



PRODUCT CODE: 361736

Tetrahydrofuran for UV, IR, HPLC, GPC

C₄H₈O

C₄H₈O



M.= 72,11

CAS [109-99-9]

EINECS 203-726-8

TARIC 2932 11 00 00

SYNONYMS: Diethylene Oxide, Tetramethylene Oxide, THF

PHYSICAL DATA: liquid, Clear, Colourless, Miscible with water • D 20/4 0,889 • M.P.: -108,5 °C • B.P.: 66 °C • n₂₀/D : 1,407 • Flash P.: -22 °C • Ign. T.: 230 °C • Vap. press. (20 °C) 200 hPa • Viscosity 25 °C 0,47 mPa.s • D. M. 20 °C 1,63 Debye • Dielec. constant 20 °C 7,4 • Evap. number (DIN 53170) 2,3 • Heat evap. 66 °C 411 KJ/Kg • Satur. conc. 20 °C 557 g/m³ • Expl. limit 1,5 % (V) 12 % (V) •

BIBLIOGRAPHY: Merck Index **13**, 9.285 Sax **TCR750** • Safety **2**, **3273 B** • Kühn-Birett **T 8** • Ullmann **(5.)12**, 121 • Beilstein **17**, **10 I**, **5 II**, **15 III/IV**, **24 V**, **1/27** • BRN 102391 • Fieser **11140 2398 3278 5649 6570** • ACS **XI** •

HAZARDOUS: C.E: 603-025-00-0 • RTECS: LU 5950000 • LD₅₀ oral rat 1.650 mg/kg • LC₅₀ rat >14,7 mg/l / 6h • LD₅₀ skn rat >2.000 mg/kg / (OECD 402) • VLA-EC (Spain) 100 ppm 300 mg/m³ VLA-ED 50 ppm 150 mg/m³ Factor for short-term value (Germany) 2

Predicted No Effect Concentration (PNEC)

Freshwater 4.32mg/l Marine water 0.432mg/l Sporadic release 21.6mg/l Purifying plant 4.6mg/l Freshwater Sediment 23.3mg/kg Marine water Sediment 2.33mg/kg Soil 2.13mg/kg Oral use (secondary poisoning) 67mg/kg

Derived No Effect Level (DNEL)

Workers Inhalation, long term (local) 150 mg/m³ Workers Inhalation, long term (systemic) 50 ppm Workers Dermal, long exposure (systemic) 25mg/kg Population Inhalation, long term (systemic) 62 mg/m³ Population, Dermal, long exposure (systemic) 15mg/kg Population Inhalation, acute (local) 150 mg/m³ Population Inhalation, acute (systemic) 150 mg/m³



H: H225 • EUH019 • H319 • H335 • H351 • H302 •

P: P210 • P233 • P243 • P305+P351+P338 • P501 • •

TRANSPORT REGULATIONS: UN: 2056 • ADR: 3/II • IMDG: 3/II • IATA: 3/II • PAX: 353 • CAO: 364 • (D/E) •

WEIGHT/VOLUME INFORMATION: 1l~0,890 kg 1kg~1,124 l

SPECIFICATIONS:

Minimum assay (G.C.)	99,9%
Density at 20/4	0,888-0,892
Maximum limit of impurities	
APHA colour	10
Acidity	0,0002 meq/g
Alkalinity	0,0002 meq/g
Non-volatile matter	0,0002 %
Peroxides (as H ₂ O ₂)	0,01 %*
Water (H ₂ O)	0,02 %
Suitability for IR spectrometry:	passes test
UV Spectrum (1cm cell; Ref.: water):	
Transmittance at 215 (Cut off) nm	≥ 10 %
Transmittance at 240 nm	≥ 30 %
Transmittance at 245 nm	≥ 50 %
Transmittance at 260 nm	≥ 70 %
Transmittance at 265 nm	≥ 80 %
Transmittance at 275 nm	≥ 90 %
Transmittance at 310-450 nm	≥ 99 %
Data of interest in HPLC:	
Rohrschneider Polarity	4,0
Eluotropic value E° (Al ₂ O ₃)	0,57
Sol. H ₂ O in solv. at 20°C	miscible

*** At the moment of the batch analysis.**

For critical jobs, purge with nitrogen.

Microfiltered product (0.2 µm) and bottled under nitrogen atmosphere.