

# 1,3-di-o-Tolyl-2-thiourea

**Other names:**

N,N'-di-o-Tolylthiourea  
Thiourea, N,N'-bis(2-methylphenyl)-  
sym-Di-o-tolylthiourea  
Carbanilide, 2,2'-dimethylthio-  
Di-o-tolylthiourea  
Di-o-tolylthiourea  
N,N'-Bis(2-methylphenyl)thiourea  
Urea, 1,3-bis(o-tolyl)-2-thio-  
USAF EK-1651  
1,3-Bis(o-tolyl)thiourea  
1,3-Di-o-tolylthiourea  
2,2'-Dimethylthiocarbanilide  
1,3-Di-o-tolylthiomocovina  
1,3-Bis(o-tolyl)-2-thiourea  
Thiourea, 1,3-di-O-tolyl-  
Carbanilide, O,O'-dimethylthio-  
NSC 119321

**Inchi:**

InChI=1S/C15H16N2S/c1-11-7-3-5-9-13(11)16-15(18)17-14-10-6-4-8-12(14)2/h3-10H,1-

**InchiKey:**

KWPNNZKRAQDVPZ-UHFFFAOYSA-N

**Formula:**

C15H16N2S

**SMILES:**

Cc1cccc1NC(=S)Nc1cccc1C

**Mol. weight [g/mol]:**

256.37

**CAS:**

137-97-3

## Physical Properties

Property code	Value	Unit	Source
gf	576.82	kJ/mol	Joback Method
hf	350.63	kJ/mol	Joback Method
hfus	36.71	kJ/mol	Joback Method
hvap	74.46	kJ/mol	Joback Method
log10ws	-5.02		Crippen Method
logp	4.112		Crippen Method
mcvol	206.700	ml/mol	McGowan Method
pc	2746.90	kPa	Joback Method
tb	776.30	K	Joback Method
tc	1028.41	K	Joback Method
tf	476.28	K	Joback Method

vc

0.765

m<sup>3</sup>/kmol

Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	554.32	J/mol×K	776.30	Joback Method
cpg	568.41	J/mol×K	818.32	Joback Method
cpg	581.44	J/mol×K	860.34	Joback Method
cpg	593.53	J/mol×K	902.35	Joback Method
cpg	604.81	J/mol×K	944.37	Joback Method
cpg	615.43	J/mol×K	986.39	Joback Method
cpg	625.50	J/mol×K	1028.41	Joback Method

## Sources

**Joback Method:**[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)**McGowan Method:**<http://link.springer.com/article/10.1007/BF02311772>**NIST Webbook:**<http://webbook.nist.gov/cgi/cbook.cgi?ID=C137973&Units=SI>**Crippen Method:**<http://pubs.acs.org/doi/abs/10.1021/ci990307l>**Crippen Method:**[https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point

**vc:** Critical Volume

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