



# Forane<sup>®</sup> 507A

(50.0% R-125, 50.0% R-143a by weight)

## Thermodynamic Properties (Saturation) - SI

This data was generated using the NIST REFPROP Database

(Lemmon, E.W., Huber, M.L., McLinden, M.O. NIST Standard Reference Database 23: Reference Fluid Thermodynamic and Transport Properties-REFPROP, Version 9.0, National Institute of Standards and Technology, Standard Reference Data Program, Gaithersburg, 2010)



**Thermodynamic Properties of R-507A - Saturation**

Temperature (°C)	Pressure (kPa)		Volume (m <sup>3</sup> /kg)		Density (kg/m <sup>3</sup> )		Enthalpy (kJ/kg)		Entropy (kJ/(kg K))		Temperature (°C)
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	
-100	3.0	2.9	0.0007	4.9292	1476.9	0.203	74.41	303.90	0.4323	1.7579	-100
-99	3.2	3.2	0.0007	4.5255	1473.8	0.221	75.62	304.49	0.4393	1.7537	-99
-98	3.5	3.5	0.0007	4.1598	1470.8	0.240	76.84	305.08	0.4463	1.7496	-98
-97	3.9	3.8	0.0007	3.8282	1467.8	0.261	78.05	305.67	0.4532	1.7455	-97
-96	4.2	4.2	0.0007	3.5272	1464.7	0.284	79.27	306.26	0.4601	1.7416	-96
-95	4.6	4.6	0.0007	3.2536	1461.7	0.307	80.48	306.85	0.4669	1.7377	-95
-94	5.0	5.0	0.0007	3.0045	1458.7	0.333	81.69	307.45	0.4737	1.7339	-94
-93	5.4	5.4	0.0007	2.7776	1455.7	0.360	82.89	308.04	0.4804	1.7303	-93
-92	5.9	5.9	0.0007	2.5705	1452.7	0.389	84.10	308.64	0.4871	1.7267	-92
-91	6.4	6.4	0.0007	2.3814	1449.8	0.420	85.31	309.23	0.4937	1.7231	-91
-90	6.9	6.9	0.0007	2.2085	1446.8	0.453	86.51	309.83	0.5003	1.7197	-90
-89	7.5	7.5	0.0007	2.0502	1443.8	0.488	87.72	310.43	0.5069	1.7163	-89
-88	8.1	8.1	0.0007	1.9052	1440.8	0.525	88.92	311.03	0.5134	1.7130	-88
-87	8.8	8.8	0.0007	1.7721	1437.8	0.564	90.13	311.63	0.5199	1.7098	-87
-86	9.5	9.4	0.0007	1.6499	1434.9	0.606	91.33	312.23	0.5263	1.7067	-86
-85	10.2	10.2	0.0007	1.5375	1431.9	0.650	92.53	312.83	0.5327	1.7036	-85
-84	11.0	11.0	0.0007	1.4341	1428.9	0.697	93.73	313.43	0.5391	1.7006	-84
-83	11.8	11.8	0.0007	1.3389	1426.0	0.747	94.94	314.03	0.5454	1.6977	-83
-82	12.7	12.7	0.0007	1.2511	1423.0	0.799	96.14	314.64	0.5517	1.6948	-82
-81	13.7	13.6	0.0007	1.1700	1420.0	0.855	97.34	315.24	0.5580	1.6920	-81
-80	14.7	14.6	0.0007	1.0951	1417.1	0.913	98.55	315.85	0.5642	1.6893	-80
-79	15.7	15.7	0.0007	1.0259	1414.1	0.975	99.75	316.45	0.5704	1.6866	-79
