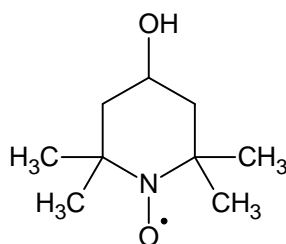




4-HYDROXY-TEMPO

Product data



CAS No.: 2226-96-2
EC No.: 218-760-9
Molecular Formula: C₉H₁₈NO₂
Molecular Weight: 172.24
CAS Name: 2,2,6,6-tetramethylpiperidine-4-hydroxy-1-oxyl
EINECS Name: 4-Hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl
IUPAC Name: 4-Hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl
Synonyms: Tempol
4-hydroxy-Tempo

Applications:

- Inhibition of polymerisation
- Catalyst of oxidation of alcohols
- Radical trap
- Structural probe for biological systems in conjunction with electron spin resonance spectroscopy
- Reagent in organic synthesis,
- Mediator in controlled free radical polymerization.

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INTRODUCTION

The stability of this radical is attributed to the steric protection provided by the four methyl groups adjacent to the nitroxyl group.

PRODUCT DESCRIPTION

Form: red-orange crystalline powder
Melting point: 69 - 71 °C
Water solubility: 1 670 g/l at 20 °C

Specification	Product
Purity	min. 98 % wt

APPLICATIONS

- Spin label for studying biological compounds (1,2) and polymers (3).
- A fluoros-tagged TEMPO derivative was prepared from the derived TEMPO propargylic ether and subsequent "click" reaction with fluoros azide. This TEMPO derivative proved to be a highly affective catalyst in the oxidation of alcohols with bleach (4).
 1. Free Radical Res. Commun. **19**, 5171 (1993)
 2. Med. Sci. Res. **21**, 401 (1993)
 3. J. Polym. Sci., B: Polym. Phys. **31**, 1885 (1993)
 4. Synlett 2767 (2006)

TOXICITY

Acute toxicity

LD50 Oral - rat - 1.053 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other.

Behavioral: Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Dyspnea.

SHIPPING, HANDLING AND STORAGE

- The material is packaged as requested by the customer
- Keep container tightly closed in a dry and well-ventilated place
- Recommended storage temperature: 2 - 8 °C

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