

# 2-Fluoro-3-trifluoromethylbenzoic acid, nonyl ester

|                      |  |
|----------------------|--|
| Inchi:               | InChI=1S/C17H22F4O2/c1-2-3-4-5-6-7-8-12-23-16(22)13-10-9-11-14(15(13)18)17(19,20 |
| InchiKey:            | JYWCDAYJRFRPN-UHFFFAOYSA-N   |
| Formula:             | C17H22F4O2   |
| SMILES:              | CCCCCCCCOC(=O)c1cccc(C(F)(F)F)c1F  |
| Mol. weight [g/mol]: | 334.35   |

## Physical Properties

| Property code | Value    | Unit                 | Source         |
|---------------|----------|----------------------|----------------|
| gf            | -824.91  | kJ/mol               | Joback Method  |
| hf            | -1218.61 | kJ/mol               | Joback Method  |
| hfus          | 40.74    | kJ/mol               | Joback Method  |
| hvap          | 61.63    | kJ/mol               | Joback Method  |
| log10ws       | -6.50    |                      | Crippen Method |
| logp          | 5.752    |                      | Crippen Method |
| mvol          | 241.150  | ml/mol               | McGowan Method |
| pc            | 1409.07  | kPa                  | Joback Method  |
| rinpol        | 1869.00  |                      | NIST Webbook   |
| rinpol        | 1869.00  |                      | NIST Webbook   |
| tb            | 695.14   | K                    | Joback Method  |
| tc            | 873.15   | K                    | Joback Method  |
| tf            | 409.75   | K                    | Joback Method  |
| vc            | 0.965    | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 688.03 | J/molxK | 695.14          | Joback Method |
| cpg           | 703.30 | J/molxK | 724.81          | Joback Method |
| cpg           | 717.74 | J/molxK | 754.48          | Joback Method |
| cpg           | 731.37 | J/molxK | 784.15          | Joback Method |
| cpg           | 744.21 | J/molxK | 813.81          | Joback Method |
| cpg           | 756.32 | J/molxK | 843.48          | Joback Method |
| cpg           | 767.70 | J/molxK | 873.15          | Joback Method |

# Sources

|                        |   |
|------------------------|---|
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U338724&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U338724&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</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>hvp:</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>rinp:</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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