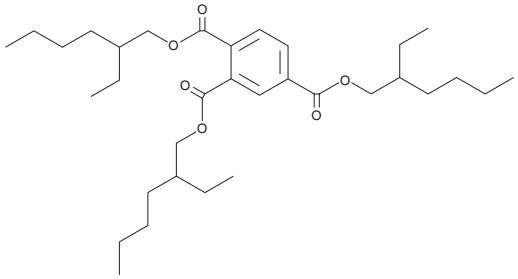
PRODUCT INFORMATION

Tris(2-ethylhexyl)trimellitate

Item No. 46059



CAS Registry No.:	3319-31-1
Formal Name:	1,2,4-benzenetricarboxylic acid, 1,2,4-tris(2-ethylhexyl) ester
Synonyms:	TOTM, Trioctyl Trimellitate
MF:	$C_{33}H_{54}O_6$
FW:	546.8
Purity:	≥95%
Supplied as:	A neat oil
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tris(2-ethylhexyl)trimellitate (TOTM) is supplied as a neat oil. A stock solution may be made by dissolving the TOTM in the solvent of choice, which should be purged with an inert gas. TOTM is soluble (≥10 mg/ml) in ethanol.

Description

TOTM is a non-phthalate plasticizer.[1] It reduces the survival rate in zebrafish (*D. rerio*), with a lowest observed effect concentration (LOEC) of 43.7 µg/L, but not in Japanese medaka (*O. latipes*) at concentrations up to 5,016.5 µg/L. Oral administration of TOTM (300 and 1,000 mg/kg per day) decreases the number of spermatocytes and spermatids in male rats but does not affect body weight, food consumption, or reproductive organ weight in male or female rats.[2] It induces hepatic injury in mice, increasing serum aspartate aminotransferase (AST), alanine transaminase (ALT), TNF-α, IL-1β, and IL-6 levels and induces hepatic lipid droplet formation and inflammatory cell infiltration.[3] TOTM has been found in soil, freshwater, and seawater.[4,5] Formulations containing TOTM have been used as plasticizers, including in polyvinyl chloride (PVC) plastics, cables, and medical devices.

References

1. Matsuo, Y., Jiang, J.J., and Horie, Y. Comprehensive assessment of tris(2-ethylhexyl) trimellitate acute toxicity and ecological risks: Species-specific sensitivity and environmental monitoring. *Environ. Pollut.* **377**, 126413 (2025).
2. Den Braver-Sewradj, S.P., Piersma, A., and Hessel, E.V.S. An update on the hazard of and exposure to diethyl hexyl phthalate (DEHP) alternatives used in medical devices. *Crit. Rev. Toxicol.* **50(8)**, 650-672 (2020).
3. Chen, X.H., Ma, L., Hu, Y.X., *et al.* Transcriptome profiling and pathway analysis of hepatotoxicity induced by tris (2-ethylhexyl) trimellitate (TOTM) in mice. *Environ. Toxicol. Pharmacol.* **41**, 62-71 (2016).
4. Billings, A., Carter, H., Cross, R.K., *et al.* Co-occurrence of macroplastics, microplastics, and legacy and emerging plasticisers in UK soils. *Sci. Total Environ.* 880, 163258 (2023).
5. Horie, Y., Matsuo, Y., Yamaji, K., *et al.* Emerging plasticizer pollution in Thailand: Occurrence, distribution, and ecological risks of phthalate and non-phthalate esters. *Mar. Pollut. Bull.* **229**, 119721 (2026).

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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