

## Multi-Size-Standard 1 - 10 µm

Lot No: **MS571.161**

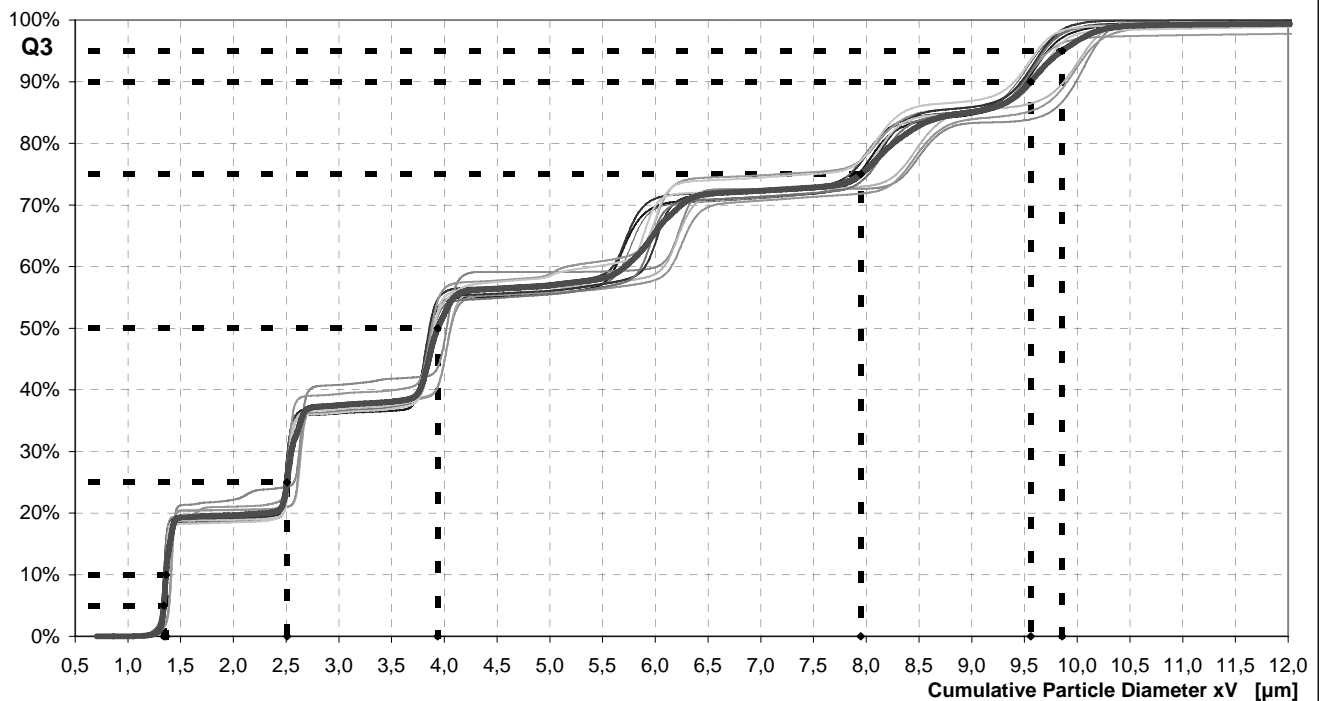
This product, supplied in a dropper-tipped bottle with a magnetic stir bar, consists of 9 single particle size standards in the size range of 1 - 10 µm. The cumulative, volume weighted particle size distribution of this stabilized mixture has been determined very accurately by measuring 11 representative samples of this lot.

Particle Sizing Instrument: Analytical Disc Centrifuge DC20000, CPS Instruments Inc., Stuart - USA  
Rotational Speed: 4000 rpm  
Instrument Calibration: With 3 external, NIST (Nat. Inst. of Standards and Technology) traceable calibration standards

d%	d5	d10	d25	d50	d75	d90	d95
<b>xV [µm]:</b>	<b>1,34</b>	<b>1,36</b>	<b>2,51</b>	<b>3,94</b>	<b>7,95</b>	<b>9,56</b>	<b>9,86</b>
Unsicherheit:	0,05	0,05	0,11	0,12	0,76	0,43	0,29

Wiesbaden, 7.7.2016

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Dr. Bernd Schied



The bold curve represents the averaged curve of 11 single measurements (thin curves). The dashed lines show the single d% values (d5, d10, d25, d50, d90, d95).

### Physical Data:

Particle Concentration:	2,0%	Polymer Density:	1.05 g/mL
Chemical Composition:	Aqueous Suspension consisting of:	Refractive Index:	1.59 (25°C, 589 nm)
	Polystyrene,		
	Surfactants (<0.1%), Preservatives (<0.05%)		

## Application

**Being able to apply this product properly the content of the bottle has to be prepared as a homogeneous suspension:**

1. Shake the dropper-tip bottle until no sediment is visible
2. Allow the dropper-tip bottle to stir at a magnetic stirrer for appr. 30 seconds
3. Put the dropper-tip bottle into an ultra sonic bath for appr. 5 minutes
4. Homogenise the content of the bottle with the magnetic stirrer for 1 minute again
5. Dispose the first drop and then - depending on the measurement system...
  - a) either drop the standard without any dilution into the measurement system directly or
  - b) apply cautious magnetic stirring to particle free water and drop the standard into simultaneously
6. Start measurement

## Storage, Shelf Life

Shipping Date:



**This particle standard can be applied without any quality loss for 2 years from shipping date. Freezing, solar radiation, drying or any contamination make this standard unusable for measurement 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!
- Multi-Size Standards are reference substances.  
Hence, store them definitely separated from other chemicals of daily use.