

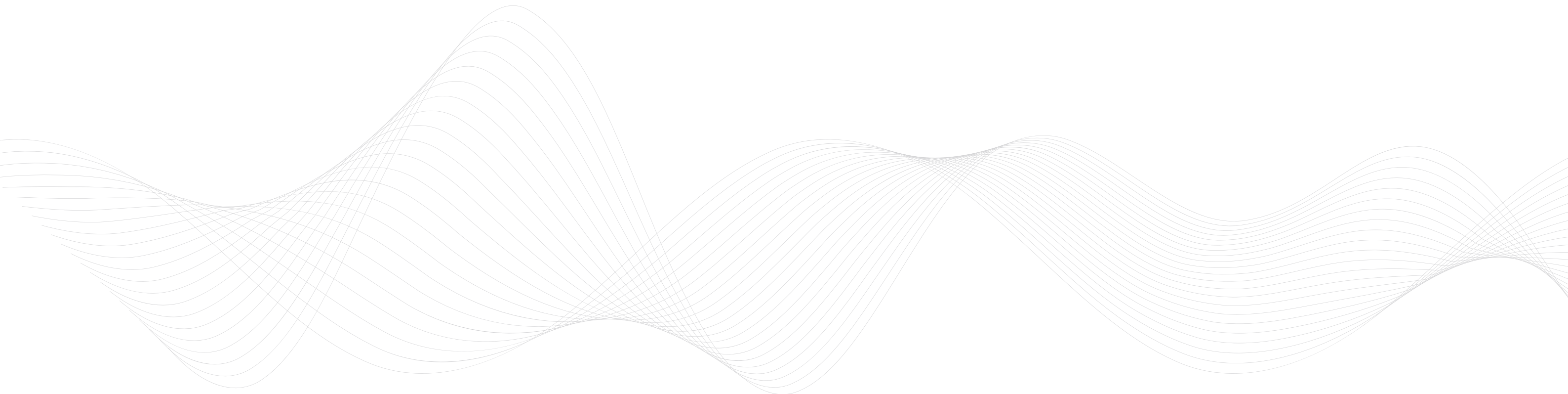


# ELAFLEKS®

Plasticizers

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# INTRODUCTION

**Ela Kimyevi Maddeler** Sanayi Ve Ticaret A.Ş., with brand of “**Ela Kimya**”, established on June, 2010 to bring innovation to plasticizer industry. One of the companies that have firstly achieved mass-production of DOTP (Diethyl Terephthalate) plasticizer in Turkey which does not contain -ortho-phthalate in molecular structure. Today, **Ela Kimya** expanded its product range by different types of plasticizers which have priority and high consumption in plastic industry.

On an area of 8,500 square meters, **Ela Kimya** operates its production and sales operations in Tuzla, Istanbul. Currently, the annual production capacity of 40,000,000 KG for plasticizers and polyester resins, will continue to increase through planned investments in the medium/long term. As a result of commercial partnership with well-known companies world-wide, take place among Turkey’s first 10 organic chemicals export company since 2013.

**Ela Kimya** has REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) compliances for products, DOTP (Diethyl Terephthalate) and DOA (Diethyl Adipate). Besides, has facility certifications, ISO 9001 and OHSAS 18001 upon quality and safety. **Ela Kimya** always pays regard to high standards in production, respects mankind and environment.





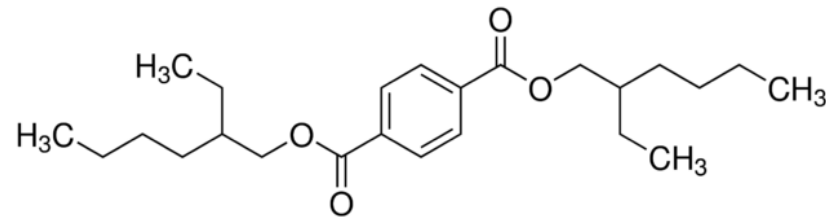
# ELAFLEKS® - DOTP (DIOCTYL TEREPHTHALATE)

Terephthalic Acid ester of 2-Ethylhexanol.

