

Armcoltherm® LD

Temperature: from -94°C to 230°C

It has excellent low-temperature fluidity and is used as a refrigerant, making it suitable for use in a wide temperature range for heating/cooling. It is widely used in the pharmaceutical industry, fine chemicals, high and low temperature all-in-one machines, etc. The ARMCOLTHERM LD is NSF HT1 food grade certified and is suitable for heating/cooling of parts that come into contact with food occasionally.

Property	Unit	Result
Appearance	Visual	Clear liquid
Composition	-	Synthetic hydrocarbons
Average molecular weight	-	162
Maximum bulk temperature	°C	230
Maximum film temperature	°C	245
Flash point	°C	78
Autoignition temperature	°C	224
Normal boiling point	°C	200
Pour point	°C	< -100
Coefficient of thermal expansion CC/CC	°C	0.00122
Density @20°C	kg/m ³	0.759
Viscosity, Kinematic @-94°C	mm ² /s	1750
Viscosity, Kinematic @-80°C	mm ² /s	285
Viscosity, Kinematic @-60°C	mm ² /s	29.5
Viscosity, Kinematic @-40°C	mm ² /s	9.840
Viscosity, Kinematic @40°C	mm ² /s	1.3
Pseudocritical temperature	°C	360
Pseudocritical pressure	bar	16.2
Pseudocritical density	kg/m ³	229

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
-137	-94	841	0.397	1.66	0.108	0.126	1750	-	-	-	-137.4
-130	-90	839	0.402	1.68	0.108	0.125	995	-	-	-	-130.7
-112	-80	832	0.409	1.71	0.107	0.124	285	-	-	-	-113.8
-94	-70	825	0.419	1.75	0.105	0.122	56.4	-	-	-	-96.5
-76	-60	818	0.428	1.79	0.105	0.121	29.5	-	-	-	-78.8
-58	-50	811	0.435	1.82	0.103	0.120	15.1	-	-	-	-60.8
-40	-40	805	0.445	1.86	0.102	0.118	9.84	-	-	-	-42.3
-22	-30	798	0.455	1.90	0.101	0.117	6.40	-	-	-	-23.5
-4	-20	791	0.464	1.94	0.100	0.116	4.09	0.00001	0.001	0.0001	-4.3
14	-10	784	0.474	1.98	0.099	0.115	3.08	0.00004	0.004	0.0006	15.3
32	0	777	0.483	2.02	0.097	0.113	2.43	0.00011	0.011	0.002	35.2
50	10	768	0.490	2.05	0.096	0.112	1.98	0.00026	0.027	0.004	55.6
68	20	759	0.500	2.09	0.095	0.110	1.65	0.0006	0.062	0.009	76.3
86	30	753	0.510	2.13	0.093	0.108	1.41	0.0013	0.131	0.019	97.4
104	40	748	0.519	2.17	0.092	0.107	1.30	0.003	0.259	0.038	118.9
122	50	741	0.529	2.21	0.091	0.105	1.08	0.005	0.484	0.070	140.9
140	60	733	0.538	2.25	0.089	0.104	0.96	0.008	0.859	0.125	163.2
158	70	726	0.548	2.29	0.088	0.102	0.86	0.014	1.46	0.212	185.9
176	80	718	0.557	2.33	0.086	0.100	0.78	0.023	2.39	0.347	209.0
194	90	710	0.567	2.37	0.085	0.098	0.71	0.037	3.77	0.547	232.5
212	100	703	0.577	2.41	0.083	0.097	0.65	0.056	5.76	0.836	256.4
230	110	695	0.586	2.45	0.082	0.095	0.60	0.084	8.57	1.244	280.8
248	120	687	0.598	2.50	0.080	0.093	0.55	0.122	12.4	1.800	305.5
266	130	678	0.608	2.54	0.078	0.091	0.51	0.173	17.6	2.554	330.7
284	140	670	0.617	2.58	0.077	0.089	0.47	0.239	24.4	3.541	356.3
302	150	661	0.627	2.62	0.075	0.087	0.44	0.325	33.2	4.819	382.3
320	160	653	0.639	2.67	0.073	0.085	0.41	0.434	44.3	6.430	408.8
338	170	644	0.648	2.71	0.072	0.083	0.38	0.572	58.3	8.462	435.6
356	180	635	0.658	2.75	0.070	0.081	0.36	0.740	75.5	10.96	463.0
374	190	625	0.670	2.80	0.068	0.079	0.34	0.946	96.5	14.01	490.7
392	200	616	0.679	2.84	0.066	0.077	0.32	1.196	122	17.71	518.9
410	210	606	0.691	2.89	0.064	0.075	0.30	1.490	152	22.06	547.6
428	220	595	0.701	2.93	0.063	0.073	0.28	1.843	188	27.29	576.7
446	230	584	0.713	2.98	0.061	0.071	0.27	2.245	229	33.24	606.3
464	240	573	0.725	3.03	0.059	0.068	0.25	2.725	278	40.35	636.3
482	250	562	0.737	3.08	0.057	0.066	0.24	3.265	333	48.33	666.9

*The above data are based on laboratory testing and not all product data are the same.

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