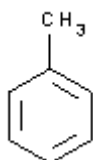
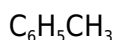


**PRODUCT CODE: 481745****Toluene dry (max. 0.005% water) , ACS, ISO**

M.= 92,14

CAS [108-88-3]

EINECS 203-625-9

TARIC 2902 30 00 00

SYNONYMS: Methylbenzene, Phenylmetane, 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_{20/D} : 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/m³ • 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 • LD₅₀ oral rat 636 mg/kg • VLA-ED 50 ppm 192 mg/m³ VLA-EC (Spain) 100 ppm 384 mg/m³ Factor for short-term value (Germany) 4

Derived No Effect Level (DNEL)

Population Inhalation, acute (systemic) 226 mg/m³ Population Inhalation, acute (local) 226 mg/m³ Population, Dermal, long exposure (systemic) 226 mg/m³ Population Inhalation, long term (systemic) 226 mg/kg bw/24h Population Inhalation, long term (systemic) 56,5 mg/m³ 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.)	99,5%
Identity :	
Identity	IR passes test
Density at 20/4	0,863-0,866

Maximum limit of impurities

APHA colour	10
Acidity	0,0001 meq/g
Alkalinity	0,0002 meq/g
Non-volatile matter	0,001 %
Darkened substances by H2SO4	passes test
Sulfur compounds (as CS2)	0,0003 %
Thiophene (C4H4S)	0,0002%
o-Xylene (G.C.)	0,01%
p-Xylene (G.C.)	0,01%
Benzene (G.C.)	0,05%
Ethylbenzene (G.C.)	0,05%
m-Xylene (G.C.)	0,05%
Water (H2O)	0,005 %

Metals by ICP [in mg/Kg (ppm)]

Ag	0,05
Al	0,5
As	0,05
Au	0,05
B	0,02
Ba	0,1
Be	0,02
Bi	0,05
Ca	0,1
Cd	0,05
Co	0,02
Cr	0,02
Cu	0,02
Fe	0,1
Ga	0,02
Ge	0,05
Hg	0,05
In	0,05
K	0,1
Li	0,05
Mg	0,1
Mn	0,02

Mo	0,02
Na	0,5
Ni	0,02
P	0,2
Pb	0,1
Pt	0,02
S	0,5
Sb	0,02
Si	0,2
Sn	0,1
Sr	0,2
Ti	0,02
Tl	0,02
V	0,02
Zn	0,1
Zr	0,02

Ed.: 3 . Vig.: 15.01.2011 .

Prod.: 481745