CAS No. **6422-86-2**

Molecular Formula **C<sub>24</sub>H<sub>38</sub>O<sub>4</sub>**

Molecular Structure



## SPECIFICATIONS

Appearance	Clear, Colorless Liquid
Odor	Characteristic
Color APHA	Max. 30 (ASTM D 5386)
Flash Point	Min. 210°C (ASTM D 92 Open Cup)
Viscosity	86-94 mPa.s (20 °C)(ASTM D 7042)
Density	0,980 – 0,985 g/cm <sup>3</sup> (20 °C) (ASTM D 4052)
Refractive Index	1,4830 - 1,4890 (20 °C) (ASTM D 1045)
Acid Number	Max. 0.1 mg KOH /g (ASTM D 1045)
Water Content	Max. %0,05 (ASTM E 203)
Molecular Weight	391 g/Mol

## FIELD OF USE

Suitable for use in the production of PVC products. Such as, cable production, compound production, hose production, shoe sole production, medical equipment production, synthetic leather production, wallpaper production, flooring production etc. ELAFLEKS® DOTP meets phthalate regulations because does not contain orto-phthalate.

## PACKAGING

ELAFLEKS® DOTP is available in bulk or packaged with IBC or drums.

## STORAGE AND HANDLING

ELAFLEKS® DOTP can be stored in tanks constructed from carbon steel. Does not require special handling. Handle in accordance with good industrial hygiene and safety practice. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water. 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.



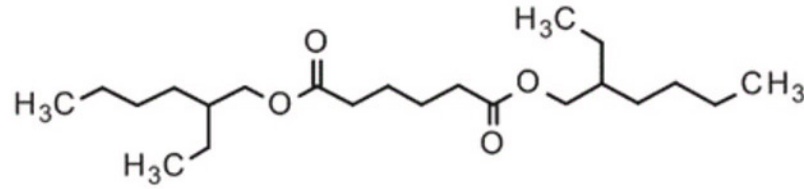
# ELAFLEKS® - DOA (DIOCTYL ADIPATE)

Adibic Acid ester of 2-Ethylhexanol.

CAS No. 103-23-1

Molecular Formula  $C_{22}H_{42}O_4$

Molecular Structure



## SPECIFICATIONS

Appearance	Clear, Colorless Liquid
Odor	Characteristic
Color APHA	Max. 30 (ASTM D 5386)
Flash Point	Min. 190°C (ASTM D 92 Open Cup)
Viscosity	13-19 mPa.s (20 °C) (ASTM D 7042)
Density	0,923 - 0,929 g/cm <sup>3</sup> (20 °C) (ASTM D 4052)
Refractive Index	1,4440 - 1,4480 (20 °C) (ASTM D 1045)
Acid Number	Max. 0.1 mg KOH /g (ASTM D 1045)
Water Content	Max. %0,10 (ASTM E 203)
Molecular Weight	371 g/mol

## FIELD OF USE

ELAFLEKS® DOA is especially suited for PVC products requiring good low temperature flexibility. Therefore it can be used as primary or secondary plasticizer in PVC products requiring better performance in low temperature. Moreover, ELAFLEKS® DOA meets the legislation for use in food-contact applications. Therefore be used for flexible PVC cling films for foods and for industrial packaging as well.

## PACKAGING

ELAFLEKS® DOA can be shipped in bulk or with IBC or 200 LT drums.

## STORAGE AND HANDLING

ELAFLEKS® DOA can be stored in tanks constructed from carbon steel. Does not require special handling. Handle in accordance with good industrial hygiene and safety practice. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water. 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.





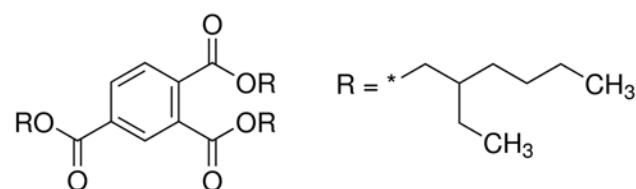
# ELAFLEKS® - TOTM (TRIOCTYL TRIMELLITATE)

Trimellitic anhydride ester of 2-Ethylhexanol.

CAS No. **3319-31-1**

Molecular Formula **C<sub>33</sub>H<sub>54</sub>O<sub>6</sub>**

Molecular Structure



## SPECIFICATIONS

Appearance	Clear, Colorless Liquid
Odor	Characteristic
Color APHA	Max. 50 (ASTM D 5386)
Flash Point	Min. 240°C (ASTM D 92 Open Cup)
Viscosity	272 mPa.s (20 °C) (ASTM D 7042)
Density	0,986 - 0,994 g/cm <sup>3</sup> (20 °C) (ASTM D 4052)
Refractive Index	1,4820 - 1,4860 (20 °C) (ASTM D 1045)
Acid Number	Max. 0.1 mg KOH /g (ASTM D 1045)
Water Content	Max. %0,10 (ASTM E 203)
Molecular Weight	546.79 g/mol

## FIELD OF USE

ELAFLEKS® TOTM is suggested as a plasticizer for use where extreme low volatility is required. ELAFLEKS® TOTM provides good electrical properties. Especially used in where better insulation need, for example, automotive internal parts. ELAFLEKS® TOTM is suitable alone. Or can be blended with other plasticizers to optimize cost.

