

# 3,3,3-Trifluoropropene

|                      |                                      |
|----------------------|--------------------------------------|
| Other names:         | 1,1,1-Trifluoropropene               |
|                      | 1,1,1-trifluoro-2-propene            |
|                      | 1-Propene, 3,3,3-trifluoro-          |
|                      | 3,3,3-Trifluoro-1-propene            |
|                      | 3,3,3-Trifluoropropylene             |
|                      | Propene, 3,3,3-trifluoro-            |
|                      | R-1243zf                             |
|                      | Tifluoromethylethylene               |
| Inchi:               | InChI=1S/C3H3F3/c1-2-3(4,5)6/h2H,1H2 |
| InchiKey:            | FDMFUZHCHIRHGGRG-UHFFFAOYSA-N        |
| Formula:             | C3H3F3                               |
| SMILES:              | C=CC(F)(F)F                          |
| Mol. weight [g/mol]: | 96.05                                |
| CAS:                 | 677-21-4                             |

## Physical Properties

| Property code | Value           | Unit    | Source         |
|---------------|-----------------|---------|----------------|
| chg           | -1532.00 ± 6.70 | kJ/mol  | NIST Webbook   |
| gf            | -519.37         | kJ/mol  | Joback Method  |
| hf            | -614.20 ± 6.70  | kJ/mol  | NIST Webbook   |
| hfus          | 4.07            | kJ/mol  | Joback Method  |
| hvap          | 22.00           | kJ/mol  | NIST Webbook   |
| ie            | 10.90           | eV      | NIST Webbook   |
| ie            | 10.95           | eV      | NIST Webbook   |
| ie            | 11.24 ± 0.04    | eV      | NIST Webbook   |
| log10ws       | -1.59           |         | Crippen Method |
| logp          | 1.735           |         | Crippen Method |
| mcvol         | 54.140          | ml/mol  | McGowan Method |
| pc            | 3609.00 ± 7.00  | kPa     | NIST Webbook   |
| rinpol        | 315.00          |         | NIST Webbook   |
| tb            | 255.00          | K       | NIST Webbook   |
| tc            | 378.59 ± 0.20   | K       | NIST Webbook   |
| tf            | 126.00          | K       | Joback Method  |
| vc            | 0.228           | m3/kmol | Joback Method  |

# Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source  |
|---------------|--------|---------|-----------------|---|
| cpg           | 110.74 | J/molxK | 404.00          | Joback Method   |
| cpg           | 106.17 | J/molxK | 379.88          | Joback Method   |
| cpg           | 101.32 | J/molxK | 355.77          | Joback Method   |
| cpg           | 96.18  | J/molxK | 331.65          | Joback Method   |
| cpg           | 90.76  | J/molxK | 307.53          | Joback Method   |
| cpg           | 85.02  | J/molxK | 283.42          | Joback Method   |
| cpg           | 78.97  | J/molxK | 259.30          | Joback Method   |
| pvap          | 99.00  | kPa     | 247.15          | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap          | 174.00 | kPa     | 261.15          | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap          | 188.00 | kPa     | 263.15          | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap          | 202.00 | kPa     | 265.15          | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap          | 217.00 | kPa     | 267.15          | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|--------|-----|--------|---|
| pvap | 234.00 | kPa | 269.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 251.00 | kPa | 271.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 269.00 | kPa | 273.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 288.00 | kPa | 275.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 308.00 | kPa | 277.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 329.00 | kPa | 279.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 351.00 | kPa | 281.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|--------|-----|--------|---|
| pvap | 374.00 | kPa | 283.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 399.00 | kPa | 285.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 424.00 | kPa | 287.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 451.00 | kPa | 289.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 479.00 | kPa | 291.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 509.00 | kPa | 293.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 539.00 | kPa | 295.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|--------|-----|--------|---|
| pvap | 572.00 | kPa | 297.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 606.00 | kPa | 299.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 641.00 | kPa | 301.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 677.00 | kPa | 303.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 715.00 | kPa | 305.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 755.00 | kPa | 307.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 796.00 | kPa | 309.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 839.00  | kPa | 311.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 883.00  | kPa | 313.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 930.00  | kPa | 315.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 978.00  | kPa | 317.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1028.00 | kPa | 319.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1080.00 | kPa | 321.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1133.00 | kPa | 323.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 1189.00 | kPa | 325.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1247.00 | kPa | 327.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1306.00 | kPa | 329.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1369.00 | kPa | 331.16 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1432.00 | kPa | 333.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1498.00 | kPa | 335.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1567.00 | kPa | 337.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 1638.00 | kPa | 339.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1711.00 | kPa | 341.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1787.00 | kPa | 343.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1865.00 | kPa | 345.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1945.00 | kPa | 347.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2030.00 | kPa | 349.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2116.00 | kPa | 351.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |



|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 2205.00 | kPa | 353.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 53.00   | kPa | 233.80 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 67.00   | kPa | 238.36 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 84.00   | kPa | 243.30 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 104.00  | kPa | 248.26 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 128.00  | kPa | 253.29 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 156.00  | kPa | 258.19 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|--------|-----|--------|---|
| pvap | 189.00 | kPa | 263.27 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 225.00 | kPa | 268.16 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 269.00 | kPa | 273.12 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 316.00 | kPa | 277.88 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 371.00 | kPa | 282.84 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 434.00 | kPa | 287.82 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 589.00 | kPa | 298.16 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 678.00  | kPa | 303.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 776.00  | kPa | 308.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 884.00  | kPa | 313.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1003.00 | kPa | 318.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1133.00 | kPa | 323.16 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1277.00 | kPa | 328.17 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1432.00 | kPa | 333.13 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|---------|-----|--------|---|
| pvap | 1598.00 | kPa | 338.03 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1782.00 | kPa | 343.02 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 1986.00 | kPa | 348.08 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2197.00 | kPa | 352.94 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2432.00 | kPa | 357.94 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2697.00 | kPa | 363.14 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2960.00 | kPa | 367.90 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

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|------|---------|-----|--------|---|
| pvap | 3255.00 | kPa | 372.86 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98   |
| pvap | 268.80  | kPa | 273.17 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 318.40  | kPa | 278.17 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 373.60  | kPa | 283.16 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 437.60  | kPa | 288.16 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |

|      |        |     |        |   |
|------|--------|-----|--------|---|
| pvap | 510.00 | kPa | 293.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 590.10 | kPa | 298.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 678.20 | kPa | 303.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 776.70 | kPa | 308.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 883.60 | kPa | 313.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 1001.80 | kPa | 318.15 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 1130.40 | kPa | 323.14 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 1274.90 | kPa | 328.14 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 1431.60 | kPa | 333.14 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 1600.50 | kPa | 338.14 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 1785.70 | kPa | 343.14 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 1986.40 | kPa | 348.13 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 2203.10 | kPa | 353.13 | Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system |
| pvap | 815.40  | kPa | 310.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)   |
| pvap | 815.10  | kPa | 310.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)   |
| pvap | 927.20  | kPa | 315.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)   |
| pvap | 1050.10 | kPa | 320.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)   |



|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 1185.60 | kPa | 325.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 1333.10 | kPa | 330.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 1494.30 | kPa | 335.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 1669.50 | kPa | 340.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 1860.00 | kPa | 345.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 1860.00 | kPa | 345.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 2066.60 | kPa | 350.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |
| pvap | 161.00  | kPa | 259.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 2532.60 | kPa | 360.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 2532.40 | kPa | 360.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 2794.90 | kPa | 365.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 3080.00 | kPa | 370.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 3262.70 | kPa | 373.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 3390.00 | kPa | 375.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 3390.00 | kPa | 375.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |
| pvap | 3518.30 | kPa | 376.93 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf) |

|      |         |     |        |   |
|------|---------|-----|--------|---|
| pvap | 149.00  | kPa | 257.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 138.00  | kPa | 255.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 127.00  | kPa | 253.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 117.00  | kPa | 251.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 108.00  | kPa | 249.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 103.00  | kPa | 248.15 | Saturated pressure measurements of 3,3,3-trifluoroprop-1-ene (R1243zf) for reduced temperatures ranging from 0.62 to 0.98 |
| pvap | 2290.30 | kPa | 355.00 | Measurements of Saturation Pressures for Trifluoroethene (R1123) and 3,3,3-Trifluoropropene (R1243zf)                     |

