



Fluid for generating solid droplet aerosols

Description

Di-Ethyl-Hexyl-Sebacat (DEHS) is a colorless and odorless fluid which is insoluble in water. It is very good suited for generating solid aerosols. By atomising DEHS with aerosol generators, droplet aerosols arise. Their main particle size is in the area of the most penetrating particle size (MPPS, 0.2 – 0.3 μm).

You can download the safety data sheet by clicking the download button. Table: Evaporation time

Droplet diameter (μm)	Evaporation time at $T=293\text{ K}$ and $p=1013\text{ hPa}$		
	Water	DOP	DEHS
0.1	2 μs	12 min	84 min
0.3	73 μs	37 min	4 h
1.0	1 ms	8 h	57 h
3.0	7 ms	55 h	16 d
10.0	80 ms	23 d	160 d

DOP: Di-Octyl-Phthalat DEHS: Di-Ethyl-Hexyl-Sebacat

Benefits

- Long service time of the aerosol (although liquid)
- Vaporisation not until after hours
- Spheric particles (droplets)

Datasheet

<i>Parameter</i>	<i>Description</i>
Name	Di-Ethyl-Hexyl-Sebacat (DEHS)
Formula	C ₂₆ H ₅₀ O ₄
CAS-number	122-62-3
Molecular weight	426.68 g/mol
Form	Fluid
Color	Colorless
Smell	Odorless
Density	0.91 g/cm ³
Melting point	approx. -67 °C
Boiling point	> 250 °C
Flash point	> 210 °C
Vapor pressure	< 0.01 hPa (at 20 °C)
Dynamic viscosity	19 - 23 mPa • s
Solubility in water	< 0.0001 g/l (at 20 °C)
Refraction index	1.450 (at 20 °C)

Applications

- DEHS proven its ability for the aerosol production in particular for the acceptance and monitoring of clean room technology.
- Among the advantages of DEHS as aerosol material is the long life of the particles.
- DEHS evaporates after a long time without residue, see table.

Palas GmbH
Partikel- und Lasermesstechnik
Greschbachstrasse 3 b
76229 Karlsruhe
Germany

Managing Partner:
Dr.-Ing. Maximilian Weiß
Commercial Register:
register court: Mannheim
company registration number: HRB 103813
USt-Id: DE143585902



Contact: E-Mail: mail@palas.de Internet: www.palas.de Tel: +49 (0)721 96213-0 Fax: +49 (0)721 96213-33