



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  $\mu\text{m}$ ).

You can download the safety data sheet by clicking the download button.

Table: Evaporation time

Droplet diameter ( $\mu\text{m}$ )	Evaporation time at T=293 K and p=0.1013 hPa		
	Water	DOP	DEHS
0.1	2 $\mu\text{s}$	12 min	84 min
0.3	73 $\mu\text{s}$	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 evaporation 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	C <sub>26</sub> H <sub>50</sub> O <sub>4</sub>
CAS-number	122-62-3
Molecular weight	426.68 g/mol
Form	Fluid
Color	Colorless
Smell	Odorless
Density	0.91 g/cm <sup>3</sup>
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.



Mehr Informationen:  
<https://www.palas.de/product/dehs>