

2.2 Unsaturated Monoesters of General Formula, C_nH_{2n-2}O₂

Ethenyl methanoate

[692-45-5]

C₃H₄O₂

MW = 72.06

385

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
313.15	918.0 ± 1.5	1977-bur/lee

Ethenyl ethanoate

[108-05-4]

C₄H₆O₂

MW = 86.09

386

Table 1. Fit with estimated *B* coefficient for 2 accepted points. Deviation σ_w = 0.241.

Coefficient	$\rho = A + BT$
<i>A</i>	1283.38
<i>B</i>	-1.200

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	934.0 ± 1.5	2.40	1943-gol/jos ¹⁾
293.15	934.0 ± 1.5	2.40	1965-sav/an ¹⁾
293.15	932.2 ± 1.0	0.60	1968-ano
298.15	925.5 ± 0.4	-0.10	1988-kat-1

¹⁾ Not included in calculation of linear coefficients.

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	935.4 ± 0.5
293.15	931.6 ± 0.5
298.15	925.6 ± 0.4

Methyl propenoate

[96-33-3]

C₄H₆O₂

MW = 86.09

387

Table 1. Fit with estimated *B* coefficient for 4 accepted points. Deviation σ_w = 0.357.

Coefficient	$\rho = A + BT$
<i>A</i>	1301.23
<i>B</i>	-1.200

cont.

Methyl propenoate (cont.)

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	953.5 ± 2.0	4.05	1944-reh/fis ¹⁾
283.15	961.8 ± 0.8	0.35	1951-mat/aue
288.15	955.8 ± 0.8	0.35	1951-mat/aue
303.15	937.2 ± 0.8	-0.25	1951-mat/aue
323.15	913.0 ± 0.8	-0.45	1951-mat/aue

¹⁾ Not included in calculation of linear coefficients.

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
280.00	965.2 ± 1.0
290.00	953.2 ± 0.8
293.15	949.5 ± 0.7
298.15	943.5 ± 0.7
310.00	929.2 ± 0.8
320.00	917.2 ± 1.1
330.00	905.2 ± 1.4

Ethenyl propanoate [105-38-4] C₅H₈O₂ MW = 100.12 388

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	915.8 ± 0.4	1956-ano-14

Ethyl propenoate [140-88-5] C₅H₈O₂ MW = 100.12 389

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	923.4 ± 1.0	1944-reh/fis
293.15	921.4 ± 1.0	1968-ano
293.15	922.4 ± 1.2	Recommended

Methyl 2-methylpropenoate [80-62-6] C₅H₈O₂ MW = 100.12 390

Table 1. Fit with estimated *B* coefficient for 3 accepted points. Deviation σ_w = 0.100.

Coefficient	$\rho = A + BT$
<i>A</i>	1241.83
<i>B</i>	-1.020

cont.

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	937.0 ± 2.0	-5.81	1943-gol/jos ¹⁾
293.15	943.0 ± 1.0	0.19	1968-ano
298.15	937.9 ± 0.4	0.19	1980-yu /ish
298.15	937.7 ± 0.2	-0.05	1987-luo/ham

¹⁾ Not included in calculation of linear coefficients.

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	946.0 ± 0.5
293.15	942.8 ± 0.4
298.15	937.7 ± 0.4

1-Methylethenyl ethanoate

[108-22-5]

C₅H₈O₂

MW = 100.12

391

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	921.0 ± 1.0	1968-ano

2-Propenyl ethanoate

[591-87-7]

C₅H₈O₂

MW = 100.12

392

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	927.6 ± 2.0	1880-bru-3 ¹⁾
376.15	822.0 ± 2.0	1883-sch-3 ¹⁾
376.15	822.0 ± 2.0	1883-sch-3 ¹⁾
297.65	925.8 ± 2.0	1884-gla ¹⁾
298.15	922.2 ± 0.5	1952-mye/col
298.15	922.2 ± 0.5	Recommended

¹⁾ Not included in calculation of recommended value.