# Datasets

## Mass density, kg/m3

| Temperature, K - Gas | Pressure, kPa - Gas | Mass density, kg/m3 - Gas |
|----------------------|---------------------|---------------------------|
| 330.00               | 1111.50             | 50.0                      |
| 340.00               | 1167.60             | 49.9                      |
| 350.00               | 1222.40             | 49.9                      |
| 360.00               | 1276.20             | 49.9                      |
| 370.00               | 1329.20             | 49.9                      |
| 380.00               | 1381.90             | 49.9                      |
| 390.00               | 1433.60             | 49.9                      |
| 400.00               | 1484.40             | 49.8                      |
| 410.00               | 1534.90             | 49.8                      |
| 420.00               | 1584.70             | 49.7                      |
| 430.00               | 1633.50             | 49.7                      |
| 355.00               | 2036.40             | 99.8                      |
| 360.00               | 2101.20             | 99.8                      |
| 370.00               | 2227.80             | 99.8                      |
| 380.00               | 2351.30             | 99.8                      |
| 390.00               | 2472.50             | 99.7                      |
| 400.00               | 2591.10             | 99.7                      |
| 410.00               | 2708.00             | 99.6                      |
| 420.00               | 2823.00             | 99.5                      |
| 430.00               | 2936.00             | 99.3                      |
| 380.00               | 3350.90             | 199.9                     |
| 385.00               | 3499.40             | 199.9                     |
| 390.00               | 3645.50             | 199.8                     |
| 395.00               | 3789.80             | 199.8                     |
| 400.00               | 3931.90             | 199.7                     |
| 405.00               | 4073.00             | 199.7                     |
| 410.00               | 4212.50             | 199.6                     |
| 415.00               | 4350.80             | 199.5                     |
| 420.00               | 4487.80             | 199.4                     |
| 425.00               | 4623.80             | 199.2                     |
| 430.00               | 4758.70             | 199.1                     |
| 379.00               | 3659.30             | 408.6                     |
| 380.00               | 3727.70             | 408.6                     |
| 385.00               | 4070.40             | 408.5                     |
| 390.00               | 4415.70             | 408.4                     |

|        |         |       |
|--------|---------|-------|
| 395.00 | 4762.20 | 408.3 |
| 400.00 | 5109.30 | 408.2 |
| 405.00 | 5458.70 | 408.1 |
| 410.00 | 5806.10 | 407.9 |
| 415.00 | 6157.70 | 407.7 |
| 420.00 | 6507.10 | 407.5 |
| 425.00 | 6857.20 | 407.2 |

Reference

<https://www.doi.org/10.1021/acs.jced.8b00452>

## Sources

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## Legend

|          |   |
|----------|---|
| chg:     | Standard gas enthalpy of combustion             |
| cpg:     | Ideal gas heat capacity                         |
| gf:      | Standard Gibbs free energy of formation         |
| hf:      | Enthalpy of formation at standard conditions    |
| hfus:    | Enthalpy of fusion at standard conditions       |
| hvap:    | Enthalpy of vaporization at standard conditions |
| ie:      | Ionization energy                               |
| log10ws: | Log10 of Water solubility in mol/l              |
| logp:    | Octanol/Water partition coefficient             |
| mcvol:   | McGowan's characteristic volume                 |
| pc:      | Critical Pressure                               |
| vpap:    | Vapor pressure                                  |

|                |                                  |
|----------------|----------------------------------|
| <b>rhog:</b>   | Gas Density                      |
| <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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