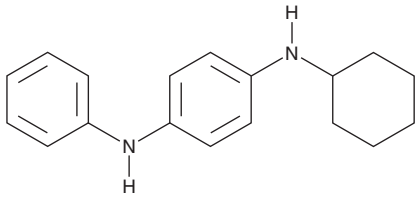
PRODUCT INFORMATION

CPPD

Item No. 42582

CAS Registry No.: 101-87-1
Formal Name: N^1-cyclohexyl-N^4-phenyl-1,4-benzenediamine
MF: $C_{18}H_{22}N_2$
FW: 266.4
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

CPPD is supplied as a solid. A stock solution may be made by dissolving the CPPD in the solvent of choice, which should be purged with an inert gas. CPPD is slightly soluble (0.1-1 mg/ml) in methanol.

Description

CPPD is a substituted *p*-phenylenediamine (PPD) and tire rubber antioxidant.[1,2] It has been found in road dust, marine sediment, and particulate matter 2.5 ($PM_{2.5}$) and is considered an environmental contaminant.[1,3,4] CPPD has been found in human fluids and tissues, including maternal plasma, cord plasma, and placenta.[5] In addition, it has also been found in human urine and positively correlates with serum total and HDL cholesterol levels and mitochondrial DNA copy number variations (mtDNAcns), which is a marker of exposure to environmental stress.[6] Embryonic CPPD (0.05 mg/L) exposure reduces growth, disrupts ocular lens development, and induces behavioral abnormalities, including aggression, in zebrafish.[2]

References

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3. Liang, C., Hou, Y.Y., J.Y., L., *et al.* Occurrences, profiles, and mass inventories of sediment *p*-phenylenediamine and their quinones in the northern South China Sea. *Mar. Pollut. Bull.* **221:118482** (2025).
4. Wang, W., Cao, G., Zhang, J., *et al.* Beyond substituted *p*-phenylenediamine antioxidants: Prevalence of their quinone derivatives in $PM_{2.5}$. *Environ. Sci. Technol.* **56(15)**, 10629-10637 (2022).
5. Li, J., Ren, F., Cao, L., *et al.* Transplacental transfer of p-phenylenediamine antioxidants: Insights from human gestational exposure and an optimized BeWo cell monolayer model. *J. Hazard Mater.* **495:139004** (2025).
6. Wang, C., Xiong, Y., Zheng, H., *et al.* Alterations of human lipid profile and mitochondrial DNA copy number induced by PPD exposure. *Ecotoxicol. Environ. Saf.* **307:11947** (2025).

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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