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Email: support@bs-partikel.de
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Certificate of Calibration

Catalog No.:
HS0030-20

Particle Size Standard

Lot No.: **HS402.161**

The lot of this particle size standard had been size-characterized during and after filling under highest accuracy. The determined mean particle size diameter x_V is traceable to the "Standard Meter" according to the National Institute of Standards and Technology (NIST).

Particle Sizing Instrument: Disc centrifuge DC20000, CPS Instruments Inc., Stuart - USA
Rotational speed: 20000 rpm

Particle Diameter (Mode): $x_V = 308\text{nm} \pm 10\text{nm}$ $x_N = 308\text{nm} \pm 10\text{nm}$

Wiesbaden, 24.3.2016

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Dr. Bernd Schied

Physical Data:

Standard Deviation: 9nm relative to x_V

Rel. Standard Dev. (C.V.): 3.0% relative to x_V

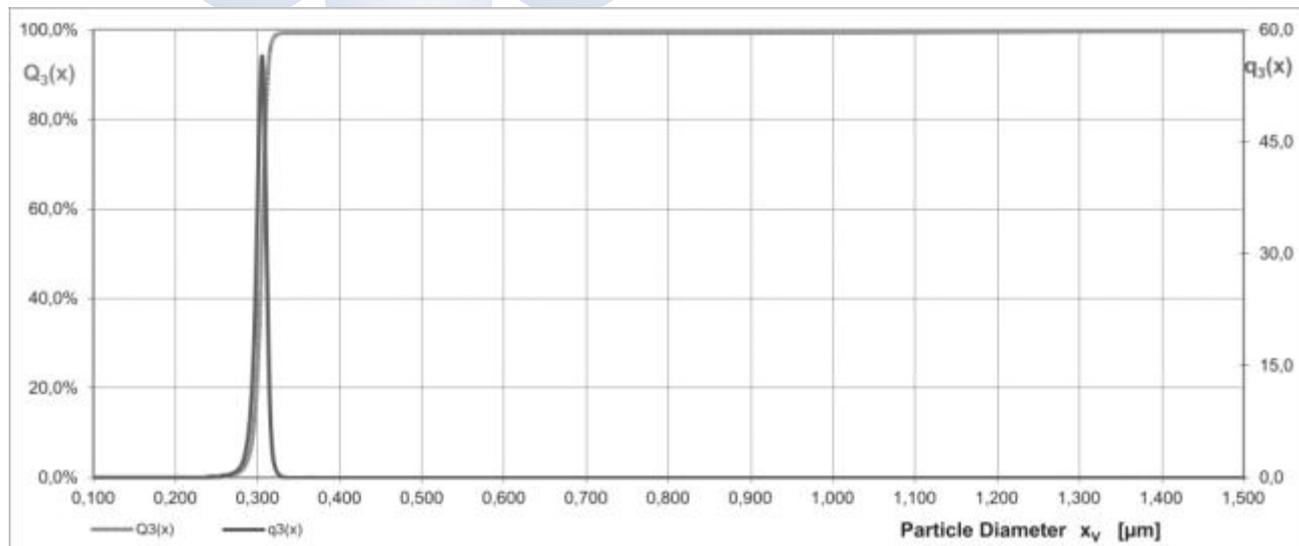
Particle Concentration: 2.0%

Polymer Density: 1.05 g/mL

Refractive Index: 1.59 (25°C, 589nm)

Chemical Composition: Aqueous suspension consisting of:

Polystyrene,
surfactants (<0.1%), preservatives (<0.05%)





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Application

Being able to apply the particle size standard properly the content of the bottle has to be prepared to a homogeneous suspension:

- Shake the bottle until no sediment is visible (approx. 20 seconds)
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 - Treat the closed bottle with an ultra sonic bath for about 30 seconds
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 - Depending on the sizing instrument:
 - Either drop the required quantity of the size standard into particle free water and homogenize or transfer the required quantity of the size standard directly into your instrument without dilution
- Recommendation: Dispose the first drop into waste*
- Shortly homogenize (i.e. by stirring with magnetic stir bar).
- - Start calibration measurement.

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Storage, Shelf Life

Shipping Date:



This particle size standard can be applied without any quality loss for 3 years from shipping date. Freezing, solar radiation, drying or any contamination can make this standard unusable for calibration purposes. Therefore please note the following advices.

- Keep the dropper-tipped vial sealed all the time.
- Do not touch the dropper-tip with fingers; do not clean it with towels or contact it with other chemicals.
- Recommended storage temperature is 4°C - 15°C; optimal temperature is 8°C; do not freeze!
- Particle size standards are reference substances.
Hence, store them definitely separated from other chemicals of daily use.