TECHNICAL DATA SHEET

Trade name : PIPERONYL BUTOXIDE PHARMA GRADE GMP

THE PRODUCT COMPLIES WITH PIPERONYL BUTOXIDE BRITISH PHARMACOPOEIA (VET) MONOGRAPH AND THE GLOBAL GMP STANDARDS FOR ACTIVE PHARMACEUTICAL INGREDIENTS (ICH Q7A)

CHEMICAL IDENTIFICATION

Definition : Not less than 94.0 % of $C_{19}H_{30}O_5$

Nomenclature

Common name : Piperonyl Butoxide

IUPAC name : 5-{[2-(2-butoxyethoxy)ethoxy]methyl}-6-propyl-1,3-benzodioxole

CA name : 1,3-Benzodioxole, 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-

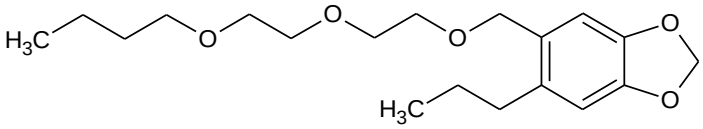
CAS number : 51-03-6

EC number : 200-076-7

Molecular formula : $C_{19}H_{30}O_5$

Molecular weight : 338.40

Structural formula :



PRODUCT SPECIFICATIONS

Chemical assay (ENDQC-710 method by HRGC)

Piperonyl Butoxide	:	**≥ 94.0 % w/w**
Butyl Carbitol®	:	≤ 1.50 % a/a
Dipiperonyl methane (DPM)	:	≤ 2.00 % a/a
Dipiperonyl ether (DPE)	:	≤ 1.50 % a/a
Dihydrosafrole (DHS)	:	≤ 50 mg/kg
Any other secondary peak (each)	:	≤ 0.50 % a/a
Any other secondary peaks (total) with an area ≥ 0.1 % , other than Butol, DPM, DPE, DHS	:	≤ 2.50 % a/a
Chloromethyl DHS	:	≤ 80 mg/kg
N,N-Dimethyformamide (DMF) (ENDQC-102 method)	:	≤ 880 mg/kg
Dichloromethane (DCM) (ENDQC-102 method)	:	≤ 600 mg / Kg

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PRODUCT SPECIFICATIONS (continues)

Acidity number (ENDQC-6 method)	:	≤ 0.10 mg KOH/g
Density (ENDQC-4 method)	:	1.050-1.065 g/cm^3 at 20°C
Colour (ENDQC-7 method)	:	≤ 2.5 (Gardner scale)
Appearance (visual method)	:	Clear oily liquid, colourless to light yellow
Refractive index (Ph. Eur. 2.2.6.)*	:	1.494-1.504 n^{20}_D
Sulphated ash (Ph. Eur. 2.4.14)**	:	≤ 0.2 % w/w
Microbial Counts (Ph. Eur. 2.6.12)	:	
TAMC		≤ 100 CFU/1g
TYMC		≤ 100 CFU/1g

** Equivalent to the BP Vet Method reported in Appendix V E.*

*** Equivalent to the BP Vet Method reported in Appendix IX A, Method II.*

ADDITIONAL INFORMATION

Odour	:	Slightly aromatic
Boiling point	:	203 °C at 278 Pa
Vapour pressure	:	2.11 x 10^{-7} hPa at 60°C
Flash point	:	179.2 °C
Solubility	:	Soluble in all common organic solvents (n-hexane, toluene, 1,2-dichloroethane, 2-propanol, acetone, ethyl acetate), including mineral oils.
Partition coefficient (Log Pow)	:	4.8
Identification		
UV-vis spectra (220-350 nm)	:	Well defined maxima at 238 nm and 290 nm.
IR spectra		Concordant with the reference spectrum of Piperonyl Butoxide.