Ethenyl 2-methylpropanoate

[2424-98-8]

C₆H₁₀O₂

MW = 114.14

393

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	889.2 ± 0.4	1957-ano-10

Ethyl (*E*)-2-butenolate

[623-70-1]

C₆H₁₀O₂

MW = 114.14

394

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	923.7 ± 2.0	1886-bru
293.15	918.8 ± 2.0	1886-bru
297.15	920.8 ± 1.0	1969-bes

Methyl (*E*)-2-methyl-2-butenolate

[500027-72-5]

C₆H₁₀O₂

MW = 114.14

395

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	948.2 ± 0.8	1935-dra/spi

Methyl 3-pentenoate

[818-58-6]

C₆H₁₀O₂

MW = 114.14

396

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
292.35	940.5 ± 2.0	1932-von/kon ¹⁾
297.85	936.7 ± 2.0	1932-von/kon ¹⁾
293.15	928.4 ± 0.8	1948-goe/cri
293.15	928.4 ± 0.8	Recommended

¹⁾ Not included in calculation of recommended value.

1-Methylethyl 2-propenoate

[689-12-3]

C₆H₁₀O₂

MW = 114.14

397

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
295.15	893.5 ± 1.0	1940-ipa
293.15	893.2 ± 1.0	1944-reh/fau
293.15	893.4 ± 1.0	Recommended

1-Methyl-2-propenyl ethanoate

[6737-11-7]

C₆H₁₀O₂

MW = 114.14

398

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
298.15	893.9 ± 0.5	1952-mye/col

Propyl 2-propenoate

[925-60-0]

C₆H₁₀O₂

MW = 114.14

399

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	907.8 ± 0.6	1944-reh/fis

Butyl propenoate

[141-32-2]

C₇H₁₂O₂

MW = 128.17

400

Table 1. Fit with estimated *B* coefficient for 3 accepted points. Deviation σ_w = 0.305.

Coefficient	$\rho = A + BT$
<i>A</i>	1251.22
<i>B</i>	-1.200

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	899.8 ± 0.6	0.36	1944-reh/fis
293.15	899.9 ± 1.0	0.46	1968-ano
298.15	893.2 ± 0.4	-0.24	1996-ste/chi-1

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	903.2 ± 0.7
293.15	899.4 ± 0.7
298.15	893.4 ± 0.7

1-Methylpropyl 2-propenoate

[2998-08-5]

C₇H₁₂O₂

MW = 128.17

401

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	891.4 ± 0.6	1944-reh/fau

1-Pentenyl ethanoate

[500028-83-1]

C₇H₁₂O₂

MW = 128.17

402

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
299.15	896.0 ± 2.0	1945-sch/gel

Ethyl 2-hexenoate

[1552-67-6]

C₈H₁₄O₂

MW = 142.2

403

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	919.2 ± 1.0	1963-nik

1-Ethylpropyl 2-propenoate

[4513-35-3]

C₈H₁₄O₂

MW = 142.2

404

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	888.3 ± 0.6	1944-reh/fau

2-Methylbutyl 2-propenoate

[44914-03-6]

C₈H₁₄O₂

MW = 142.2

405

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	887.1 ± 0.6	1944-reh/fau

3-Methylbutyl 2-propenoate

[4245-35-6]

C₈H₁₄O₂

MW = 142.2

406

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	891.1 ± 0.6	1944-reh/fau

Pentyl 2-propenoate

[2998-23-4]

C₈H₁₄O₂

MW = 142.2

407

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	890.3 ± 0.6	1944-reh/fis

1,3-Dimethylbutyl 2-propenoate

[18933-92-1]

C₉H₁₆O₂

MW = 156.22

408

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	872.3 ± 0.6	1944-reh/fau

2-Ethylbutyl 2-propenoate

[3953-10-4]

C₉H₁₆O₂

MW = 156.22

409

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	891.2 ± 0.6	1944-reh/fau

Hexyl 2-propenoate

[2499-95-8]

C₉H₁₆O₂

MW = 156.22

410

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	888.2 ± 0.6	1944-reh/fis

Heptyl 2-propenoate

[2499-58-3]

C₁₀H₁₈O₂

MW = 170.25

411

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	884.6 ± 0.6	1944-reh/fis

Methyl 2-nonenoate

[111-79-5]

C₁₀H₁₈O₂

MW = 170.25

412

Table 1. Fit with estimated *B* coefficient for 3 accepted points. Deviation σ_w = 0.108.

