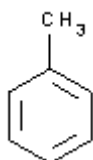
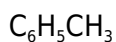


**PRODUCT CODE: 361745****Toluene for UV, IR, HPLC, GPC, ACS**

M.= 92,14

CAS [108-88-3]

EINECS 203-625-9

TARIC 2902 30 00 00

**SYNONYMS:** Methylbenzene, Phenylmethane, Toluol

**PHYSICAL DATA:** liquid, Clear, Colourless, Soluble in water 0,05 g/l at 20 °C D 20/4 0,866 • M.P.: -94,99 °C • B.P.: 110,62 °C • n<sub>20/D</sub> : 1,4963 • Flash P.: 4,4 °C • Ign. T.: 535 °C • Vap. press. (20 °C) 29 hPa • Viscosity 25 °C 0,59 mPa.s • D. M. 20 °C 0,36 Debye • Dielec. constant 25 °C 2,37 • Evap. number (DIN 53170) 6 • Heat evap. 111 °C 360 KJ/Kg • Satur. conc. 20 °C 110 g/m<sup>3</sup> • Expl. limit 1,2 % (V) 7 % (V) •

**BIBLIOGRAPHY:** Merck Index **12**, 9.667 13, 9.607 Sax **TGK750** • Safety **2** , **3363 D** • Kühn-Birett **T 13** • Ullmann **(4.)23** , 301 • Beilstein **5** , **280 I** , **144 II** , **209 III** , **651 IV** , **766** • BRN 635760 • ACS **XI** • ISO 6353/2-1983R - 39 , 55 •

**HAZARDOUS:** C.E: 601-021-00-3 • RTECS: XS 5250000 • LD<sub>50</sub> oral rat 636 mg/kg • VLA-ED 50 ppm 192 mg/m<sup>3</sup> VLA-EC (Spain) 100 ppm 384 mg/m<sup>3</sup> Factor for short-term value (Germany) 4

**Derived No Effect Level (DNEL)**

Population Inhalation, acute (systemic) 226 mg/m<sup>3</sup> Population Inhalation, acute (local) 226 mg/m<sup>3</sup> Population, Dermal, long exposure (systemic) 226 mg/m<sup>3</sup> Population Inhalation, long term (systemic) 226 mg/kg bw/24h Population Inhalation, long term (systemic) 56,5 mg/m<sup>3</sup> Population, oral, long term (systemic) 8.13 mg/kg bw/24h

**Predicted No Effect Concentration (PNEC)**

Freshwater Sediment 0.68 mg/l Marine water Sediment 0.68 mg/l Sewage treatment plant 13.61 mg/l Freshwater Sediment 16.39 mg/kg Marine water Sediment 16.39 mg/kg Soil 2.89 mg/kg



H: H225 • H315 • H361fdi • H336 • H373 • H304 •  
P: P201 • P210 • P241 • P260 • P304+P340 • P301+P310 • P303+P361+P353 • P235 • P501 •

**TRANSPORT REGULATIONS:** UN: 1294 • ADR: 3/II • IMDG: 3/II • IATA: 3/II • PAX: 353 • CAO: 364 • (D/E) •

**WEIGHT/VOLUME INFORMATION:** 1l~0,865 kg      1kg~1,156 l

**OBSERVATIONS:** Product controlled as a drug precursor. •

## **SPECIFICATIONS:**

Minimum assay (G.C.)	99,9%
Density at 20/4	0,863-0,866
<b>Maximum limit of impurities</b>	
APHA colour	10
Acidity	0,0001 meq/g
Alkalinity	0,0002 meq/g
Non-volatile matter	0,0003 %
Darkened substances by H2SO4	passes test
Sulfur compounds (as CS2)	0,0003 %
Thiophene (C4H4S)	0,0002%
Water (H2O)	0,01 %
Suitability for IR spectrometry:	passes test
Fluorescence at 365 nm (as quinine)	2 ppb
Fluorescence at 365 nm (as quinine)	2 ppb
UV Spectrum (1cm cell; Ref.: water):	
Transmittance at 285 (Cut off) nm	<sup>3</sup> 10 %
Transmittance at 288 nm	<sup>3</sup> 32 %
Transmittance at 290 nm	<sup>3</sup> 50 %
Transmittance at 293 nm	<sup>3</sup> 63 %
Transmittance at 300 nm	<sup>3</sup> 80 %
Transmittance at 310 nm	<sup>3</sup> 90 %
Transmittance at 350-450 nm	<sup>3</sup> 98 %
Data of interest in HPLC:	
P' + 0,25 E	2,9
Rohrschneider Polarity	2,4
Elutropic value E° (Al2O3)	0,29
Sol. H2O in solv. at 20°C	0,046

**For critical jobs, purge with nitrogen.**

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

Ed.: 4 . Vig.: 04.09.2013 .

Prod.: 361745