

# BENZENE, 1-CHLORO-4-(2-CYANO-2-PHENYLETHENYL)

|                      |                                                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other names:         | p-Chloro-«alpha»-phenylcinnamonnitrile<br>Acrylonitrile, 3-(p-chlorophenyl)-2-phenyl-<br>Benzeneacetonitrile, «alpha»-((4-chlorophenyl)methylene)-<br>4-Chlor-benzal-(benzyl-cyanid)<br>3-(p-Chlorophenyl)-2-phenylacrylonitrile<br>F 2388<br>3-(4-Chlorophenyl)-2-phenyl-2-propenenitrile |
| Inchi:               | InChI=1S/C15H10ClN/c16-15-8-6-12(7-9-15)10-14(11-17)13-4-2-1-3-5-13/h1-10H/b14-10                                                                                                                                                                                                          |
| InchiKey:            | WHZUHCZQGFNGNH-GXDHUFHOSA-N                                                                                                                                                                                                                                                                |
| Formula:             | C15H10ClN                                                                                                                                                                                                                                                                                  |
| SMILES:              | N#C/C(=C\c1ccc(Cl)cc1)c1ccccc1                                                                                                                                                                                                                                                             |
| Mol. weight [g/mol]: | 239.71                                                                                                                                                                                                                                                                                     |

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| hf            | 346.89  | kJ/mol | Cheméo Relay (1.0) |
| hfus          | 26.89   | kJ/mol | Joback Method      |
| ie            | 8.50    | eV     | Cheméo Relay (1.0) |
| logp          | 4.404   |        | Crippen Method     |
| mcvol         | 184.010 | ml/mol | McGowan Method     |
| tb            | 638.91  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 447.90 | J/mol×K | 744.49          | Joback Method |
| cpg           | 460.36 | J/mol×K | 788.59          | Joback Method |
| cpg           | 471.71 | J/mol×K | 832.69          | Joback Method |
| cpg           | 482.09 | J/mol×K | 876.79          | Joback Method |
| cpg           | 491.62 | J/mol×K | 920.88          | Joback Method |
| cpg           | 500.43 | J/mol×K | 964.98          | Joback Method |
| cpg           | 508.65 | J/mol×K | 1009.08         | Joback Method |

# Sources

Cheméo Relay (1.0, beta):

NIST Webbook: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C3695929&Units=SI>

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>

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)

Cheméo Relay (1.0):

## Legend

|               |                                              |
|---------------|----------------------------------------------|
| <b>cpg:</b>   | Ideal gas heat capacity                      |
| <b>hf:</b>    | Enthalpy of formation at standard conditions |
| <b>hfus:</b>  | Enthalpy of fusion at standard conditions    |
| <b>ie:</b>    | Ionization energy                            |
| <b>logp:</b>  | Octanol/Water partition coefficient          |
| <b>mcvol:</b> | McGowan's characteristic volume              |
| <b>tb:</b>    | Normal Boiling Point Temperature             |

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