

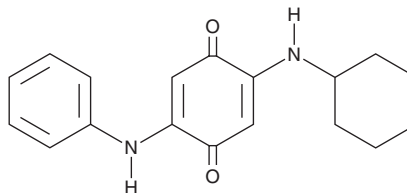
# PRODUCT INFORMATION



## CPPD-Q

Item No. 40828

**CAS Registry No.:** 68054-78-4  
**Formal Name:** 2-(cyclohexylamino)-5-(phenylamino)-  
2,5-cyclohexadiene-1,4-dione  
**Synonym:** CPPD-quinone  
**MF:** C<sub>18</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 296.4  
**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-Q is supplied as a solid. A stock solution may be made by dissolving the CPPD-Q in the solvent of choice, which should be purged with an inert gas. CPPD-Q is slightly soluble (0.1-1 mg/ml) in acetonitrile.

### Description

CPPD-Q is a *p*-phenylenediamine quinone (PPD-Q) and an oxidized derivative of the antiozonant CPPD.<sup>1</sup> It is toxic to the aquatic bacterium *V. fischeri* (EC<sub>50</sub> = 6.98 mg/L). It induces intestinal production of reactive oxygen species (ROS) in *C. elegans* when used at concentrations of 1 or 10 µg/ml.<sup>2</sup> CPPD-Q has been found in fine particulate matter 2.5 (PM<sub>2.5</sub>) samples collected at the roadside in China.<sup>3</sup>

### 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. Wang, Y., Liang, G., Chao, J., *et al.* Comparison of intestinal toxicity in enhancing intestinal permeability and in causing ROS production of six PPD quinones in *Caenorhabditis elegans*. *Sci. Total Environ.* **927**, 172306 (2024).
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).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/31/2024

#### 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](http://WWW.CAYMANCHEM.COM)