## PACKAGING

ELAFLEKS® TOTM can be shipped in bulk or with IBC or 200 LT drums.

## STORAGE AND HANDLING

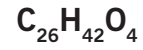
ELAFLEKS® TOTM can be stored in tanks constructed from carbon steel. Does not require special handling. Handle in accordance with good industrial hygiene and safety practice. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water. Avoid repeated or prolonged skin contact. Avoid breathing vapors by providing adequate ventilation. Always refer to the Safety Data Sheet (SDS) for detailed information on safety.



# ELAFLEKS® - DINP (DIISONONYL PHTHALATE)

Diisononyl ester of phthalic acid.

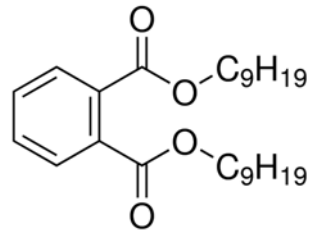
Molecular Formula



CAS Number

28553-12-0

Molecular Structure



## SPECIFICATIONS

Appearance	Clear, Colorless Liquid
Odor	Characteristic
Color APHA	Max. 30 (ASTM D 5386)
Flash Point	Min. 205°C (ASTM D 92 Open Cup)
Viscosity	70-80 mPa.s (20 °C) (ASTM D 7042)
Density	0,970 - 0,974 g/cm <sup>3</sup> (20 °C) (ASTM D 4052)
Refractive Index	1,4830 - 1,4870 (20 °C) (ASTM D 1045)
Acid Number	Max. 0.07 mg KOH /g (ASTM D 1045)
Water Content	Max. %0,05 (ASTM E 203)
Molecular Weight	418.6 g/mol

## FIELD OF USE

ELAFLEKS® DINP is used in a diverse range of industrial products such as electrical wire and cables, flexible PVC sheeting, coated fabrics, automotive parts, building and construction (waterproofing), vinyl flooring, footwear, sealings, lamination film.

## PACKAGING

ELAFLEKS® DINP can be shipped in bulk or with IBC or 200 LT drums.

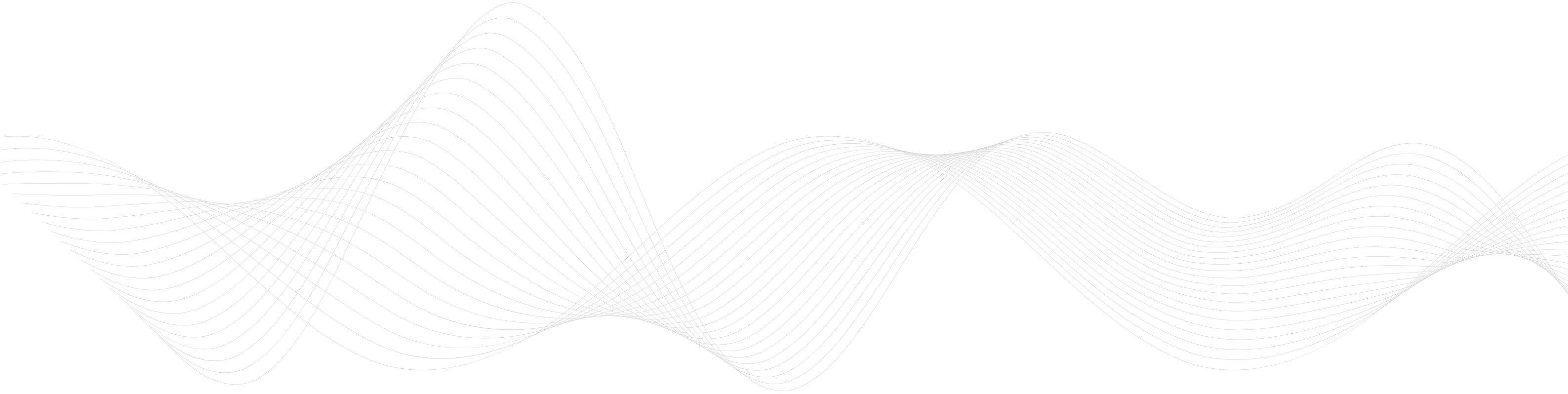
## STORAGE AND HANDLING

ELAFLEKS® DINP can be stored in tanks constructed from carbon steel. Does not require special handling. Handle in accordance with good industrial hygiene and safety practice. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water. 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.





# NOTES





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