



# TEMPO

## GENERAL DESCRIPTION

Product:	TEMPO
Synonyms:	Tetramethylpiperidine 1-oxyl 2,2,6,6-Tetramethyl-1-piperidinyloxy, free radical
CAS Number:	2564-83-2
EC Number:	219-888-8
Molecular Formula:	C <sub>9</sub> H <sub>18</sub> NO
Molecular Weight:	156.25

## SALES SPECIFICATION

Appearance:	red crystals
Purity:	98% min
Packing:	on request

## PHYSICAL PROPERTIES

Melting point:	38.6 °C
Flash Point:	67 °C; Method – closed cup
Density:	904.5 kg.m <sup>-3</sup> at 50 °C

## USE

TEMPO is widely used as a radical trap, as a structural probe for biological systems in conjunction with electron spin resonance spectroscopy, as a reagent in organic synthesis, and as a mediator in controlled free radical polymerization. The stability of this radical is attributed to the steric protection provided by the four methyl groups adjacent to the nitroxyl group. It is used also as an oxidising catalyst of alcohols to aldehydes and ketones.

## CLASSIFICATION

European Hazard Symbols:	C - Corrosive
Risk Phrases:	R34
Safety Phrases:	S26-36/37/39, 45
GHS classification and labeling:	Skin Corr. 1B
Hazard statement	H314 - Causes severe skin burns and eye damage.
Pictogram:	
Signal word:	Danger
UN Number:	3263
Hazard class:	8