

PRODUCT INFORMATION



77PD

Item No. 42602

CAS Registry No.: 3081-14-9

Formal Name: N¹,N⁴-bis(1,4-dimethylpentyl)-1,4-benzenediamine

Synonyms: N,N'-bis(1,4-dimethylpentyl)-p-Phenylenediamine,
N,N'-bis(1,4-dimethylpentyl)-para-Phenylenediamine

MF: C₂₀H₃₆N₂

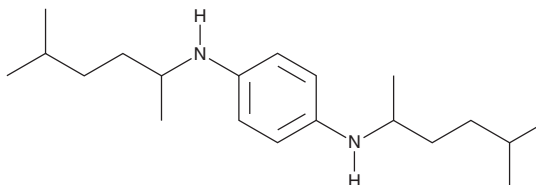
FW: 304.5

Purity: ≥98%

Supplied as: A neat oil

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

77PD is supplied as a neat oil. A stock solution may be made by dissolving the 77PD in the solvent of choice, which should be purged with an inert gas. 77PD is soluble (≥10 mg/ml) in ethanol. 77PD is sparingly soluble (1-10 mg/ml) in DMSO.

Description

77PD is a substituted *p*-phenylenediamine.¹ It scavenges ozone, forming nitroxyl radicals. 77PD is toxic to the aquatic bacterium *V. fischeri* (EC₅₀ = 0.41 mg/L) and has been found in river water and sediment.^{2,3} 77PD has been used as an antiozonant in rubber tires.⁴

References

1. Cataldo, F. Early stages of *p*-phenylenediamine antiozonants reaction with ozone: Radical cation and nitroxyl radical formation. *Polym. Degrad. Stab.* **147**, 132-141 (2018).
2. Wang, W., Chen, Y., Fang, J., *et al.* Toxicity of substituted *p*-phenylenediamine antioxidants and their derived novel quinones on aquatic bacterium: Acute effects and mechanistic insights. *J. Hazard. Mater.* **469:133900**, (2024).
3. Zhu, J., Guo, R., Ren, F., *et al.* Occurrence and partitioning of *p*-phenylenediamine antioxidants and their quinone derivatives in water and sediment. *Sci. Total Environ.* **914:170046**, (2024).
4. Ivan, G. and Giurginca, M. Influence of carbon black-antidegradant interaction on the behavior of rubber compounds in the thermo-oxidative degradation. *Rev. Roum. Chim.* **29(8)**, 639-646 (1984).

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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