

5.14.2 Physical Properties

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ITAS Physical Property Library F3: Category

ID	Name	Code	Material Description
1	ABSR1	7001	ABS RESIN (LOW K)
2	ABSR2	7002	ABS RESIN (HIGH K)
3	ACDEL	7006	ACETYL (DELAIN)
4	ACRLP	7011	ACRYLIC (LUCITE, PLEXIGLASS)

String: ALUMINUM

CR or F10 Search

12	BRALF	5212	ALUMINA BRICK, FUSED (AL2O3 96) (22 P)
13	BRAL1	5214	ALUMINA BRICK, HIGH (AL2O3 53) (20 P)
14	BRAL2	5215	ALUMINA BRICK, HIGH (AL2O3 83) (28 P)
15	BRAL3	5216	ALUMINA BRICK, HIGH (AL2O3 87) (22 P)
16	PORAL	5281	ALUMINA PORCELAIN, HIGH
17	AL	1001	ALUMINUM
18	AL	1001	ALUMINUM

Use PgDn PgUp Home End ↑ ↓

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ITAS Thermal Properties For ALUMINUM 1001

Thermal Conductivity (cal/sec-cm-C)		Density, g/cm3	Specific Heat (cal/g-C)	
Temp (C)	k	2.698	Temp (C)	Cp
-269.0	0.91	Cp, cal/g-C	-273.15	0.0
-266.0	1.7	k, cal/sec-cm-C	-252.6	0.0024
-263.0	2.4	0.57	-240.0	0.01
-253.0	3.8	Latent Heat, cal/g	-217.5	0.0431
-243.0	3.8	94.9	-195.0	0.0815
-223.0	2.0	Transition Temp, C	-162.0	0.130
-213.0	1.43	668.2	-100.0	0.185
-173.0	0.7	†At or Near Room Temp†	0.0	0.215
-100.0	0.57		500.0	0.270
0.0	0.54		660.0	0.303
400.00	0.53		660.1	0.259
660.0	0.50		2467.0	0.259

F1: References/Data Quality

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ITAS Thermal Properties For ALUMINUM 1001

Thermal Conductivity (Btu/Hr-Ft-F)		Density, lb/in3	Specific Heat (Btu/lb-F)	
Temp (F)	k	0.097	Temp (F)	Cp
-452.200	220.129	Cp, Btu/lb-F	-459.670	0.000
-446.800	411.230	k, Btu/Hr-Ft-F	-422.600	0.002
-441.400	580.560	137.083	-400.000	0.010
-423.400	919.220	Latent Heat, Btu/lb	-359.500	0.043
-405.400	919.220	170.777	-320.440	0.061
-369.400	403.800	Transition Temp, F	-259.600	0.130
-351.400	345.917	1220.360	-140.000	0.185
-279.400	169.330	†At or Near Room Temp†	32.000	0.215
-140.000	137.083		932.000	0.270
32.000	130.626		1220.000	0.303
752.000	120.207		1220.100	0.259
1220.000	120.950		4472.600	0.259

F1: References/Data Quality F2: Help F3: SI Units ESC: QUIT

Figure 5-144. PC-ITAS/plus Physical Properties Library Screens