

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriyat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

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## TECHNICAL DATA SHEET (TDS)

### DIPHENYL TEREPHTHALATE (DPT)

#### 1. Product Identification

Item	Details
Chemical Name	Diphenyl Terephthalate
Synonyms	Terephthalic acid diphenyl ester; Diphenyl 1,4-benzenedicarboxylate
CAS No.	1539-04-4
Molecular Formula	C <sub>20</sub> H <sub>14</sub> O <sub>4</sub>
Molecular Weight	318.33 g/mol
Product Form	Micronized solid powder

#### 2. Product Description

Diphenyl Terephthalate is a high-melting aromatic ester supplied in micronized solid form for polymer compounding and formulation.

In polymer systems, it functions as a solid plasticizer / functional modifier, supporting thermal stability and long-term performance retention in PVC, styrenic compounds, and engineering thermoplastics.

#### 3. Typical Physical Properties

Property	Typical Value
Appearance	White to off-white solid/powder
Odour	Odourless (typical)
Melting Point	197 – 199 °C
Bulk Density	0.45 – 0.70 g/cm <sup>3</sup> (typical for micronised solids; internal typical range)
Solubility in Water	Insoluble (typical)
Solubility in Organic Solvents	Limited/soluble in aromatic-type solvents (typical)
Thermal Behaviour	Stable under polymer processing conditions (typical)

Values are typical and not intended as specifications.

#### 4. Particle Size Characteristics (Micronized Grade)

Parameter	Typical Range
D50	5 – 12 µm
D90	< 25 µm
D100	< 45 µm

Micronisation supports uniform dispersion and consistent functional performance in polymer matrices.

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## 5. Primary Applications

Application Area	Function
PVC Compounds	Solid plasticizer / co-plasticizer
Engineering Thermoplastics	Internal modifier
Styrenic & ABS Systems	Stress-relief / compatibility modifier
High-Temperature Polymers	Permanent thermal modifier

## 6. Processing & Handling

- Suitable for dry blending and masterbatch preparation
- Compatible with standard compounding and extrusion equipment
- Best incorporated during high-shear mixing or melt compounding

## 7. Storage & Shelf Life

Item	Recommendation
Storage	Cool, dry, well-ventilated area
Container	Keep tightly closed
Shelf Life	24 months under recommended conditions

## 8. Packaging

- 20–25 kg bags
- Other packaging available on request

## 9. Regulatory & Compliance (Indicative)

- Intended for industrial use
- Detailed regulatory status available upon request

## 10. Disclaimer

The information provided is based on typical data and experience and is intended for guidance in formulation development. Users should conduct their own evaluations to determine suitability for their specific applications.