂	0.6x min	0.07 min a)
tc ₅₀	1.3x min	0.14 min a)
tc ₉₀	2.6x min	0.25 min a)
M _H	21.4x dNm	1.87 dNm b)

The range was determined from: a) homogeneity studies (with 79 values)
b) stability studies based on 6-time steps (with 3 measurements each)
c) interlaboratory reproducibility (R) of an interlaboratory comparison test.

Validity of this material properties

The statements in this document concerning the properties of the described reference material are valid for six months from the date of shipment provided the reference material is stored at 5 °C in the original pressure seal bag.

Compound Sheet ID No. XXX

Date of Production at BAM: (month, year)

Date of Shipment from BAM: (month, year)

Material Description

This reference material is an unvulcanized rubber compound, available as a section of a compound sheet. The usability of the material is determined by the date of production stated in this document.

It is intended to represent characteristic properties of an elastomer compound for the manufacture of a vulcanized rubber. It may be used to review and check the results of a corresponding testing device, i.e. a curemeter or moving die rheometer for rubber.

Transport, Storage and Handling

The expected stability of the RM allows the material to be dispatched at ambient temperature. On receiving, it is to be stored at 5 °C in a delivered pressure seal bag.

Before withdrawing a subsample, the pack must have reached ambient temperature. Thereafter, the pack must be closed tightly and stored at 5 °C again in an original pressure seal bag.

The conditions for using the RM BAM-E028 are described in the introduction of the corresponding technical report (see below). In addition, the instructions of the manufacturer of the test device apply.

It is strongly recommended to handle and dispose of the reference material in accordance with the guidelines for materials legally in force at the site of end use and disposal.

Recommended Use

Using the curemeter (torsional rheometer), with biconical-die cavity, according to ISO 6502, part 3, the following measurement conditions have to be selected:

- frequency: 1.66 Hz
- amplitude: 0.5 °
- temperature: 177 °C
- duration of measurement: 15 min
- specimen weight: ca. 5 g
- separation between die and specimen by commonly used separation foil (PET)

Literature

Information on safe handling of the reference material can be found in the available safety data sheet.

A detailed technical report describing the production, characterization and the treatment of the analytical data for the RM BAM-E028 is available on request or can be downloaded from BAM website (<https://www.bam.de>).

Accepted as a BAM-RM on October 17, 2022

Dr. Silke Richter
Committee for Certification

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Project Coordinator

This Reference Material is offered by:

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