-78	16.8	16.8	0.0007	0.9618	1411.2	1.040	100.95	317.06	0.5766	1.6840	-78
-77	18.0	18.0	0.0007	0.9025	1408.2	1.108	102.16	317.66	0.5828	1.6815	-77
-76	19.3	19.3	0.0007	0.8474	1405.2	1.180	103.36	318.27	0.5889	1.6790	-76
-75	20.6	20.6	0.0007	0.7964	1402.3	1.256	104.57	318.88	0.5950	1.6766	-75
-74	22.0	22.0	0.0007	0.7490	1399.3	1.335	105.77	319.48	0.6011	1.6742	-74
-73	23.5	23.5	0.0007	0.7049	1396.3	1.419	106.98	320.09	0.6071	1.6719	-73
-72	25.0	25.0	0.0007	0.6639	1393.4	1.506	108.18	320.70	0.6131	1.6696	-72
-71	26.6	26.6	0.0007	0.6257	1390.4	1.598	109.39	321.31	0.6191	1.6674	-71
-70	28.4	28.4	0.0007	0.5901	1387.4	1.695	110.60	321.92	0.6250	1.6652	-70
-69	30.2	30.2	0.0007	0.5570	1384.4	1.796	111.81	322.52	0.6310	1.6631	-69
-68	32.1	32.1	0.0007	0.5260	1381.5	1.901	113.02	323.13	0.6369	1.6611	-68
-67	34.1	34.1	0.0007	0.4971	1378.5	2.012	114.23	323.74	0.6428	1.6591	-67
-66	36.2	36.2	0.0007	0.4701	1375.5	2.127	115.44	324.35	0.6486	1.6571	-66
-65	38.4	38.4	0.0007	0.4448	1372.5	2.248	116.66	324.96	0.6545	1.6552	-65
-64	40.7	40.7	0.0007	0.4212	1369.5	2.374	117.87	325.57	0.6603	1.6533	-64
-63	43.1	43.1	0.0007	0.3990	1366.5	2.506	119.09	326.17	0.6661	1.6515	-63
-62	45.6	45.6	0.0007	0.3783	1363.5	2.644	120.31	326.78	0.6718	1.6497	-62
-61	48.3	48.3	0.0007	0.3588	1360.5	2.787	121.52	327.39	0.6776	1.6480	-61
-60	51.1	51.1	0.0007	0.3406	1357.4	2.936	122.74	328.00	0.6833	1.6463	-60
-59	54.0	53.9	0.0007	0.3234	1354.4	3.092	123.97	328.61	0.6890	1.6446	-59
-58	57.0	57.0	0.0007	0.3073	1351.4	3.254	125.19	329.21	0.6947	1.6430	-58
-57	60.1	60.1	0.0007	0.2921	1348.4	3.423	126.41	329.82	0.7004	1.6414	-57
-56	63.4	63.4	0.0007	0.2779	1345.3	3.599	127.64	330.43	0.7060	1.6399	-56
-55	66.9	66.9	0.0007	0.2644	1342.3	3.782	128.87	331.03	0.7116	1.6384	-55
-54	70.5	70.5	0.0007	0.2518	1339.2	3.971	130.10	331.64	0.7173	1.6369	-54
-53	74.2	74.2	0.0007	0.2399	1336.1	4.169	131.33	332.24	0.7228	1.6355	-53
-52	78.1	78.1	0.0008	0.2286	1333.1	4.374	132.56	332.84	0.7284	1.6341	-52
-51	82.2	82.2	0.0008	0.2180	1330.0	4.587	133.79	333.45	0.7340	1.6327	-51
-50	86.4	86.4	0.0008	0.2080	1326.9	4.808	135.03	334.05	0.7395	1.6314	-50
-49	90.8	90.8	0.0008	0.1985	1323.8	5.037	136.27	334.65	0.7450	1.6301	-49
-48	95.3	95.3	0.0008	0.1896	1320.7	5.274	137.51	335.25	0.7505	1.6288	-48

