DEHS

Di-Ethyl-Hexyl-Sebacat (DEHS) is a colorless and odorless fluid which is insoluble in water. It is very well suited for generating solid aerosols.

Operation principle

Generating solid droplet aerosols

By atomizing 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	Evaporation time at T=293 K and p=0.1013 hPa		
(μm)	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

Table 2: DEHS evapuration time

DOP: Di-Octyl-Phthalate

DEHS: Di-Ethyl-Hexyl-Sebacat

Benefits

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

DATASHEET

Name	Di-Ethyl-Hexyl-Sebacat (DEHS)
Formula	C26H50O4
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 (bei 20 °C)
Dynamic viscosity	19 – 23 mPa • s
Solubility in water	< 0,0001 g/l (bei 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.

Mehr Informationen:
https://www.palas.de/en/product/dehs