

PRODUCT INFORMATION



N-Phenyl-N'-(2-methylphenyl)-p-phenylenediamine

Item No. 45331

CAS Registry No.: 27173-16-6

Formal Name: N¹-(2-methylphenyl)-N⁴-phenyl-1,4-benzenediamine

Synonyms: N-o-Tolyl-N'-phenyl-p-phenylenediamine, N-Phenyl-N'-(o-tolyl)-p-phenylenediamine, PTPD

MF: C₁₉H₁₈N₂

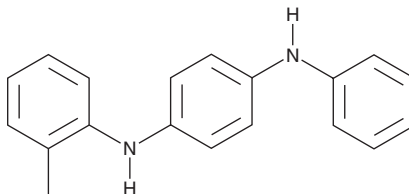
FW: 274.4

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N-Phenyl-N'-(2-methylphenyl)-p-phenylenediamine (PTPD) is supplied as a solid. A stock solution may be made by dissolving the PTPD in the solvent of choice, which should be purged with an inert gas. PTPD is soluble (≥10 mg/ml) in DMSO.

Description

PTPD is a p-phenylenediamine (PPD) and component of the tire rubber antioxidant BENPAT.¹ It has been found in tires, road dust, and wastewater influent, effluent, biosolids, and leachate.^{2,3} Formulations containing PTPD have been used as stabilizers in tires, synthetic rubber, and lubricating oils.

References

1. Klöckner, P., Seiwert, B., Wagner, S., *et al.* Organic markers of tire and road wear particles in sediments and soils: Transformation products of major antiozonants as promising candidates. *Environ. Sci. Technol.* **55**(17), 11723-11732 (2021).
2. Cao, X., Yue, T., Meng, W., *et al.* Nontargeted screening unveils structural diversity and environmental pervasiveness of p-phenylenediamine antioxidant-derived quinones: Evidence from end-of-life tires and road dust contamination. *Environ. Sci. Technol.* **59**(38), 20630-20641 (2025).
3. Zhang, Z.-F., Zhang, X., Zhang, X., *et al.* Diphenylamine antioxidants in wastewater influent, effluent, biosolids and landfill leachate: Contribution to environmental releases. *Water Res.* **189**, 116602 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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