BAM
Bundesanstalt für Materialforschung und -prüfung

REFERENCE MATERIAL DOCUMENT

REFERENCE MATERIAL BAM-E030

Rubber Sliders (set of three) for friction measurements according to the requirements of EN 12697-49

Specification of the slider sets with numbers XX to yy, as determined for the complete sliders:

Hardness (apparent) according to ISO 48-4: xx Shore A
Measurement uncertainty: ± 3 Shore A

Specification of the elastomer batch of the sliders, as determined on a test plate:

Property	value	Standard uncertainties
Hardness according to ISO 48-4	x7 Shore A	± 3 Shore A
Rebound resilience according to ISO 4662	Xx %	± 3 %
Stress at 100 % elongation according to ISO 37	xx.1 MPa	± 1.5 MPa
Stress at 200 % elongation according to ISO 37	xx.1 MPa	± 2.0 MPa
Tensile strength according to ISO 37	xx.1 MPa	± 4.0 MPa
Elongation at break according to ISO 37	3x8 %	± 90 %

The listed values for measurement uncertainties have a confidence level of 95 % (coverage factor=2).
The uncertainty of the values is furthermore influenced by material-related deviations within a production batch.
For compliance with EN 12697-49 the data of the elastomer batch determined on a test plate are applicable.

End of Validity

The statements in this document concerning the properties of the described reference material are valid for four years from the date of production provided the reference material is stored cool (7 ± 3 °C), dry, protected from light and kept in a protective cover (the original resealable plastic bag) completely closed.

Date of Production at BAM: (month, year)

Material Description

EN 12697-49 describes a method for determining the polishing resistance and skid resistance of a surface. The friction of a surface is measured using three sliders attached to a rotating measuring head. First, the measuring head is accelerated so that the sliders move at a speed of 100 km/h. The measuring head is lowered onto the surface with a certain load. Each measured torque value results in the respective unitless coefficient of friction. Finally, the coefficient of friction at 60 km/h is corrected using the coefficient of friction of a reference surface to obtain the FAP value (also known as PWS value) of the tested surface.

Handling

The conditions for using the BAM-E030 are described in the introduction of the corresponding technical report (see below).
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.

Identification

Each slider is labelled indicating the producer (BAM), the month/year of shipment, FAP and identification number.

Specifications / Recommended Use

See EN 12697-49

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 data for the BAM-E030 is available on request or can be downloaded from BAM Webshop (www.webshop.bam.de).

Accepted as a BAM-RM on July 16, 2025

Bundesanstalt für Materialforschung und -prüfung (BAM)

Dr. Silke Richter
Committee for Certification

Dietmar Schulze
Project Coordinator
Division 7.5

This Reference Material is offered by:

Bundesanstalt für Materialforschung und –prüfung (BAM)

Unter den Eichen 87, D-12205 Berlin, Germany

P: +49 30 8104 3230
F: +49 30 8104 1707

E-Mail: crm-elastomer@bam.de
Internet: www.webshop.bam.de