LAMPIRAN

Tabel . Sifat-Sifat Udara Pada Tekanan Atmosfer.

Nilai μ, k, c_D, dan Pr tidak terlalu bergantung pada tekanan dan dapat digunakan untuk tekanan yang cukup luas.

T, K	ρ kg/m^3	c_p kj/kg.^{0}C	μ kg/m.s x 10^5	v m^2/s x 10^4	k W/m.^{0}C	α m^2/s x 10^4	Pr
100	3.6010	1.0266	0.6924	1.923	0.009246	0.02501	0.770
150	2.3675	1.0099	1.0283	4.343	0.013735	0.0574	0.753
200	1.7684	1.0061	1.3289	7.490	0.01809	0.10165	0739
250	1.4128	1.0053	1.5990	11.31	0.02227	0.15675	0.722
300	1.1774	1.0057	1.8462	15.69	0.02624	0.22160	0.708
350	0.9980	1.0090	2.075	20.76	0.03003	0.2983	0.697
400	0.8826	1.0140	2.286	25.90	0.03365	0.3760	0.689
450	0.7833	1.0207	2.484	31.71	0.03707	0.4222	0.683
500	0.7048	1.0295	2.671	37.90	0.04038	0.5564	0.680
550	0.6423	1.0392	2.848	44.34	0.04360	0.6532	0.680
600	0.5879	1.0551	3.018	51.35	0.04659	0.7512	0.680
650	0.5430	1.0635	3.177	58.51	0.04953	0.8578	0.682
700	0.5030	1.0752	3.332	66.25	0.05230	0.9672	0.684
750	0.4709	1.0856	3.481	73.91	0.05509	1.0774	0.686
800	0.4405	1.0978	3.625	82.29	0.05779	1.1951	0.689
850	0.4149	1.1095	3.765	90.75	0.06028	1.3097	0.692
900	0.3925	1.1212	3.899	99.3	0.06279	1.4271	0.696
950	0.3716	1.1321	4.023	108.2	0.06525	1.5510	0.699
1000	0.3524	1.1417	4.152	117.8	0.06752	1.6779	0.702
1100	0.3204	1.160	4.44	138.6	0.0732	1.969	0.704
1200	0.2947	1.179	4.69	159.1	0.0782	2.251	0.707
1300	0.2707	1.197	4.93	182.1	0.0837	2.583	0.705
1400	0.2515	1.214	5.17	205.5	0.0891	2.920	0.705
1500	0.2355	1.230	5.40	229.1	0.0946	3.262	0.705
1600	0.2211	1.248	5.63	254.5	0.100	3.609	0.705
1700	0.2082	1.467	5.85	280.5	0.105	3.977	0.705
1800	0.1970	1.287	6.07	308.1	0.111	4.379	0.704
1900	0.1858	1.309	6.29	338.5	0.117	4.811	0.704
2000	0.1762	1.338	6.50	369.0	0.124	5.260	0.702
2100	0.1682	1.372	6.72	399.6	0.131	5.715	0.700
2200	0.1602	1.419	6.93	432.6	0.139	6.120	0.707
2300	0.1538	1.482	7.14	464.0	0.149	6.540	0.710
2400	0.1458	1.574	7.35	504.0	0.161	7.020	0.718
2500	0.1394	1.688	7.57	543.5	0.175	7.441	0.730

Dari Natl Bur stand (U.S) Circ. 564. 1965

Tabel. Sifat-sifat bukan logam.

