

# KLJ Group

Trust built on performance



## DI-OCTYL PHTHALATE (DOP)

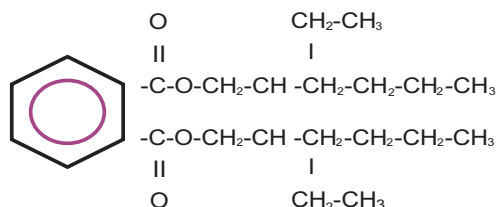
### DI - OCTYL PHTHALATE (DOP)

Primary plasticizer for PVC and PVC copolymers

#### Chemical Nature

Phthalic acid ester of C<sub>8</sub> alcohol

Chemical Name :- Bis (2- Ethylhexyl)Phthalate  
Trade Name :- DOP, DEHP  
Molecular Formula :- C<sub>24</sub>H<sub>38</sub>O<sub>4</sub>  
Molecular Weight :- 390  
Molecular Structure :- C<sub>4</sub>H<sub>9</sub>(C<sub>2</sub>H<sub>5</sub>)C<sub>2</sub>H<sub>5</sub>-CO<sub>2</sub>-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H<sub>9</sub>(C<sub>2</sub>H<sub>5</sub>)C<sub>4</sub>H<sub>9</sub>



CAS Number :- 117-81-7  
UN. NO :- 3082  
EINECS NO :- 204211-0

#### Specification

#### Characteristics

#### Unit

#### Test Method

#### Value

Colour	HU	ASTM-D-1045-86	20 max.
Volatile Loss (130°C/ 3Hrs)	wt.%	KLJTM	0.10 max.
Ester Value	mg KOH/g	ASTM-D-1045-86	284-290
Acidity	wt.%	ASTM-D-1045-86	0.01 max.
Moisture	wt.%	ASTM-E-203	0.10 max.
Specific Gravity (27°C)	--	ASTM-D-1045-86	0.980–0.986
Ester content	wt.%	ASTM-D-1045-86	99.50 min.
Heat Stability (180°C/ 2Hrs)	HU	ISI-9591-96	No Change
Acidity after heat treatment	wt.%	ASTM-D-1045-86	0.03
Plasticizing Esters by GC	% by area	KLJTM	99.50 min.
Residual alcohol	% by area	KLJTM	0.10 max.

#### Typical Properties

Volume Resistivity	Ohmcm	KLJTM	2±0.2 X10 <sup>11</sup>
Boiling Point @ 7 mbar	°C	lit.	231
Pour point	°C	lit.	-46
Viscosity at 20°C	cp	KLJTM	82±2
Flash Point	°C	KLJTM	218
Refractive Index (27°C)	--	ASTM-D-1045-86	1.484–1.488

#### Total Solution in Plasticizers



## DI-OCTYL PHTHALATE (DOP)

### Properties

DOP is almost colourless and odourless oily liquid, free of foreign materials which is, slightly soluble in water( 0.285mg/L at 240c ) but soluble in alcohols, hexane etc. and is miscible and compatible with all the monomeric plasticizers of PVC compounding.

#### KLJ advantages :-

- i) It is almost smellless.**
- ii) Its volume resistivity is much higher than any other DOP .**
- iii) It has less volatility due to less % of moisture & residual alcohol.**

### Application

95% of DOP is used as a Plasticizer in PVC resins for fabricating flexible vinyl Product like :- vinyl upholstery, tablecloth, shower, curtain, raincoat, shoes, garden hoses, swimming pools liners, polymeric coating, cable coating, component of paper & paperboard, defoaming agents, surface lubricants, in order of importance.

The only significant non-plasticizer use for DOP is an replacement for polychlorinated biphenyls in dielectric fluid for electric capacitors.

The miscellaneous use for DOP are :- as the solvent in erasable ink, as an acaricide for use in orchards, as an inert ingredient in pesticides, as an vacuum pump oil, in detecting leaks in respirators.

### Packing & Storage

DOP is packed in 200/225 Kg iron drum/HDPE drum, 20-22 MT in Flexi tank / ISO tank / road tanker. It is stored in tightly closed container, in a cool & dry, ventilated

### Shelf Life

Original characteristics remain intact for 24 month, if kept in recommended storage.

### Safety

The MSDS can be provided on request.

### Disclaimer

The data contain in this publication are based on our current knowledge and experience. During processing , there are so many factors which may effect the application part of DOP, so these data neither imply any gaurante of certain properties, nor the sutability of the product for the specific purpose. Any data given in this publication may change without prior information and do not constitute the agreed quality of our product.

Total Solution in Plasticizers