**Thermodynamic Properties of R-507A - Saturation**

Temperature (°C)	Pressure (kPa)		Volume (m <sup>3</sup> /kg)		Density (kg/m <sup>3</sup> )		Enthalpy (kJ/kg)		Entropy (kJ/(kg K))		Temperature (°C)
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	
-47	100.1	100.1	0.0008	0.1811	1317.6	5.521	138.75	335.85	0.7560	1.6276	-47
-46	105.0	105.0	0.0008	0.1731	1314.5	5.776	139.99	336.45	0.7615	1.6264	-46
-45	110.1	110.1	0.0008	0.1656	1311.4	6.041	141.24	337.05	0.7669	1.6252	-45
-44	115.4	115.4	0.0008	0.1584	1308.2	6.315	142.48	337.65	0.7724	1.6241	-44
-43	120.9	120.9	0.0008	0.1516	1305.1	6.598	143.73	338.24	0.7778	1.6229	-43
-42	126.6	126.6	0.0008	0.1451	1301.9	6.892	144.99	338.84	0.7832	1.6219	-42
-41	132.5	132.5	0.0008	0.1390	1298.7	7.195	146.24	339.43	0.7886	1.6208	-41
-40	138.7	138.7	0.0008	0.1332	1295.6	7.509	147.49	340.03	0.7940	1.6198	-40
-39	145.0	145.0	0.0008	0.1277	1292.4	7.834	148.75	340.62	0.7993	1.6188	-39
-38	151.6	151.6	0.0008	0.1224	1289.2	8.170	150.01	341.21	0.8047	1.6178	-38
-37	158.4	158.4	0.0008	0.1174	1286.0	8.516	151.28	341.80	0.8100	1.6168	-37
-36	165.4	165.4	0.0008	0.1127	1282.8	8.875	152.54	342.38	0.8154	1.6159	-36
-35	172.7	172.7	0.0008	0.1082	1279.5	9.245	153.81	342.97	0.8207	1.6150	-35
-34	180.2	180.2	0.0008	0.1039	1276.3	9.627	155.08	343.55	0.8260	1.6141	-34
-33	188.0	188.0	0.0008	0.0998	1273.0	10.021	156.35	344.14	0.8312	1.6132	-33
-32	196.0	196.0	0.0008	0.0959	1269.7	10.428	157.63	344.72	0.8365	1.6123	-32
-31	204.3	204.3	0.0008	0.0922	1266.5	10.848	158.90	345.30	0.8418	1.6115	-31
-30	212.9	212.8	0.0008	0.0886	1263.2	11.281	160.18	345.88	0.8470	1.6107	-30
-29	221.7	221.7	0.0008	0.0853	1259.9	11.727	161.46	346.45	0.8523	1.6099	-29
-28	230.8	230.8	0.0008	0.0821	1256.5	12.188	162.75	347.03	0.8575	1.6092	-28
-27	240.2	240.2	0.0008	0.0790	1253.2	12.662	164.04	347.60	0.8627	1.6084	-27
-26	249.9	249.9	0.0008	0.0760	1249.8	13.151	165.33	348.17	0.8679	1.6077	-26
-25	259.9	259.8	0.0008	0.0732	1246.5	13.655	166.62	348.74	0.8731	1.6070	-25
-24	270.2	270.1	0.0008	0.0706	1243.1	14.174	167.92	349.30	0.8783	1.6063	-24
-23	280.8	280.7	0.0008	0.0680	1239.7	14.709	169.22	349.87	0.8834	1.6056	-23
-22	291.7	291.6	0.0008	0.0655	1236.3	15.259	170.52	350.43	0.8886	1.6049	-22
-21	303.0	302.8	0.0008	0.0632	1232.9	15.826	171.82	350.99	0.8937	1.6043	-21
-20	314.5	314.4	0.0008	0.0609	1229.4	16.409	173.13	351.54	0.8989	1.6037	-20
-19	326.4	326.3	0.0008	0.0588	1225.9	17.009	174.44	352.10	0.9040	1.6030	-19
-18	338.7	338.5	0.0008	0.0567	1222.5	17.627	175.76	352.65	0.9091	1.6024	-18
-17	351.2	351.1	0.0008	0.0548	1219.0	18.263	177.07	353.20	0.9142	1.6018	-17
-16	364.2	364.0	0.0008	0.0529	1215.4	18.917	178.39	353.75	0.9193	1.6013	-16
-15	377.5	377.3	0.0008	0.0510	1211.9	19.589	179.72	354.29	0.9244	1.6007	-15
-14	391.1	390.9	0.0008	0.0493	1208.4	20.281	181.04	354.83	0.9295	1.6001	-14
-13	405.2	404.9	0.0008	0.0476	1204.8	20.992	182.37	355.37	0.9346	1.5996	-13
-12	419.6	419.3	0.0008	0.0460	1201.2	21.723	183.71	355.91	0.9397	1.5991	-12
-11	434.4	434.1	0.0008	0.0445	1197.6	22.475	185.05	356.44	0.9447	1.5986	-11
-10	449.5	449.3	0.0008	0.0430	1193.9	23.248	186.39	356.97	0.9498	1.5980	-10
-9	465.1	464.9	0.0008	0.0416	1190.3	24.042	187.73	357.50	0.9548	1.5975	-9
-8	481.1	480.8	0.0008	0.0402	1186.6	24.859	189.08	358.02	0.9599	1.5971	-8
-7	497.5	497.2	0.0008	0.0389	1182.9	25.698	190.43	358.54	0.9649	1.5966	-7
-6	514.3	514.0	0.0008	0.0377	1179.2	26.560	191.78	359.06	0.9699	1.5961	-6
-5	531.6	531.2	0.0009	0.0364	1175.4	27.445	193.14	359.57	0.9750	1.5956	-5
-4	549.2	548.9	0.0009	0.0353	1171.7	28.355	194.51	360.08	0.9800	1.5952	-4
-3	567.3	567.0	0.0009	0.0341	1167.9	29.290	195.87	360.58	0.9850	1.5947	-3
-2	585.9	585.5	0.0009	0.0331	1164.0	30.251	197.25	361.08	0.9900	1.5943	-2
-1	604.9	604.5	0.0009	0.0320	1160.2	31.237	198.62	361.58	0.9950	1.5938	-1
0	624.4	624.0	0.0009	0.0310	1156.3	32.251	200.00	362.07	1.0000	1.5934	0
1	644.3	643.9	0.0009	0.0300	1152.4	33.292	201.38	362.56	1.0050	1.5929	1
2	664.7	664.3	0.0009	0.0291	1148.5	34.361	202.77	363.05	1.0100	1.5925	2
3	685.6	685.1	0.0009	0.0282	1144.5	35.459	204.16	363.53	1.0150	1.5921	3
4	707.0	706.5	0.0009	0.0273	1140.5	36.587	205.56	364.00	1.0199	1.5917	4
5	728.9	728.4	0.0009	0.0265	1136.5	37.745	206.96	364.47	1.0249	1.5912	5

**Thermodynamic Properties of R-507A - Saturation**

Temperature (°C)	Pressure (kPa)		Volume (m <sup>3</sup> /kg)		Density (kg/m <sup>3</sup> )		Enthalpy (kJ/kg)		Entropy (kJ/(kg K))		Temperature (°C)
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	
6	751.3	750.7	0.0009	0.0257	1132.4	38.935	208.37	364.94	1.0299	1.5908	6
7	774.2	773.6	0.0009	0.0249	1128.3	40.157	209.78	365.40	1.0349	1.5904	7
8	797.6	797.0	0.0009	0.0241	1124.2	41.412	211.20	365.85	1.0398	1.5900	8
9	821.5	820.9	0.0009	0.0234	1120.1	42.701	212.62	366.30	1.0448	1.5895	9
10	846.0	845.3	0.0009	0.0227	1115.9	44.025	214.04	366.75	1.0498	1.5891	10
11	871.0	870.3	0.0009	0.0220	1111.6	45.386	215.47	367.18	1.0548	1.5887	11
12	896.6	895.9	0.0009	0.0214	1107.4	46.783	216.91	367.61	1.0597	1.5883	12
13	922.7	922.0	0.0009	0.0207	1103.1	48.218	218.35	368.04	1.0647	1.5878	13
14	949.4	948.6	0.0009	0.0201	1098.7	49.693	219.80	368.46	1.0696	1.5874	14
15	976.6	975.8	0.0009	0.0195	1094.3	51.208	221.25	368.87	1.0746	1.5869	15
16	1004.5	1003.7	0.0009	0.0190	1089.9	52.764	222.71	369.28	1.0796	1.5865	16
17	1032.9	1032.1	0.0009	0.0184	1085.4	54.364	224.18	369.68	1.0845	1.5860	17
18	1061.9	1061.1	0.0009	0.0179	1080.9	56.008	225.65	370.07	1.0895	1.5856	18
19	1091.6	1090.7	0.0009	0.0173	1076.4	57.698	227.13	370.45	1.0945	1.5851	19
20	1121.8	1120.9	0.0009	0.0168	1071.7	59.435	228.61	370.83	1.0995	1.5846	20
21	1152.7	1151.7	0.0009	0.0163	1067.1	61.221	230.10	371.19	1.1044	1.5841	21
22	1184.2	1183.2	0.0009	0.0159	1062.4	63.058	231.60	371.55	1.1094	1.5836	22
23	1216.3	1215.3	0.0009	0.0154	1057.6	64.946	233.10	371.91	1.1144	1.5831	23
24	1249.1	1248.1	0.0009	0.0150	1052.8	66.889	234.61	372.25	1.1194	1.5826	24
25	1282.6	1281.5	0.0010	0.0145	1047.9	68.888	236.13	372.58	1.1244	1.5821	25
26	1316.7	1315.6	0.0010	0.0141	1043.0	70.944	237.66	372.91	1.1294	1.5815	26
27	1351.5	1350.3	0.0010	0.0137	1038.0	73.061	239.19	373.22	1.1344	1.5810	27
28	1387.0	1385.8	0.0010	0.0133	1032.9	75.240	240.73	373.52	1.1394	1.5804	28
29	1423.1	1421.9	0.0010	0.0129	1027.8	77.484	242.28	373.82	1.1444	1.5798	29
30	1460.0	1458.7	0.0010	0.0125	1022.6	79.795	243.84	374.10	1.1495	1.5792	30
31	1497.6	1496.3	0.0010	0.0122	1017.3	82.177	245.41	374.37	1.1545	1.5785	31
32	1535.9	1534.6	0.0010	0.0118	1011.9	84.631	246.98	374.63	1.1595	1.5779	32
33	1574.9	1573.6	0.0010	0.0115	1006.5	87.162	248.57	374.88	1.1646	1.5772	33
34	1614.7	1613.3	0.0010	0.0111	1001.0	89.771	250.16	375.11	1.1697	1.5765	34
35	1655.3	1653.8	0.0010	0.0108	995.4	92.464	251.77	375.33	1.1748	1.5758	35
36	1696.6	1695.1	0.0010	0.0105	989.7	95.244	253.39	375.54	1.1799	1.5750	36
37	1738.6	1737.1	0.0010	0.0102	984.0	98.115	255.01	375.73	1.1850	1.5742	37
38	1781.5	1780.0	0.0010	0.0099	978.1	101.080	256.65	375.91	1.1901	1.5734	38
39	1825.1	1823.6	0.0010	0.0096	972.1	104.150	258.30	376.07	1.1953	1.5726	39
40	1869.6	1868.0	0.0010	0.0093	966.0	107.320	259.96	376.22	1.2004	1.5717	40
41	1914.9	1913.2	0.0010	0.0090	959.8	110.600	261.64	376.35	1.2056	1.5708	41
42	1961.0	1959.3	0.0010	0.0088	953.5	114.000	263.33	376.46	1.2108	1.5698	42
43	2007.9	2006.2	0.0011	0.0085	947.1	117.520	265.03	376.54	1.2161	1.5688	43
44	2055.7	2054.0	0.0011	0.0083	940.5	121.170	266.74	376.61	1.2213	1.5678	44
45	2104.4	2102.7	0.0011	0.0080	933.8	124.970	268.48	376.66	1.2266	1.5667	45
46	2154.0	2152.2	0.0011	0.0078	926.9	128.910	270.23	376.68	1.2320	1.5655	46
47	2204.4	2202.6	0.0011	0.0075	919.9	133.000	271.99	376.68	1.2373	1.5643	47
48	2255.7	2253.9	0.0011	0.0073	912.7	137.270	273.78	376.66	1.2427	1.5631	48
49	2308.0	2306.2	0.0011	0.0071	905.3	141.720	275.58	376.60	1.2481	1.5617	49
50	2361.2	2359.3	0.0011	0.0068	897.7	146.360	277.41	376.52	1.2536	1.5603	50
51	2415.4	2413.5	0.0011	0.0066	889.9	151.210	279.26	376.40	1.2591	1.5588	51
52	2470.5	2468.6	0.0011	0.0064	881.9	156.290	281.13	376.25	1.2647	1.5573	52
53	2526.6	2524.7	0.0011	0.0062	873.6	161.620	283.03	376.05	1.2703	1.5556	53
54	2583.7	2581.8	0.0012	0.0060	865.1	167.210	284.95	375.82	1.2760	1.5538	54
55	2641.9	2639.9	0.0012	0.0058	856.2	173.110	286.91	375.54	1.2818	1.5519	55
56	2701.0	2699.1	0.0012	0.0056	847.0	179.340	288.90	375.21	1.2876	1.5499	56
57	2761.3	2759.3	0.0012	0.0054	837.5	185.930	290.93	374.83	1.2936	1.5477	57
58	2822.6	2820.7	0.0012	0.0052	827.5	192.940	293.00	374.38	1.2996	1.5454	58

**Thermodynamic Properties of R-507A - Saturation**

Temperature (°C)	Pressure (kPa)		Volume (m <sup>3</sup> /kg)		Density (kg/m <sup>3</sup> )		Enthalpy (kJ/kg)		Entropy (kJ/(kg K))		Temperature (°C)
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	
59	2885.0	2883.1	0.0012	0.0050	817.1	200.420	295.11	373.86	1.3058	1.5429	59
60	2948.6	2946.7	0.0012	0.0048	806.1	208.430	297.28	373.26	1.3120	1.5401	60
61	3013.4	3011.4	0.0013	0.0046	794.5	217.060	299.51	372.56	1.3185	1.5371	61
62	3079.3	3077.4	0.0013	0.0044	782.2	226.430	301.81	371.76	1.3251	1.5338	62
63	3146.5	3144.6	0.0013	0.0042	769.0	236.670	304.19	370.82	1.3319	1.5302	63
64	3214.9	3213.1	0.0013	0.0040	754.7	247.990	306.68	369.73	1.3391	1.5261	64
65	3284.7	3282.9	0.0014	0.0038	739.1	260.670	309.30	368.44	1.3465	1.5215	65
66	3355.9	3354.2	0.0014	0.0036	721.7	275.140	312.08	366.88	1.3545	1.5161	66
67	3428.5	3426.9	0.0014	0.0034	701.8	292.120	315.11	364.97	1.3631	1.5097	67
68	3502.6	3501.2	0.0015	0.0032	678.1	312.900	318.50	362.52	1.3727	1.5018	68
69	3578.5	3577.2	0.0015	0.0029	647.7	340.430	322.55	359.14	1.3842	1.4912	69
70	3656.2	3655.3	0.0017	0.0026	599.7	385.060	328.32	353.47	1.4007	1.4740	70