

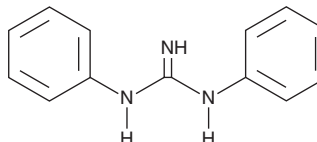
PRODUCT INFORMATION



DPG

Item No. 45195

CAS Registry No.: 102-06-7
Formal Name: N,N'-diphenyl-guanidine
Synonyms: 1,3-Diphenylguanidine, NSC 3272
MF: $C_{13}H_{13}N_3$
FW: 211.3
Purity: $\geq 98\%$
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

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

Description

DPG is a rubber vulcanization accelerator.¹ It is cytotoxic to A549 and HepG2 cells ($EC_{50}S = 59.4$ and $47.7 \mu\text{M}$, respectively).² DPG ($10 \mu\text{g/ml}$) decreases body length and induces cardiac abnormalities in zebrafish larvae.¹ It is associated with allergic contact dermatitis.³ DPG has been found as a contaminant in soil and urban water.^{4,5}

References

1. Xu, Q., Tang, J., Zhao, S., *et al.* Assessment of developmental toxicity of 1,3-diphenylguanidine and its chlorinated derivative in zebrafish embryos. *Environ. Technol. Innov.* **40**, (2025).
2. Marques Dos Santos, M., Cheriaux, C., Jia, S., *et al.* Genotoxic effects of chlorinated disinfection by-products of 1,3-diphenylguanidine (DPG): Cell-based in-vitro testing and formation potential during water disinfection. *J. Hazard Mater.* **436**, 129114 (2022).
3. Dejonckheere, G., Herman, A., and Baek, M. Allergic contact dermatitis caused by synthetic rubber gloves in healthcare workers: Sensitization to 1,3-diphenylguanidine is common. *Contact Dermatitis* **81(3)**, 167-173 (2019).
4. Li, Z.M., Pal, V.K., Kannan, P., *et al.* 1,3-Diphenylguanidine, benzothiazole, benzotriazole, and their derivatives in soils collected from northeastern United States. *Sci. Total Environ.* **887**, 164110 (2023).
5. Zhang, H.-Y., Huang, Z., Liu, Y.-H., *et al.* Occurrence and risks of 23 tire additives and their transformation products in an urban water system. *Environ. Int.* **171**, 107715 (2023).

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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