

# R-407F (Performax™ LT)

Zetropic blend (30% R-32 - 30% R-125 - 40% R-134a)

Molecular weight (g/mol) .....	82,06
Melting point (°C) .....	N/A
Boiling point (at 1,013 bar) .....	-46,06
Temperature glide at 1,013 bar (K) .....	6,40
Critical temperature (°C) .....	82,66
Critical pressure (bar absolute) .....	47,55
Specific heat (liquid) at + 25°C (kJ/kg.K) .....	1,575
Specific heat (vapour) at 1,013 bar and + 25°C (kJ/kg.K) .....	0,834
Thermal capacity ratio (Cp/Cv) at + 25°C and 1,013 bar .....	1,152
Viscosity (liquid) at + 25°C in centipoise (10 <sup>-3</sup> Pa.s) .....	0,145
Surface tension at + 25°C in dyne per centimetre (10 <sup>-3</sup> N/m) .....	6,63
Classification NF-EN 378 .....	L1

## Main applications

Performax™ LT is a "non azeotropic" HFC blend, designed for commercial and direct expansion industrial refrigeration applications. It can be used for new or existing systems as a replacement for R-404A. R-407F is mainly used in new refrigeration units in supermarkets, cold stores, food preservation storage units, cooling display cabinets and for refrigerated transport.

## Commercial specifications

Composition : 30% R-32 - 30% R-125 - 40% R-134a (±2% / ±2% / ± 2%).

Purity : ≥ 99,5 % weight.

Water content : ≤ 10 ppm weight.

Acidity (HCl) : ≤ 1 ppm weight.

Non-condensables (gas phase) : ≤ 1,5 % volume.

High boiling residue : ≤ 0,01% volume.

Chloride ion test : negative

## Oils

Use a polyol ester (POE) oil.

Check with **Climalife** regarding the viscosity of the oil selected for your application, and the miscibility with the fluid under consideration.

## Regulation

The use and implementation of Performax™ LT are governed by EU Regulation n°842/2006. The recovery of Performax™ LT is mandatory under EU Regulation n°842/2006. (Refer to regulations enforced in each country).

Thermodynamic properties of R-407F - Saturated state

Absol. pressure		LIQUID				ENTHALPY				SATURATED				ENTHALPY				ENTHALPY				LATENT HEAT				
[bar]		Volume	Density	Enthalpy	Entropy	[kJ/kg]				[kJ/kg]				[kJ/kg]				[kJ/kg]								
[bar]		$v^L$	$\rho^L$	$h^L$	$s^L$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	$h^L$	$h^V$	
[bar]		[dm <sup>3</sup> /kg]	[kg/dm <sup>3</sup> ]	[kJ/kg]	[kJ/kg·K]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]
0.03	-100	0.663	1.531	65.84	0.383	61.749	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.04	-95	0.666	1.522	72.82	0.446	67.919	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.06	-90	0.672	1.488	85.43	0.501	77.9	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.14	-80	0.679	1.474	91.84	0.535	81.94	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.19	-75	0.685	1.459	98.45	0.568	88.1	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.27	-70	0.692	1.444	104.96	0.601	94.26	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.36	-65	0.699	1.430	111.50	0.633	100.81	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.49	-60	0.707	1.415	118.05	0.664	107.28	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.64	-55	0.714	1.400	124.63	0.694	114.24	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
0.83	-50	0.722	1.385	131.24	0.724	121.81	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
1.013	-46.06	0.729	1.372	136.46	0.747	126.46	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
1.07	-46	0.730	1.369	137.88	0.753	128.01	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
1.35	-40	0.739	1.354	144.56	0.782	134.56	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
1.69	-35	0.747	1.338	151.28	0.811	141.28	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
2.09	-30	0.756	1.322	158.03	0.839	148.03	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
2.57	-25	0.756	1.305	164.88	0.868	154.88	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
3.12	-20	0.776	1.289	171.76	0.894	161.76	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
3.76	-15	0.797	1.272	178.71	0.921	168.71	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
4.50	-10	0.797	1.254	185.73	0.947	175.73	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
5.34	-5	0.809	1.237	192.82	0.974	182.82	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
6.29	0	0.821	1.218	200.00	1.000	190.00	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
7.37	5	0.834	1.199	207.27	1.026	197.27	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
8.58	10	0.848	1.180	214.65	1.052	204.65	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
9.93	15	0.862	1.160	222.14	1.078	212.14	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
11.44	20	0.878	1.139	229.75	1.104	220.75	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
13.11	25	0.895	1.117	237.50	1.129	228.50	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
14.96	30	0.914	1.094	245.42	1.155	236.42	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
16.99	35	0.935	1.070	253.51	1.181	244.51	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
19.31	40	0.957	1.047	261.81	1.207	252.81	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
21.94	45	0.981	1.024	270.31	1.233	261.31	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
24.31	50	1.012	0.988	279.16	1.260	270.16	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
27.20	55	1.046	0.956	288.33	1.287	279.33	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
30.35	60	1.086	0.921	297.95	1.315	288.95	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
33.75	65	1.136	0.880	308.19	1.345	299.19	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
37.43	70	1.202	0.832	319.37	1.376	310.37	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
41.40	75	1.289	0.770	332.23	1.412	323.23	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073
45.62	80	1.488	0.668	348.69	1.460	348.69	0.146	382.05	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073	2.073

Thermodynamic properties of R-407F (superheated vapour) - Volume (dm<sup>3</sup>/kg)

Sat. Temp.	Sat. Pressure	Subcool. (°C)																																																																			
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	100																																																
-100	13563.29	13645.02	14031.24	14417.05	14802.53	15187.75	15572.75	15957.52	16342.26	16727.00	17111.72	17496.43	17881.12	18265.80	18650.48	19035.16	19419.84	19804.52	20189.20	20573.88	20958.56	21343.24	21727.92	22112.60	22497.28	22881.96	23266.64	23651.32	24036.00	24420.68	24805.36	25190.04	25574.72	25959.40	26344.08	26728.76	27113.44	27498.12	27882.80	28267.48	28652.16	29036.84	29421.52	29806.20	30190.88	30575.56	30960.24	31344.92	31729.60	32114.28	32498.96	32883.64	33268.32	33653.00	34037.68	34422.36	34807.04	35191.72	35576.40	35961.08	36345.76	36730.44	37115.12	37499.80	37884.48	38269.16	38653.84	39038.52	39423.20

Thermodynamic properties of R-407F (superheated vapour) - Enthalpy (kJ/kg)

Sat. Temp. °C	Sat. Pressure bar	Superheat (°C)																			
		0	5	10	15	20	25	30	35	40	45	50	55	60	70	80	90	100			
-100	0.01	357.7	360.8	363.9	367.1	370.3	373.5	376.8	380.1	383.5	386.4	389.4	392.4	395.4	397.4	399.4	401.4	403.4	412.0	419.5	427.2
-95	0.02	360.7	363.8	367.0	370.2	373.5	376.8	380.1	383.5	386.9	390.1	393.5	396.9	400.2	403.5	406.8	410.1	413.4	415.7	419.5	427.2
-90	0.03	363.7	366.9	370.1	373.4	376.7	380.0	383.4	386.8	390.2	393.6	397.0	400.4	403.8	407.2	410.6	414.0	417.4	419.5	423.2	431.0
-85	0.05	366.7	370.0	373.2	376.6	380.0	383.3	386.7	390.1	393.5	396.9	400.3	403.7	407.1	410.5	413.9	417.3	420.7	423.2	426.9	434.8
-80	0.07	369.7	373.0	376.3	379.7	383.1	386.5	389.9	393.3	396.7	400.1	403.5	406.9	410.3	413.7	417.1	420.5	423.9	426.4	430.2	438.1
-75	0.12	372.8	376.1	379.5	383.0	386.4	389.8	393.2	396.6	400.0	403.4	406.8	410.2	413.6	417.0	420.4	423.8	427.2	430.7	434.6	442.5
-70	0.17	375.8	379.2	382.7	386.2	389.7	393.2	396.7	400.2	403.7	407.2	410.7	414.2	417.7	421.2	424.7	428.2	431.7	435.2	439.1	447.0
-65	0.24	378.8	382.3	385.8	389.4	393.0	396.6	400.2	403.8	407.4	411.0	414.6	418.2	421.8	425.4	429.0	432.6	436.2	440.0	444.0	451.9
-60	0.33	381.8	385.4	389.0	392.6	396.2	399.9	403.6	407.3	411.1	414.8	418.5	422.3	426.0	429.8	433.6	437.4	441.2	445.1	449.1	457.0
-55	0.44	384.8	388.4	392.1	395.8	399.5	403.2	407.0	410.8	414.6	418.4	422.2	426.0	429.8	433.6	437.4	441.2	445.0	448.9	452.9	460.7
-50	0.59	387.7	391.5	395.2	399.0	402.7	406.5	410.3	414.1	417.9	421.7	425.5	429.3	433.1	436.9	440.7	444.5	448.3	452.2	456.2	464.0
-45	0.77	390.6	394.4	398.3	402.1	405.9	409.8	413.7	417.5	421.4	425.2	429.1	432.9	436.7	440.5	444.3	448.1	451.9	455.8	459.7	467.5
-40	1.00	393.5	397.4	401.3	405.2	409.1	413.1	417.0	420.9	424.8	428.7	432.6	436.5	440.4	444.3	448.2	452.1	456.0	459.9	463.8	471.5
-35	1.27	396.3	400.3	404.3	408.3	412.3	416.3	420.3	424.3	428.3	432.3	436.3	440.3	444.3	448.3	452.3	456.3	460.3	464.3	468.3	476.0
-30	1.60	399.1	403.2	407.3	411.4	415.4	419.5	423.6	427.7	431.8	435.9	439.9	444.0	448.1	452.2	456.3	460.4	464.5	468.6	472.7	480.4
-25	2.03	401.9	406.1	410.2	414.3	418.4	422.5	426.6	430.7	434.8	438.9	443.0	447.1	451.2	455.3	459.4	463.5	467.6	471.7	475.8	483.5
-20	2.46	404.6	408.8	413.0	417.3	421.6	425.8	430.1	434.3	438.6	442.9	447.2	451.5	455.8	460.1	464.4	468.7	473.0	477.3	481.6	489.3
-15	3.01	407.0	411.4	415.8	420.2	424.6	429.0	433.4	437.8	442.2	446.6	451.0	455.4	459.8	464.2	468.6	473.0	477.4	481.8	486.2	493.9
-10	3.64	409.5	414.0	418.6	423.0	427.5	431.9	436.3	440.7	445.2	449.6	454.0	458.4	462.8	467.2	471.6	476.0	480.4	484.8	489.2	496.9
-5	4.38	411.9	416.6	421.2	425.8	430.3	434.9	439.4	444.0	448.5	453.0	457.5	462.0	466.5	471.0	475.5	480.0	484.5	489.0	493.5	501.2
0	5.22	414.1	419.0	423.8	428.5	433.1	437.7	442.4	447.1	451.6	456.3	460.9	465.6	470.3	475.0	479.7	484.4	489.1	493.8	498.5	506.2
5	6.18	416.3	421.3	426.2	431.1	435.8	440.6	445.3	450.1	454.7	459.4	464.1	468.7	473.4	478.1	482.8	487.5	492.2	496.9	501.6	509.3
10	7.27	418.4	423.6	428.6	433.6	438.5	443.3	448.1	452.9	457.7	462.5	467.3	472.1	476.9	481.6	486.4	491.2	496.0	500.8	505.6	513.3
15	8.51	420.3	425.6	430.9	436.0	441.0	446.0	450.9	455.9	460.7	465.6	470.5	475.3	480.2	485.0	490.0	494.9	499.8	504.7	509.5	517.2
20	9.89	422.0	427.6	433.0	438.2	443.4	448.5	453.6	458.6	463.6	468.6	473.6	478.6	483.5	488.5	493.5	498.5	503.5	508.5	513.3	521.0
25	11.44	423.6	429.4	435.0	440.4	445.7	451.0	456.2	461.4	466.6	471.8	476.9	482.0	487.1	492.2	497.3	502.4	507.5	512.6	517.4	525.1
30	13.16	425.0	430.9	436.6	442.2	447.7	453.1	458.5	463.8	469.1	474.4	479.7	485.0	490.3	495.6	500.9	506.2	511.5	516.8	521.0	528.7
35	15.07	426.3	432.2	437.8	443.4	448.9	454.4	459.8	465.2	470.6	476.0	481.4	486.8	492.2	497.6	503.0	508.4	513.8	519.2	524.6	532.3
40	17.19	426.9	433.6	439.9	446.0	451.9	457.6	463.2	468.7	474.3	479.8	485.4	490.9	496.5	502.0	507.6	513.1	518.7	524.2	529.7	537.4
45	19.53	427.5	434.5	441.2	447.5	453.6	459.5	465.3	471.1	476.9	482.7	488.5	494.3	500.1	505.9	511.7	517.5	523.3	529.1	534.9	542.6
50	22.11	427.6	435.2	442.2	448.8	455.1	461.3	467.3	473.0	478.7	484.4	490.1	495.8	501.5	507.2	512.9	518.6	524.3	530.0	535.7	543.4
55	24.95	427.2	435.4	442.9	449.8	456.5	462.9	468.7	474.5	480.3	486.1	491.9	497.7	503.5	509.3	515.1	521.0	526.8	532.6	538.4	546.1
60	28.07	426.2	435.2	443.2	450.6	457.6	464.2	470.7	477.1	483.5	489.9	496.3	502.7	509.1	515.5	521.9	528.3	534.7	541.1	547.5	555.2
65	31.50	424.1	433.4	443.2	451.1	458.9	466.2	473.2	480.0	486.8	493.6	500.4	507.2	514.0	520.8	527.6	534.4	541.2	548.0	554.8	562.6
70	35.28	421.1	431.3	442.7	451.1	459.8	468.2	476.2	484.0	491.8	499.6	507.4	515.2	523.0	530.8	538.6	546.4	554.2	562.0	569.8	577.6
75	39.48	415.7	430.7	441.5	450.7	459.9	469.7	479.0	487.9	496.7	505.5	514.3	523.1	531.9	540.7	549.5	558.3	567.1	575.9	584.7	593.5
80	44.22	405.0	426.7	439.3	449.5	458.4	467.7	476.4	484.9	493.3	501.7	510.1	518.5	526.9	535.3	543.7	552.1	560.5	568.9	577.3	586.1

Thermodynamic properties of R-407F (superheated vapour) - Entropy (kJ/kg.K)

Sat. Temp. °C	Sat. Pressure bar	Superheat (°C)																			
		0	5	10	15	20	25	30	35	40	45	50	55	60	70	80	90	100			
-100	0.01	2.121	2.139	2.156	2.173	2.190	2.207	2.223	2.255	2.287	2.318	2.348	2.378	2.407	2.435	2.462	2.489	2.516	2.572	2.628	2.684
-95	0.02	2.098	2.105	2.122	2.139	2.156	2.172	2.189	2.220	2.252	2.282	2.312	2.342	2.370	2.399	2.426	2.453	2.480	2.536	2.592	2.648
-90	0.03	2.067	2.075	2.092	2.108	2.125	2.141	2.157	2.189	2.220	2.250	2.279	2.309	2.337	2.366	2.393	2.420	2.447	2.503	2.559	2.615
-85	0.05	2.030	2.047	2.063	2.080	2.098	2.113	2.128	2.160	2.190	2.220	2.250	2.279	2.307	2.335	2.362	2.390	2.417	2.473	2.529	2.585
-80	0.07	2.004	2.020	2.036	2.054	2.071	2.087	2.102	2.133	2.164	2.194	2.224	2.253	2.281	2.309	2.336	2.364	2.391	2.447	2.503	2.559
-75	0.12	1.980	1.995	2.010	2.026	2.042	2.057	2.088	2.118	2.147	2.176	2.204	2.232	2.259	2.286	2.313	2.340	2.367	2.423	2.479	2.535
-70	0.17	1.960	1.977	1.994	2.010	2.026	2.042	2.057	2.088	2.117	2.145	2.173	2.201	2.228	2.255	2.282	2.309	2.336	2.392	2.448	2.504
-65	0.24	1.941	1.958	1.974	1.990	2.006	2.022	2.037	2.068	2.097	2.127	2.155	2.183	2.211	2.239	2.266	2.293	2.320	2.376	2.432	2.488
-60	0.33	1.924	1.940	1.957	1.973	1.988	2.004	2.019	2.050	2.079	2.108	2.137	2.165	2.192	2.219	2.246	2.273	2.300	2.356	2.412	2.468
-55	0.44	1.908	1.924	1.940	1.956	1.972	1.988	2.003	2.033	2.062	2.091	2.120	2.147	2.175	2.202	2.229	2.256	2.283	2.339	2.395	2.451
-50	0.59	1.893	1.909	1.926	1.942	1.957	1.973	1.988	2.018	2.047	2.076	2.104	2.132	2.159	2.186	2.213	2.240	2.267	2.323	2.379	2.435
-45	0.77	1.879	1.879	1.912	1.928	1.944	1.959	1.974	2.004	2.033	2.062	2.090	2.118	2.145	2.172	2.200	2.227	2.254	2.310	2.366	2.422
-40	1.00	1.867	1.883	1.900	1.915	1.931	1.946	1.962	1.991	2.020	2.049	2.077	2.104	2.132	2.158	2.185	2.212	2.239	2.295	2.351	2.407
-35	1.27	1.855	1.872	1.888	1.904	1.920	1.935	1.950	1.981	2.010	2.038	2.066	2.094	2.121	2.148	2.175	2.202	2.229	2.285	2.341	2.397
-30	1.60	1.844	1.861	1.877	1.893	1.909	1.924	1.940	1.969	1.998	2.026	2.054	2.082	2.110	2.138	2.165	2.192	2.219	2.275	2.331	2.387
-25	2.03	1.833	1.850	1.866	1.882	1.898	1.914	1.930	1.961	1.991	2.020	2.048	2.								