

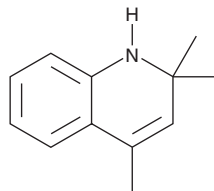
PRODUCT INFORMATION



TMQ

Item No. 45640

CAS Registry No.: 147-47-7
Formal Name: 1,2-dihydro-2,2,4-trimethyl-quinoline
Synonyms: NSC 4175, Polnox R,
2,2,4-Trimethyl-1,2-dihydroquinoline
MF: C₁₂H₁₅N
FW: 173.3
Purity: ≥95%
Supplied as: A semi-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

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

Description

TMQ is a tire rubber antioxidant.¹ Topical application of TMQ increases the incidence of renal tubule adenoma and carcinoma in male rats and induces acanthosis and hyperkeratosis of the skin at the application site in male and female rats.² It has been found in tire and road wear particles (TRWPs) from air and road samples.^{3,4} Formulations containing TMQ have been used as stabilizing and antioxidant additives in rubber and latex.

References

1. Shetye, S.S. and Ambare, S.N. Optimisation and evaluation of 2,2,4-trimethyl-1,2-dihydroquinoline (TMQ) and alkyl derivative of P-phenylene diamine (6PPD) and characterisation of rubber vulcanisates. *Res. J. Chem. Environ.* **24(4)**, 107-117 (2020).
2. Irwin, R.D., French, J.E., Elwell, M., et al. Carcinogenicity of dermally administered 1,2-dihydro-2,2,4-trimethylquinoline monomer in F344 rats and B6C3F₁ mice. *J. Appl. Toxicol.* **19(2)**, 125-132 (1999).
3. Kuntz, V., Zahn, D., and Reemtsma, T. Quantification and occurrence of 39 tire-related chemicals in urban and rural aerosol from Saxony, Germany. *Environ. Int.* **194:109189**, (2024).
4. Calarnou, L., Traïkia, M., Leremboure, M., et al. Assessing biodegradation of roadway particles via complementary mass spectrometry and NMR analyses. *Sci. Total Environ.* **900:165698**, (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.

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, 06/10/2026

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