

# VESTINOL<sup>®</sup> 9

**CAS-No:** 28553-12-0

**Appearance:** Clear, without any visible impurities

**Chemical name:** Di-iso-nonyl phthalate (DINP)

**Application:**

The advantageous properties of the plasticizer VESTINOL 9 (DINP) are apparent in every method of thermoplastics processing, and also in the processing of plastisols, as well as in the performance of the finished products.

This n-butene-based low-branched grade is known to give better cold flexibility and lower plastisol viscosity than DOP. The higher molecular weight of DINP also reduces plastisol thickening.

VESTINOL 9 (DINP) can be mixed with any other commercially available plasticizer and is fully compatible with PVC - even in highly plasticized formulations.

In summary - VESTINOL 9 (DINP) has a wide variety of beneficial properties, both during processing and in finished products, making this the plasticizer of choice for PVC applications.

**Specifications:**

Property	Value	Unit	Test method
Colour (APHA, Hazen)	max. 30	mg Pt/l	DIN ISO 6271 / ASTM D 1209
Dynamic viscosity, 20 °C	72 - 82	mPa s	DIN 53 015 / ASTM D 445
Density, 20 °C <sup>1)</sup>	0.972 - 0.977	g/ml	DIN 51 757 / ASTM D 4052
Refractive index, 20 °C	1.484 - 1.488	–	DIN 51 423/2 / ASTM D 1045
Acid number <sup>1)</sup>	max. 0.04	mg KOH/g	DIN EN ISO 2114 / ASTM D 1045
Ester content, GC <sup>2)</sup>	min. 99.6	% by mass	Degussa
Water content	max. 0.05	% by mass	DIN 51 777 / ASTM E 203

<sup>1)</sup> tested frequently, but not batchwise

<sup>2)</sup> complies with Process Capability Index cpk  $\geq$  1

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(Status: October 2008)

® = registered trade mark of Degussa



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## General data

Property (VESTINOL 9)	Value	Unit	Test method
Molar mass	418,6	–	–
Hydroxyl number	approx. 0.2	mg KOH/g	photometric
Saponification number	approx. 265	mg KOH/g	ASTM D 94
Pourpoint	approx. - 54	°C	ISO 3016
Volatility loss (2h/130 °C)	approx. 0,1	% by mass	BS 1995/1953
Flash point	approx. 200	°C	DIN EN 22 719
Ignition temperature	approx. 400	°C	DIN 51 794 / ASTM E 659
Specific heat, 20 °C	1.78	kJ/kg K	–
Heat of evaporation at b.p.	207	kJ/kg	–
Volume resistivity, 20 °C	1 * 10 <sup>12</sup>	Ohm x cm	DIN 53 482
Solution temperature <sup>3)</sup>	134	°C	DIN 53 408

<sup>3)</sup> measured with S-PVC, K-value 70

## Vapour pressure:

°C	210	231	242	255	263
hPa	1.3	3.2	4.9	7.7	9.9

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