Coefficient	$\rho = A + BT$
<i>A</i>	1043.56
<i>B</i>	-0.750

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
298.15	819.9 ± 0.5	-0.05	1993-ami/rai
303.15	816.1 ± 0.5	-0.10	1993-ami/rai
308.15	812.6 ± 0.5	0.15	1993-ami/rai

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	826.1 ± 0.7
293.15	823.7 ± 0.6
298.15	820.0 ± 0.5
310.00	811.1 ± 0.5

1-Methylhexyl 2-propenoate

[61634-82-0]

C₁₀H₁₈O₂

MW = 170.25

413

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	875.0 ± 0.6	1944-reh/fau

2-Ethylhexyl 2-propenoate

[103-11-7]

C₁₁H₂₀O₂

MW = 184.28

414

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	885.2 ± 0.7	1944-reh/fau
293.15	885.3 ± 1.0	1968-ano
293.15	885.2 ± 0.7	Recommended

1-Methylheptyl 2-propenoate

[42928-85-8]

C₁₁H₂₀O₂

MW = 184.28

415

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	875.4 ± 0.7	1944-reh/fau

Octyl 2-propenoate

[2499-59-4]

C₁₁H₂₀O₂

MW = 184.28

416

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	881.0 ± 0.6	1944-reh/fis

Nonyl 2-propenoate

[2664-55-3]

C₁₂H₂₂O₂

MW = 198.31

417

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	878.5 ± 0.6	1944-reh/fis

Decyl 2-propenoate

[2156-96-9]

C₁₃H₂₄O₂

MW = 212.33

418

Table 1. Experimental values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	877.3 ± 2.0	1944-reh/fis
293.15	878.9 ± 2.0	1944-reh/fis
293.15	883.4 ± 1.0	1955-ano-13

2-Ethylhexyl 4-pentenoate

[86198-08-5]

C₁₃H₂₄O₂

MW = 212.33

419

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	878.7 ± 0.4	1957-ano-10

8-Methylnonyl propenoate

[1330-61-6]

C₁₃H₂₄O₂

MW = 212.33

420

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	883.2 ± 1.0	1968-ano

4-Ethyl-1-methyloctyl 2-propenoate

[500019-78-3]

C₁₄H₂₆O₂

MW = 226.36

421

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	875.8 ± 1.0	1944-reh/fau

Dodecyl 2-propenoate

[500019-73-8]

C₁₅H₂₈O₂

MW = 240.39

422

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	872.7 ± 1.0	1944-reh/fis

Tridecyl 2-propenoate

[3076-04-8]

C₁₆H₃₀O₂

MW = 254.41

423

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	880.6 ± 0.4	1954-ano-12

Heptyl 3,7-dimethyl-6-ocetenoate

[500036-02-2]

C₁₇H₃₂O₂

MW = 268.44

424

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
288.15	876.0 ± 1.0	1937-rog/dvo

Tetradecyl 2-propenoate

[21643-42-5]

C₁₇H₃₂O₂

MW = 268.44

425

Table 1. Fit with estimated *B* coefficient for 2 accepted points. Deviation σ_w = 0.050.

Coefficient	$\rho = A + BT$
<i>A</i>	1101.64
<i>B</i>	-0.790

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	870.0 ± 1.0	-0.05	1944-reh/fis
303.15	862.2 ± 1.0	0.05	1944-reh/fis

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	872.5 ± 1.0
293.15	870.1 ± 0.9
298.15	866.1 ± 0.9
310.00	856.7 ± 1.0

Methyl (Z)-9-octadecenoate

[112-62-9]

C₁₉H₃₆O₂

MW = 296.49

426

Table 1. Experimental values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
299.15	876.8 ± 2.0	1932-bri-2
293.15	874.0 ± 2.0	1964-gou/vlu
313.15	859.6 ± 2.0	1964-gou/vlu
298.15	859.0 ± 2.0	1967-rus/ber

Ethyl (Z)-9-octadeceneoate

[111-62-6]

C₂₀H₃₈O₂

MW = 310.52

427

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	870.8 ± 0.5	1971-che/shv

Methyl (Z)-13-docosenoate

[1120-34-9]

C₂₃H₄₄O₂

MW = 352.6

428

Table 1. Fit with estimated *B* coefficient for 2 accepted points. Deviation σ_w = 0.250.

Coefficient	$\rho = A + BT$
<i>A</i>	1084.85
<i>B</i>	-0.730

cont.

