

Armcoltherm[®] 500

Temperature: from -10 °C to 315 °C

Armcoltherm 500 is a premium liquid phase Heat transfer Fluid renowned for its exceptional thermal stability, making it an excellent choice for use in high-temperature environments. It has been specifically engineered to operate in liquid phase Heat transfer systems at temperatures reaching up to 315°C, offering a range of performance advantages. One of its most notable features is its outstanding high-temperature stability.

Property	Unit	Result
Appearance	Visual	Clear liquid
Composition	-	Refined mineral oil
Average molecular weight	-	350
Maximum bulk temperature	°C	315
Maximum film temperature	°C	335
Flash point	°C	218
Autoignition temperature	°C	330
Normal boiling point	°C	350
Pour point	°C	-20
Coefficient of thermal expansion CC/CC	°C	0.000751
Density @20°C	kg/m ³	845
Viscosity, Kinematic @40°C	mm ² /s	30.5
Viscosity, Kinematic @100°C	mm ² /s	5.30
Liquid heat capacity @300°C	kJ/kg.k	2.92
Liquid thermal conductivity @300°C	W/m.k	0.098
Vapor pressured @300°C	Kpa	29.9
Pseudocritical temperature	°C	540
Pseudocritical pressure	bar	15.1
Pseudocritical density	kg/m ³	278

Temperature		Density	Specific Heat		Thermal Conductivity		Viscosity	Vapor Pressure			Fluid Enthalpy
°F	°C	kg/m ³	kcal/ kg*°C	kJ/kg*K	Kcal/ m*hr*°C	W/m*k	mm ² /s	kgf/cm ²	kPa	psia	kJ/kg
14	-10	870	0.452	1.89	0.123	0.143	1,235.00	-	-	-	12.8
32	0	863	0.462	1.93	0.122	0.142	341.00	-	-	-	29.7
50	10	854	0.470	1.97	0.122	0.142	213.80	-	-	-	47.4
68	20	845	0.478	2.00	0.122	0.141	86.60	-	-	-	65.1
86	30	842	0.487	2.04	0.121	0.140	58.55	-	-	-	83.7
104	40	839	0.495	2.07	0.120	0.139	30.50	-	-	-	102.3
122	50	833	0.504	2.11	0.119	0.138	22.80	-	-	-	121.9
140	60	827	0.512	2.14	0.118	0.137	15.10	-	-	-	141.5
158	70	821	0.521	2.18	0.118	0.137	11.79	-	-	-	162.0
176	80	815	0.529	2.21	0.117	0.136	8.48	-	-	-	182.5
194	90	809	0.536	2.24	0.117	0.135	6.89	-	-	-	203.9
212	100	803	0.543	2.27	0.116	0.134	5.30	0.0002	0.021	0.003	225.3
230	110	797	0.552	2.31	0.115	0.133	4.50	0.0004	0.036	0.005	247.6
248	120	791	0.560	2.34	0.114	0.132	3.69	0.0005	0.050	0.007	269.9
266	130	785	0.569	2.38	0.113	0.131	3.20	0.0013	0.101	0.015	293.1
284	140	779	0.577	2.41	0.112	0.130	2.71	0.0020	0.151	0.022	316.2
302	150	773	0.585	2.45	0.111	0.129	2.40	0.0030	0.256	0.037	340.2
320	160	767	0.593	2.48	0.110	0.128	2.09	0.0040	0.361	0.052	364.1
338	170	761	0.602	2.52	0.110	0.127	1.89	0.0060	0.592	0.086	388.9
356	180	755	0.610	2.55	0.109	0.126	1.68	0.0080	0.822	0.119	413.7
374	190	749	0.619	2.59	0.108	0.125	1.54	0.0125	1.266	0.184	439.3
392	200	743	0.627	2.62	0.107	0.124	1.39	0.0170	1.710	0.248	464.9
410	210	737	0.636	2.66	0.106	0.123	1.28	0.0255	2.530	0.367	491.3
428	220	731	0.644	2.69	0.105	0.122	1.17	0.0340	3.350	0.486	517.6
446	230	725	0.651	2.72	0.104	0.121	1.10	0.0485	4.785	0.693	544.7
464	240	719	0.658	2.75	0.103	0.120	1.02	0.0630	6.220	0.900	571.8
482	250	713	0.667	2.79	0.103	0.119	0.96	0.0870	8.560	1.241	599.6
500	260	707	0.675	2.82	0.102	0.118	0.90	0.1110	10.900	1.582	627.4
518	270	701	0.683	2.86	0.101	0.117	0.86	0.1495	14.650	2.126	655.9
536	280	695	0.691	2.89	0.100	0.116	0.81	0.1880	18.400	2.670	684.4
554	290	689	0.700	2.90	0.099	0.115	0.77	0.2465	24.150	3.505	713.6
572	300	683	0.708	2.92	0.098	0.114	0.73	0.3050	29.900	4.339	742.8
590	310	677	0.715	2.99	0.098	0.113	0.68	0.3915	38.350	5.565	772.7
608	320	671	0.722	3.02	0.097	0.112	0.62	0.4780	46.800	6.791	802.5
626	330	665	0.731	3.06	0.096	0.111	0.57	0.7110	69.650	10.096	832.2
644	340	659	0.739	3.09	0.095	0.110	0.51	0.9440	92.500	13.400	861.9
653	345	654	0.744	3.11	0.095	0.110	0.47	1.0300	101.000	14.600	875.3

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