

Polymer Add (Thailand) Co.,Ltd.

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TECHNICAL DATA SHEET (TDS)

DIPHENYL ISOPHTHALATE (DPI)

1. Product Identification

Item	Details
Chemical Name	Diphenyl Isophthalate
Synonyms	Isophthalic acid diphenyl ester
CAS No.	744-56-5
Molecular Formula	$C_{20}H_{14}O_4$
Molecular Weight	318.32 g/mol
Product Form	Micronized solid powder

2. Product Description

Diphenyl Isophthalate is a high-melting aromatic ester supplied in micronized solid form for use as a solid plasticizer and functional polymer modifier.

It provides permanent plasticization, enhanced thermal stability, and low migration in PVC, engineering thermoplastics, and high-temperature polymer systems.

3. Typical Physical Properties

Property	Typical Value
Appearance	White to off-white powder
Odour	Odourless
Melting Point	150 – 155 °C
Bulk Density	0.45 – 0.70 g/cm ³
Solubility in Water	Insoluble
Solubility in Organic Solvents	Soluble in aromatic solvents
Thermal Behaviour	Stable under polymer processing conditions

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 ensures 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 additive
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
- Not classified as SVHC under REACH (indicative)
- Detailed regulatory status available upon request

10. Disclaimer

This information is provided as guidance for formulation development. Users should evaluate suitability for their specific applications.