

# (R,1E,5E,9E)-1,5,9-Trimethyl-12-(prop-1-en-2-yl)cy

|                      |                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other names:         | 1,5,9-Cyclotetradecatriene, 1,5,9-trimethyl-12-(1-methylethenyl)-, (1E,5E,9E,12R)-1,5,9-Cyclotetradecatriene, 1,5,9-trimethyl-12-(1-methylethenyl)-, [R-(E,E,E)]-1,5,9-Cyclotetradecatriene, 13-isopropenyl-2,6,10-trimethyl-, (-)-(-)-Cembrene A<br>Cembrene A<br>Neocembrene A<br>(R)-(-)-Cembrene A<br>Neocembrene<br>CEMBRENE A (711293 K111)<br>3E-Cembrene A<br>(E)-3-Cembrene A |
| Inchi:               | InChI=1S/C20H32/c1-16(2)20-14-12-18(4)10-6-8-17(3)9-7-11-19(5)13-15-20/h8,11-12,20                                                                                                                                                                                                                                                                                                     |
| InchiKey:            | VWSPQDDPRITBAM-KPGNMOGWSA-N                                                                                                                                                                                                                                                                                                                                                            |
| Formula:             | C20H32                                                                                                                                                                                                                                                                                                                                                                                 |
| SMILES:              | C=C(C)C1CC=C(C)CCC=C(C)CCC=C(C)CC1                                                                                                                                                                                                                                                                                                                                                     |
| Mol. weight [g/mol]: | 272.47                                                                                                                                                                                                                                                                                                                                                                                 |
| CAS:                 | 31570-39-5                                                                                                                                                                                                                                                                                                                                                                             |

## Physical Properties

| Property code | Value   | Unit   | Source         |
|---------------|---------|--------|----------------|
| gf            | 185.45  | kJ/mol | Joback Method  |
| hf            | -196.52 | kJ/mol | Joback Method  |
| hfus          | 22.50   | kJ/mol | Joback Method  |
| hvap          | 64.19   | kJ/mol | Joback Method  |
| log10ws       | -7.26   |        | Crippen Method |
| logp          | 6.762   |        | Crippen Method |
| mcvol         | 264.600 | ml/mol | McGowan Method |
| pc            | 1453.46 | kPa    | Joback Method  |
| rinpol        | 1960.00 |        | NIST Webbook   |
| rinpol        | 1959.00 |        | NIST Webbook   |
| rinpol        | 1941.00 |        | NIST Webbook   |
| rinpol        | 1956.00 |        | NIST Webbook   |
| rinpol        | 1959.00 |        | NIST Webbook   |
| rinpol        | 1960.00 |        | NIST Webbook   |
| rinpol        | 1941.00 |        | NIST Webbook   |
| rinpol        | 1917.00 |        | NIST Webbook   |
| rinpol        | 1970.00 |        | NIST Webbook   |

|        |         |                      |               |
|--------|---------|----------------------|---------------|
| rinpol | 1956.00 |                      | NIST Webbook  |
| rinpol | 1960.00 |                      | NIST Webbook  |
| rinpol | 1917.00 |                      | NIST Webbook  |
| rinpol | 1961.00 |                      | NIST Webbook  |
| rinpol | 1959.00 |                      | NIST Webbook  |
| rinpol | 1951.00 |                      | NIST Webbook  |
| rinpol | 1959.00 |                      | NIST Webbook  |
| rinpol | 1959.00 |                      | NIST Webbook  |
| tb     | 719.69  | K                    | Joback Method |
| tc     | 956.28  | K                    | Joback Method |
| tf     | 318.50  | K                    | Joback Method |
| vc     | 0.965   | m <sup>3</sup> /kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 773.61 | J/mol×K | 719.69          | Joback Method |
| cpg           | 800.41 | J/mol×K | 759.12          | Joback Method |
| cpg           | 825.14 | J/mol×K | 798.55          | Joback Method |
| cpg           | 847.79 | J/mol×K | 837.98          | Joback Method |
| cpg           | 868.34 | J/mol×K | 877.42          | Joback Method |
| cpg           | 886.78 | J/mol×K | 916.85          | Joback Method |
| cpg           | 903.08 | J/mol×K | 956.28          | Joback Method |

## Sources

|                        |                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C31570395&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C31570395&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>                                     |
| <b>Crippen Method:</b> | <a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>                             |
| <b>Joback Method:</b>  | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                         |
| <b>McGowan Method:</b> | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                         |

## 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>hvac:</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>rinpol:</b>  | Non-polar retention indices                     |
| <b>tb:</b>      | Normal Boiling Point Temperature                |
| <b>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |
| <b>vc:</b>      | Critical Volume                                 |

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