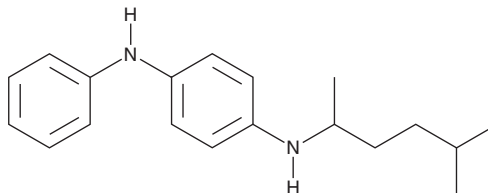


# PRODUCT INFORMATION

## 7-PPD

Item No. 42620

**CAS Registry No.:** 3081-01-4  
**Formal Name:** N<sup>1</sup>-(1,4-dimethylpentyl)-N<sup>4</sup>-phenyl-1,4-benzenediamine  
**Synonym:** DMPPD  
**MF:** C<sub>19</sub>H<sub>26</sub>N<sub>2</sub>  
**FW:** 282.4  
**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

7-PPD is supplied as a solid. A stock solution may be made by dissolving the 7-PPD in the solvent of choice, which should be purged with an inert gas. 7-PPD is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

### Description

7-PPD is a substituted *p*-phenylenediamine (PPD).<sup>1</sup> It is toxic to the bacterium *V. fischeri* (EC<sub>50</sub> = 0.8 mg/L). 7-PPD has been found in tire wear particles, crumb rubber, doormats, and laboratory stoppers, fine particulate matter 2.5 (PM<sub>2.5</sub>) samples collected at the roadside, and in river water and river sediments.<sup>2-4</sup> It is toxic to rats (LD<sub>50</sub> = 2,100 mg/kg).<sup>5</sup> Formulations containing 7-PPD have been used as a rubber antiozonants and polymerization inhibitors.

### References

1. 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).
2. Zhao, H.N., Hu, X., Gonzalez, M., *et al.* Screening *p*-phenylenediamine antioxidants, their transformation products, and industrial chemical additives in crumb rubber and elastomeric consumer products. *Environ. Sci. Technol.* **57**(7), 2779-2791 (2023).
3. Wang, W., Cao, G., Zhang, J., *et al.* Beyond substituted *p*-phenylenediamine antioxidants: Prevalence of their quinone derivatives in PM<sub>2.5</sub>. *Environ. Sci. Technol.* **56**(15), 10629-10637 (2022).
4. 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).
5. Randall, D.J. and Bannister, R.M. Acute toxicologic evaluation of SANTOFLEX® 14 antiozonant. *J. Am. Coll. Toxicol.* **1**(2), 103-104 (1990).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM