

THERMINOL® 55

Heat Transfer Fluid by Solutia

Efficient,
Reliable, Synthetic
Heat Transfer Fluid

-10°C to

305°C



THERMINOL[®] 55

Therminol 55 has an optimum economic bulk operating range of – 10° C. It can be used to an extended bulk temperature of 315° C

Therminol 55 is a synthetic heat transfer fluid intended for use in the liquid phase for indirect process heating. Therminol 55 exhibits thermal stability markedly superior to that of mineral oils used for the same purpose, resulting in a favourable cost/performance ratio.

Liquid phase systems using Therminol 55 are finding use in applications which traditionally used steam as heating medium. Savings in capital, running and maintenance costs are often achieved.

Therminol 55 finds application in process heating include heating chambers in Textiles, Plywood, heating of calendar rolls, tracing of lines at storage terminals, process heating for chemical industry and waste heat recovery systems.

Therminol 55 is compatible with all types of mineral oils. Therminol 55 can be added / mixed in all proportions with all other branded mineral oils.

Thermal Stability

The thermal stability of a heat transfer fluid is one of the most important considerations in the selection of a fluid for operation under specific heat transfer conditions.

Fluid decomposition, both mineral oil and synthetic hydrocarbon based heat transfer fluids, generally results in the formation of volatile products (low boilers) and polymeric high viscosity fraction (high boilers). The relative proportion of low and high boiler formation, and the solubility of the high boiling fraction, may vary widely and are critical factors when evaluating fluid performance, predicting top-up costs, and overall risk of deposits or coking.

The chemical composition of Therminol 55 has been carefully selected to minimize the formation of low boilers and eliminate the risk of insoluble high boiler formation and fouling, provided proper attention is given to system design and operation.

Routine monitoring of fluid properties is recommended. Solutia sales is backed up by comprehensive technical services assisted by our state of art Technical Centre at Belgium.

Typical Physical, Chemical and Thermal Properties of Therminol 55

Composition	Mixture of synthetic hydrocarbons
Appearance	Clear yellow liquid
Max. bulk temperature	305 ⁰ C (Extended use uptill 315 ⁰ C)
Max. film temperature	335 ⁰ C
Kinetic viscosity @ 40 ⁰ C	36.8 mm ² /s (cSt)
Density @ 25 ⁰ C	875 kg/m ³
Flash point (ASTM D-92)	193 ⁰ C
Fir point (ASTM D-92)	238 ⁰ C
Autoignition temperature (ASTM D 2155)	366 ⁰ C
Pour point	-40 ⁰ C
Boiling point @ 1013 mbar	351 ⁰ C
Coefficient of thermal expansion	0.00096/ ⁰ C
Moisture content	< 200 ppm

Note: Values quoted aer typical values obtained in the laboratory from production samples. Other samples might exhibit slightly different data. Specifications are subject to change. Write to Solutia for current sales specifications

P R O P E R T I E S O F T H E R M I N O L[®] 5 5

Temperature		Liquid Density			Liquid Heat Capacity		Liquid Enthalpy**		Heat of Vaporization	
°F	°C	lb/gal	lb/ft ³	kg/m ³	Btu/lb-°F [cal/g-°C]	kJ/kg•K	Btu/lb	kJ/kg	Btu/lb	kJ/kg
-20	-29	7.55	56.5	905	0.414	1.73	-8.4	-19.4	180.0	418.3
-15	-26	7.53	56.4	903	0.416	1.74	-6.3	-14.6	179.1	416.3
0	-18	7.49	56.0	897	0.423	1.77	0.0	0.0	176.6	410.5
20	-7	7.42	55.5	890	0.433	1.81	8.6	19.9	173.2	402.7
40	4	7.36	55.1	882	0.442	1.85	17.3	40.3	170.0	395.1
60	16	7.30	54.6	875	0.453	1.89	26.3	61.0	166.7	387.5
80	27	7.24	54.1	867	0.461	1.93	35.4	82.3	163.5	380.1
100	38	7.17	53.7	860	0.471	1.97	44.7	103.9	160.4	372.8
120	49	7.11	53.2	852	0.480	2.01	54.2	126.0	157.3	365.6
140	60	7.05	52.7	845	0.490	2.05	63.9	148.6	154.2	358.5
160	71	6.99	52.3	837	0.499	2.09	73.8	171.6	151.2	351.5
180	82	6.93	51.8	830	0.509	2.13	83.9	195.0	148.2	344.6
200	93	6.86	51.3	822	0.518	2.17	94.1	218.9	145.3	337.8
220	104	6.80	50.9	815	0.528	2.21	104.6	243.2	142.4	331.1
240	116	6.74	50.4	807	0.537	2.25	115.2	267.9	139.6	324.5
260	127	6.67	49.9	800	0.546	2.29	126.1	293.1	136.8	317.9
280	138	6.61	49.4	792	0.556	2.32	137.1	318.7	134.0	311.5
300	149	6.54	49.0	784	0.565	2.36	148.3	344.7	131.3	305.1
320	160	6.48	48.5	777	0.574	2.40	159.7	371.2	128.6	298.8
340	171	6.42	48.0	769	0.584	2.44	171.3	398.1	125.9	292.6
360	182	6.35	47.5	761	0.593	2.48	183.0	425.5	123.2	286.5
380	193	6.28	47.0	753	0.602	2.52	195.0	453.3	120.6	280.3
400	204	6.22	46.5	745	0.612	2.56	207.1	481.5	118.0	274.3
420	216	6.15	46.0	737	0.621	2.60	219.5	510.2	115.4	268.3
440	227	6.08	45.5	729	0.630	2.64	232.0	539.3	112.8	262.3
460	238	6.01	45.0	721	0.640	2.68	244.7	568.8	110.2	256.3
480	249	5.94	44.5	712	0.649	2.72	257.6	598.7	107.7	250.3
500	260	5.87	43.9	704	0.658	2.75	270.6	629.1	105.1	244.3
520	271	5.80	43.4	695	0.668	2.79	283.9	660.0	102.5	238.3
540	282	5.73	42.8	686	0.677	2.83	297.4	691.2	99.9	232.3
550	288	5.69	42.6	682	0.682	2.85	304.2	707.0	98.6	229.3
560	293	5.65	42.3	677	0.686	2.87	311.0	722.9	97.3	226.3
580	304	5.58	41.7	668	0.696	2.91	324.8	755.0	94.7	220.1
600***	316	5.50	41.1	659	0.705	2.95	338.8	787.6	92.0	214.0

* Optimum bulk temperature 550°F (290°C).

† These data are based upon samples tested in the laboratory and are not guaranteed for all samples. Write us for complete sales specifications for Therminol 55 fluid. Does not constitute an express warranty. See NOTICE on inside back cover of this brochure.

** The liquid enthalpy basis is zero at 0°F.

*** Extended bulk temperature 600°F (315°C).

H E A T T R A N S F E R F L U I D * †

Liquid Thermal Conductivity			Liquid Viscosity			Vapor Pressure				Temperature	
Btu/ ft-hr-°F	kcal/ m-hr-°C	W/m•K	lb/ft-hr	cSt [mm ² /s]	cP [mPa•s]	psia	mm Hg	kgf/cm ²	kPa	°F	°C
0.0775	0.1153	0.1341	4600	2100	1900					-20	-29
0.0773	0.1151	0.1337	3400	1560	1405					-15	-26
0.0768	0.1143	0.1328	1480	683	612					0	-18
0.0760	0.1131	0.1315	571	265	236					20	-7
0.0753	0.1120	0.1302	255	119.5	105.4					40	4
0.0746	0.1110	0.1289	128.5	60.7	53.1					60	16
0.0738	0.1098	0.1276	71.5	34.1	29.6					80	27
0.0731	0.1087	0.1264	43.2	20.8	17.87					100	38
0.0723	0.1076	0.1251	28.0	13.57	11.57					120	49
0.0716	0.1065	0.1238	19.19	9.39	7.93					140	60
0.0708	0.1054	0.1225	13.80	6.82	5.71					160	71
0.0701	0.1043	0.1212	10.34	5.15	4.27	0.0018	0.091	0.00012	0.012	180	82
0.0693	0.1032	0.1199	8.01	4.03	3.31	0.0033	0.17	0.00023	0.023	200	93
0.0686	0.1021	0.1186	6.39	3.24	2.64	0.0059	0.31	0.00042	0.041	220	104
0.0678	0.1009	0.1173	5.22	2.67	2.16	0.010	0.53	0.00073	0.071	240	116
0.0671	0.0998	0.1160	4.35	2.25	1.797	0.017	0.90	0.0012	0.12	260	127
0.0663	0.0987	0.1147	3.69	1.924	1.524	0.029	1.5	0.0020	0.20	280	138
0.0656	0.0976	0.1134	3.17	1.672	1.311	0.046	2.4	0.0033	0.32	300	149
0.0648	0.0965	0.1121	2.76	1.471	1.142	0.073	3.8	0.0051	0.50	320	160
0.0641	0.0954	0.1108	2.43	1.307	1.005	0.112	5.8	0.0079	0.77	340	171
0.0633	0.0942	0.1095	2.16	1.173	0.892	0.168	8.7	0.0118	1.16	360	182
0.0626	0.0931	0.1082	1.931	1.060	0.798	0.248	12.8	0.0175	1.71	380	193
0.0618	0.0920	0.1069	1.737	0.964	0.718	0.360	18.6	0.0253	2.49	400	204
0.0610	0.0909	0.1056	1.572	0.882	0.650	0.515	26.6	0.0362	3.55	420	216
0.0603	0.0897	0.1043	1.428	0.810	0.590	0.724	37.4	0.0509	4.99	440	227
0.0595	0.0886	0.1030	1.302	0.747	0.538	1.00	51.9	0.0706	6.92	460	238
0.0588	0.0875	0.1017	1.190	0.691	0.492	1.37	71.0	0.0965	9.47	480	249
0.0580	0.0863	0.1003	1.091	0.641	0.451	1.85	95.9	0.130	12.8	500	260
0.0573	0.0852	0.0990	1.002	0.596	0.414	2.47	128	0.174	17.1	520	271
0.0565	0.0841	0.0977	0.922	0.555	0.381	3.27	169	0.230	22.5	540	282
0.0561	0.0835	0.0971	0.885	0.536	0.366	3.74	193	0.263	25.8	550	288
0.0557	0.0829	0.0964	0.849	0.518	0.351	4.27	221	0.300	29.4	560	293
0.0550	0.0818	0.0951	0.783	0.484	0.324	5.52	285	0.388	38.0	580	304
0.0542	0.0807	0.0938	0.722	0.453	0.298	7.07	365	0.497	48.7	600	316

TECHNICAL SERVICE HOTLINE (800) 433-6997



WORLDWIDE SALES OFFICES

UNITED STATES

For order assistance

Please call our Customer Service Department, toll free at (800) 426-2463.

For technical assistance

Please call our Technical Service Hotline, toll free at (800) 433-6997.

Houston

1800 West Loop South
Suite 1360
Houston, Texas 77027
Tel: (713) 850-0088
Fax: (713) 850-0096

St. Louis

P.O. Box 66760
St. Louis, Missouri 63166-6760
Tel: (314) 674-1000
Fax: (314) 674-7433

INTERNATIONAL SALES OFFICES

Argentina

Solutia Argentina S.R.L.
Alicia Moreau de Justo 1050,
3rd Floor
1107 Puerto Madero
Buenos Aires, Argentina
Tel: 54-1-331-4077
Fax: 54-1-331-7481

Australia

Solutia Australia Pty. Ltd.
Level 1, 437 Canterbury Road
Surrey Hills, Victoria 3127
Australia
Tel: 61-3-9888-4589
Fax: 61-3-9888-4562

Belgium

Solutia Europe N.V./S.A.
Rue Laid Burniat, 3
Parc Scientifique - Fleming
B-1348 Louvain-la-Neuve (Sud)
Belgium
Tel: 32.10.48.12.11
Fax: 32.10.48.12.12

Brazil

Solutia Brazil Ltda.
Rua Gomes de Carvalho
1306-60. Andar 04547-005
Sao Paulo, SP, Brazil
Tel: 55-11-5087-3000
Fax: 55-11-5087-3030

Canada

Solutia Canada Inc.
2233 Argentia Road
P.O. Box 787
Mississauga, Ontario
L5M 2G4 Canada
Tel: 905-826-9222
Fax: 905-826-3119

China-PRC

Solutia Chemical Co. Ltd., Suzhou
9th Floor, Kings Tower
16 Shi Shan Road
Suzhou New District, PRC 215011
Tel: 86-512-825-3191
Fax: 86-512-825-0417

Colombia

Solutia Colombia Ltda.
Carrera 7 No. 71-21
Torre B, ofc.: 906
Santa Fe de Bogota, DC
Colombia
Tel: 571-317-48-20
Fax: 571-317-48-20

India

Solutia Chemicals India Private
Limited
205-207, 'Midas'
Sahar Plaza Complex
Andheri-Kurla Road
Andheri (E)
Mumbai 400 059 India
Tel: 91 22 8302862/64
Fax: 91 22 8310059

Japan

Solutia Japan Ltd.
Shinkawa Sanko Building
Second Floor
1-13-17, Shinkawa, Chuo-ku
Tokyo 104-0033, Japan
Tel: (03) 3523 2080
Fax: (03) 3523 2070

Korea

Solutia Korea Ltd.
3rd Floor, Anglican Church Building
3-7, Jeong-dong, Joong-gu,
Seoul 100-120, Korea
Tel: 82-2-736-7112
Fax: 82-2-739-5049

Malaysia

Solutia Hong Kong Ltd.
Malaysia Branch
12th Floor (1309-B)
Kelana Parkview Tower
No. 1 Jalan SS 6/2
Kelana Jaya
47301 Petaling Jaya
Selangor, Malaysia
Tel: 60-3-704-0279
Fax: 60-3-704-4067

Mexico

Solutia Mexico, S. de R.L. de C.V.
Edificio Torre Esmeralda
Blvd. Manuel Avila Camacho
No. 40, Piso 12
Colonia Lomas de Chapultepec
11000 Mexico, D.F.
Tel: 525-202-5600
Fax: 525-202-0979

Singapore

Solutia Singapore Pte. Ltd.
101 Thomson Road
#19-01/02 United Square
Singapore 307591
Tel: 65-355-7239
Fax: 65-254-3138

Taiwan

Solutia Taiwan Inc.
2F, 124 Chung Cheng Road
Shin Lin District, Taipei
Taiwan, R.O.C.
Tel: 886-2-2835-1666
Fax: 886-2-8866-2703

Thailand

Solutia Thailand Ltd.
19th Floor, SCB Park Plaza
19 Ratchadapisek Road
Laadyao, Chatuchak
Bangkok, Thailand 10900
Tel: 66-2-937-8860
Fax: 66-2-937-8865

Venezuela

Solutia Venezuela SRL
Avenida Francisco de Miranda
Edificio Parque Cristal
Torre Oeste, Piso 13 Ofc 13-4
Los Palos Grandes
Caracas 1062, Venezuela
Tel: 582-285-50-37
Fax: 582-285-71-13

Visit our new Web site at
www.therminol.com.