Instrument Laboratory North
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PROPERTIES OF NON-METALLIC SOLIDS

[1] At or near room temperature
[2] Thermal conductivity will decrease with age and use.
To convert to kg/m^3 multiply lb/ft^3 by 16.02
To convert to kJ/kg multiply Btu/lb by 2.326
To convert to kJ/kg-ºC multiply Btu/lb-ºF by 4.187
To convert to W/m-ºC multiply Btu-in/hr-ft2-ºF by 0.1442

Material	[1]Density lb/ft^3	Specific Heat Btu ---- lb-ºF	[1] Thermal Conductivity Btu-in ---- hr-ft^2-ºF	Melting Point ºF (Lowest)	Latent Heat of Fusion Btu/lb
Allyl, Cast	82.5	0.55	12.1		
Alumina (AISI Mag 393)	150				
Aluminum Silicate (Lava Grade A)	149	0.2	9.1	3690	
Alundum		0.186			
Amber	65.6				
Asbestos	36	0.25	0.44		40
Ashes	40-45	0.2	0.49	250±	
Asphalt	65	0.4	1.2		
Bakelite Resin, Pure	74-81	0.3-0.4			
Barium Chloride	240	0.10		1697	
Beeswax	60		1.67	144	75
Boron Nitride (Compacted)					
	142	0.33	125	5430	
Brick, Common Clay	100	0.23	5		
Brick, Facing/Building	140	0.22	8		
& Mortors	157				
Calcium Chloride	138	0.17		1422	72
Carbon		0.20	165	6700	
Carnauba Wax	62.4	0.8			
Cement, Portland Loose	94	0.19	2.04		
Cerafelt Insulation	3	0.25 @ 1000º	1.22		
Ceramic Fiber	10-15	0.27			
Chalk	112-175	0.215	5.76		
Charcoal Wood	17.5-36	0.242	0.612		
Chrome Brick		0.17	9.6		
Clay	90±10	0.224	9	3160	
Coal (Course Anthercite)	80	0.32	11		
Coal Tars	78	0.35-0.45			
Coke	62-88	0.265			
Concrete (Cinder)	100	0.16	5.3		
Concrete (Stone)	144	0.156	9.5		
Cordierite (AISI Mag 202)	131	0.35	9.12		
Cork	13.5	0.5	0.36		
Cotton (Flax, Hemp)	92.4	0.31	0.41		
Delrin	88	0.35	1.56		
Diamond	219	0.147	13872		
Earth, Dry & Packed	94	0.44	0.9		
Ethyl Cellulose	67-74	0.32-0.46			
Fiberglass	0.75		0.28		
Microlite® Duct Insulation					
Fiberglass	3		0.26		
Spin-Glas 1000 Insulation					