

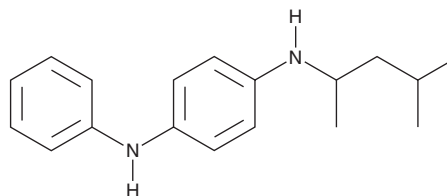
PRODUCT INFORMATION



6-PPD

Item No. 38246

CAS Registry No.: 793-24-8
Formal Name: N¹-(1,3-dimethylbutyl)-N⁴-phenyl-1,4-benzenediamine
Synonyms: Antioxidant 4020, N-(1,3-Dimethylbutyl)-N¹-phenyl-p-phenylenediamine
MF: C₁₈H₂₄N₂
FW: 268.4
Purity: ≥98%
UV/Vis.: λ_{max}: 291 nm
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

6-PPD is supplied as a solid. A stock solution may be made by dissolving the 6-PPD in the solvent of choice, which should be purged with an inert gas. 6-PPD is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6-PPD in ethanol and DMF is approximately 25 mg/ml and approximately 10 mg/ml in DMSO.

Description

6-PPD is a substituted *p*-phenylenediamine.¹ It scavenges ozone, forming nitroxyl radicals.² 6-PPD decreases hatchability of zebrafish embryos by 25.6 and 78.9% when used at concentrations of 0.022 and 0.22 mg/L, respectively.¹ It also reduces motility and body length, as well as induces developmental malformations and oxidative stress in, zebrafish embryos. Formulations containing 6-PPD have been used as stabilizing additives and antiozonants in rubber.

References

1. Peng, W., Liu, C., Chen, D., *et al.* Exposure to N-(1,3-dimethylbutyl)-N¹-phenyl-p-phenylenediamine (6PPD) affects the growth and development of zebrafish embryos/larvae. *Ecotoxicol. Environ. Saf.* **232**, 113221 (2022).
2. Cataldo, F. Early stages of p-phenylenediamine antiozonants reaction with ozone: Radical cation and nitroxyl radical formation. *Polym. Degrad. Stab.* **147**, 132-141 (2018).

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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