

CRM BAM - PM - 122

Certified Reference Material (Porous Glass Beads II)

Method: Mercury Intrusion

High pressure range

CRM BAM-PM-122
Material: Porous glass beads II

Certified properties:

- A) Pressure-volume curve between 0.1 MPa and 400 MPa
- B) Diameter-volume curve between 3.7 nm and 14708 nm
- C) Pore volume at selected intrusion pressure points as well as values for pore width (see Table 1)

Table 1 Single values of certified properties

Property	Unit	$\bar{\bar{X}}$	s
Pore volume at 100 MPa	mm ³ ·g ⁻¹	919,7	16,8
Pore volume at 195 MPa	mm ³ ·g ⁻¹	922,5	17,5
Pore volume at 200 MPa	mm ³ ·g ⁻¹	922,6	17,5
Pore volume at 395 MPa	mm ³ ·g ⁻¹	924,4	17,2
Mean pore width d ₅₀	nm	139,0	3,7
Most frequent pore width d _{p,m}	nm	140,2	3,9

$\bar{\bar{X}}$ average of laboratory averages (certified value)

s standard deviation of laboratory averages

The number of laboratories (outlier free) participating in the interlaboratory tests was 24.

Table 2 Non-certified property

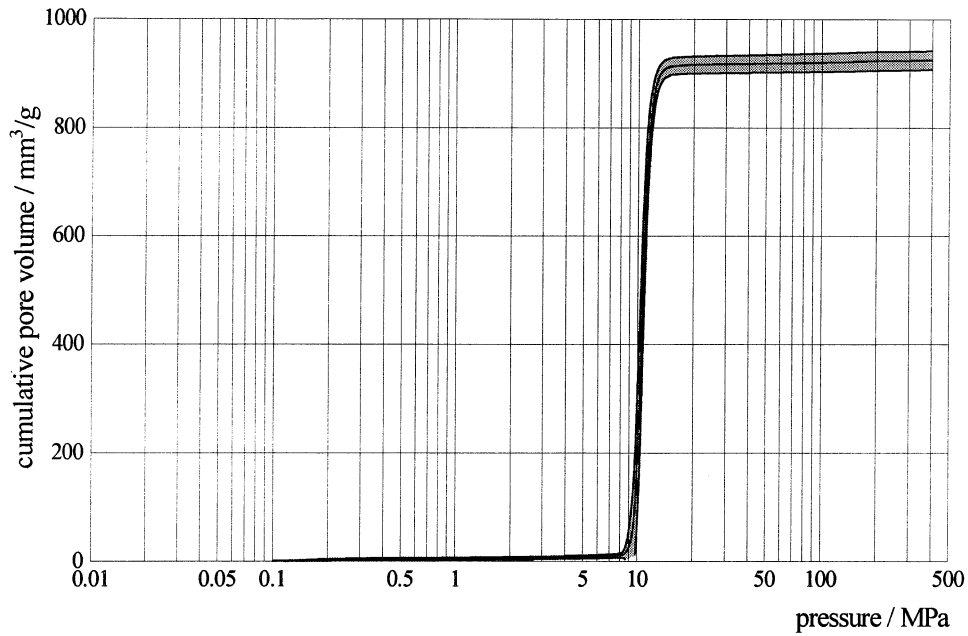
	Unit	Value
Specific surface area*	m ² ·g ⁻¹	26,6

* only as additional information, given without uncertainty, calculated according to

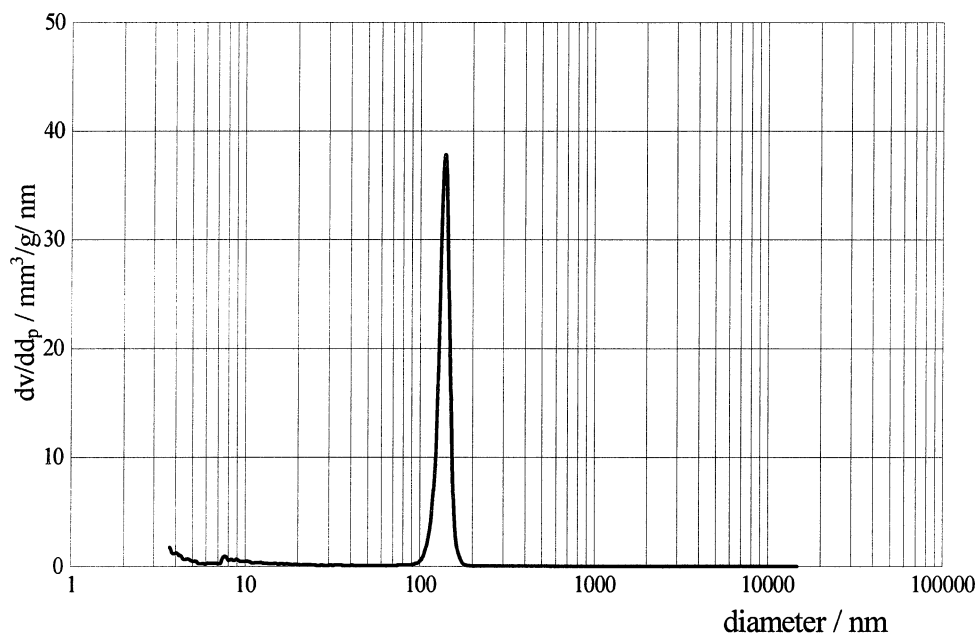
$A_{sp} = 4 \cdot V / d$ using the certified properties V_{200MPa} and d_{50}

Application

The reference material is intended for the calibration and checking of instruments for measurement of pressure / volume curve of solids.



Certified pressure/volume curve of CRM BAM-PM-122



Pore size distribution of CRM BAM-PM-122

Data evaluation

The pressure / volume curve must be extracted between 0.1 400 MPa.
 The complete pressure / volume curve had been certified. The certificate contains these data.

Method

DIN 66 133

Evaluation of interlaboratory test according to BAM / BCR Guidelines including 24 laboratories.

Information regarding the sample

Density

Thermal and phase analysis

Particle size distribution

Morphology

Available unit size

10 g

Price

see price list

May be obtained from:

Bundesanstalt für Materialforschung und -prüfung

Division I.1 Inorganic Chemical Analysis; Reference Materials

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