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	870.6 ± 1.0	-0.25	1964-gou/vlu
313.15	856.5 ± 1.0	0.25	1964-gou/vlu

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	873.1 ± 1.1
293.15	870.9 ± 1.1
298.15	867.2 ± 1.0
310.00	858.5 ± 1.0
320.00	851.2 ± 1.3

Heptyl (Z)-9-octadecenoate

[500035-99-4]

C₂₅H₄₈O₂

MW = 380.65

429

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
288.15	868.6 ± 1.0	1937-rog/dvo

2.3 Unsaturated Monoesters of General Formula, C_nH_{2n-4}O₂

Ethenyl 2-propenoate

[2177-18-6]

C₅H₆O₂

MW = 98.1

430

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	943.6 ± 0.4	1957-ano-10

2-Propynyl ethanoate

[627-09-8]

C₅H₆O₂

MW = 98.1

431

Table 1. Experimental and recommended values with uncertainties.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	1005.2 ± 2.0	1880-bru-3 ¹⁾
293.15	1012.2 ± 2.0	1880-bru-3 ¹⁾
298.15	994.3 ± 0.6	1952-mye/col
298.15	994.3 ± 0.6	Recommended

¹⁾ Not included in calculation of recommended value.

1,3-Butadienyl ethanoate

[1515-76-0]

C₆H₈O₂

MW = 112.13

432

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	952.4 ± 0.4	1954-ano-12

Methyl 3,5-hexadienoate

[40338-61-2]

C₇H₁₀O₂

MW = 126.16

433

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	951.8 ± 1.0	1961-chi/mer

2-Propenyl 2-methylpropenoate

[96-05-9]

C₇H₁₀O₂

MW = 126.16

434

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	933.5 ± 0.7	1943-reh/fis

1-Ethynyl-1-methylpropyl ethanoate

[500029-12-9]

C₈H₁₂O₂

MW = 140.18

435

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
298.15	925.6 ± 0.6	1952-mye/col

Methyl 2,5-heptadienoate

[18261-30-8]

C₈H₁₂O₂

MW = 140.18

436

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	935.8 ± 1.0	1961-chi/mer

Methyl 3,5-heptadienoate

[38013-24-0]

C₈H₁₂O₂

MW = 140.18

437

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	946.2 ± 1.0	1961-chi/mer

Methyl 5-methyl-2,4-hexadienoate

[500004-47-7]

C₈H₁₂O₂

MW = 140.18

438

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	956.6 ± 1.0	1961-chi/mer

Methyl 5-methyl-2,5-hexadienoate

[500004-46-6]

C₈H₁₂O₂

MW = 140.18

439

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	935.3 ± 1.0	1961-chi/mer

Methyl 5-methyl-3,5-hexadienoate

[101567-51-5]

C₈H₁₂O₂

MW = 140.18

440

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	947.1 ± 1.0	1961-chi/mer

2-Methyl-2-propenyl 2-methylpropenoate

[500017-53-8]

C₈H₁₂O₂

MW = 154.21

441

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	923.1 ± 0.7	1943-reh/fis

Methyl 6-methyl-2,5-heptadienoate

[37410-80-3]

C₉H₁₄O₂

MW = 154.21

442

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	932.0 ± 1.0	1961-chi/mer

Methyl 6-methyl-3,5-heptadienoate

[500004-54-6]

C₉H₁₄O₂

MW = 154.21

443

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	945.7 ± 1.0	1961-chi/mer

(E)-3,7-Dimethyl-2,6-octadienyl ethanoate

[105-87-3]

C₁₂H₂₀O₂

MW = 196.29

444

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
298.15	916.5 ± 0.6	1965-rum

(Z)-3,7-Dimethyl-2,6-octadienyl ethanoate

[141-12-8]

C₁₂H₂₀O₂

MW = 196.29

445

Table 1. Experimental value with uncertainty.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
298.15	912.8 ± 0.6	1965-rum

Methyl (Z,Z)-9,12-octadecadienate

[112-63-0]

C₁₉H₃₄O₂

MW = 294.48

446

Table 1. Fit with estimated B coefficient for 2 accepted points. Deviation σ_w = 0.500.

Coefficient	$\rho = A + BT$
A	1115.76
B	-0.780

cont.

Methyl (Z,Z)-9,12-octadecadienate (cont.)

Table 2. Experimental values with uncertainties and deviation from calculated values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$	$\frac{\rho_{\text{exp}} - \rho_{\text{calc}}}{\text{kg} \cdot \text{m}^{-3}}$	Ref.
293.15	886.6 ± 1.0	-0.50	1964-gou/vlu
313.15	872.0 ± 1.0	0.50	1964-gou/vlu

Table 3. Recommended values.

$\frac{T}{\text{K}}$	$\frac{\rho_{\text{exp}} \pm 2\sigma_{\text{est}}}{\text{kg} \cdot \text{m}^{-3}}$
290.00	889.6 ± 1.2
293.15	887.1 ± 1.1
298.15	883.2 ± 1.1
310.00	874.0 ± 1.1
320.00	866.2 ± 1.3