

Technical Information

TI/N-CPN/IP Palatinol® DPHP-I
June 2025

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Petrochemicals Plasticizers



Palatinol® DPHP-I

(Stabilized with 0.1 % 1,1,3-Tris(2-methyl-4-hydroxy-5-tert-butylphenyl)butane antioxidant)

Palatinol® DPHP-I is a primary plasticizer for polyvinyl chloride resins and copolymers.

Chemical Nature

Bis(2-propylheptyl) phthalate

BASF Registered Name

Palatinol® DPHP-I

CAS No.

53306-54-0

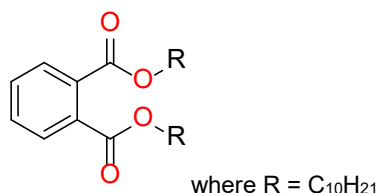
Average Molecular Weight

447

Formula

C₂₈H₄₆O₄

Molecular Structure



Product Specifications

	Value	Test Method
Specific gravity @ 25°/25 °C	0.957 - 0.965	ASTM D-4052
Ester content, % by weight (minimum)	99.5	ASTM D-3465
Acid Number, mg KOH/g (maximum)	0.07	ASTM D-1045
Water, % by weight (maximum)	0.1	ASTM E-1064
Color, Pt-Co Units (APHA, maximum)	25	ASTM D-5386
Suspended Matter	COLSFFM*	visual

*Clear Oily Liquid Substantially Free of Foreign Material

Typical Physical Properties

The following data were measured in the BASF Corp. laboratory. They do not represent any legally binding guarantee of properties for our sales product.

	Value
Pour point, °C	-48
Flash point (COC), °C	232
Odor	mild characteristic
Surface Tension, mN/m	30.6
Solution Temperature, °C	141
Plastisol Gelation Temperature, °C	146
Vapor Pressure @ 20 °C, mbar	< 0.01
Solubility @ 25 °C in water, mg/L	< 0.01
Refractive Index ⁿ D20	1.484

Viscosity & Density Data

Temperature (°C)	Dynamic viscosity (cP)	Density (g/cm ³)
-20	4,820	0.992
-10	1,530	0.984
0	573	0.977
10	246	0.969
20	119	0.962
40	37.3	0.948
60	15.6	0.933
80	8.0	0.919

Description

Palatinol® DPHP-I is a decyl phthalate produced from 2-propyl heptanol alcohol (2PH). When compared to plasticizers made from isodecanol alcohol, DPHP-I compares favorably in physical and performance characteristics.

Palatinol® DPHP-I is inhibited with 0.1 % 1,1,3-Tris(2-methyl-4-hydroxy-5-tert-butylphenyl)butane.

Applications

Palatinol® DPHP-I produces low fog artificial leather, preferably used in automotive applications. In wire and cable applications, the C₁₀ phthalates are suitable for UL 80 rated wire.

Safety

Based on toxicity studies, Palatinol® DPHP-I has a low order of toxicity and does not require special handling. Handle in accordance with good industrial hygiene and safety practices. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water and contact physician.

Avoid repeated or prolonged skin contact. Avoid breathing vapors by providing adequate ventilation.

Always refer to the Safety Data Sheet (SDS) for detailed information on safety.

Storage and Handling

Palatinol® DPHP-I can be stored for one year at temperatures below 40°C, if moisture is excluded.

Packaging

Palatinol® DPHP-I is available in bulk, tank trucks or rail cars.

Contact Information**Marketing**

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Note

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