Bahan	Temperatur ^{0}C	*k*, W/m/.^{0}C	ρ kg/m^3	*c* kj/kg.^{0}C	α m^2/s x 10^7
Bahan-bahan bangunan dan penahan kalor					
Aspal	20-55	0.74-0.76			
Bata:					
Bata bangunan	20	0.69	1600	0.84	5.2
Biasa					
Muka		1.32	2000		
Bata karborundum	600	18.5			
	1400	11.1			
Bata krom	200	2.32	3000	0.84	9.2
	550	2.47			9.8
	900	1.99			7.9
Tanah diatomea					
Dicetak dan	200	0.24			
Dibakar	870	0.31			
Bata tahan api	500	1.04	2000	0.96	5.4
Dibakar 2426^{0}F	800	1.07			
	1100	1.09			
Dibakar 2642^{0}F	500	1.28	2300	0.96	5.8
	800	1.37			
	1100	1.40			
Missouri	200	1.00	2600	0.96	4.0
	600	1.47			
	1400	1.47			
Magnesit	200	3.81		1.13	
	650	2.77			
	1200	1.90			
Semen, portland		0.29	1500		
Moster	23	1.16			
Beton, sinder	23	0.76			
Batu, 1.2-4 campur	20	1.37	1900-	0.88	8.2-6.8
Gelas, jendela	20	0.78 (avg)	2300	0.84	3.4
Korosilikat	30-75	1.09	2700		
Plaster, gips	20	0.48	2200	0.84	4.0
La logam	20	0.47	1440		
Lat kayu	20	0.28			
Batu:					
Granit		1.79-3.98		0.82	8-18
Batu kapur	100-300	1.26-1.33	2640	0.90	3.6-5.9
Marmer		2.07-2.94	2500	0.80	10-13.6
Batu pasir	40	1.83	2500-	0.71	11.2-11.9
Kayu (melintas serat)			2700		
Balsa, 8,8 lb/ft^3	30	0.55	2160-		
Sipres	30	0.097	2300		
Fir	23	0.11		2.72	0.96
Mapel atau oak	30	0.166	140	2.4	1.28
Pinus kuning	23	0.147	460	2.8	0.82
Pinus putih	30	0.112	420		
			540		
			640		
			430		

Tabel *ABSORBER TEST MATERIAL*

Code*	Absorber Material		Optical Popertiest	
	Coating	Substrate	Absorptance	Emittance
A	*Black nickel*	*Steel*	0.87	0.13
C	*Flat black paint*	*Copper*	0.98	0.92
D	*Black chrome*	*Steel (nickel-*	0.97	0.07
E	*flashed)*		0.95	0.87
F	*Flat balck paint*	*Copper*	0.96	0.75
G	*Copper oxide*	*Copper*	0.93	0.86
H	*Black porcelain*	*Steel*	0.95	0.89
I	*Flat black paint*	*Aluminum*	0.88	0.19
J	*Black chrome*	*Stainlees steel*	0.98	0.14
L	*Black chrome*	*Aluminum*	0.99	0.29
M	*Laed oxide*	*Copper*	0.94	0.10
N	*Oxide anodized*	*Aluminum*	0.93	0.51
P	*Oxide conversion Coating Black chrome*	*Aluminum Copper*	0.96	0.08

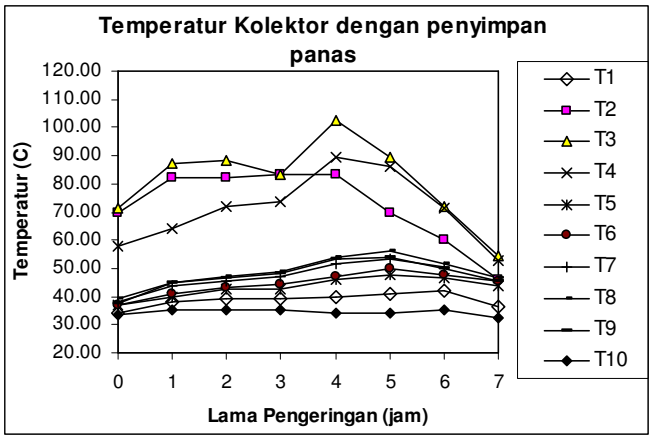
- *Code letters A through H indicate material coupon specimens cut from solar collector A through H. codes 1 through P test at the materials level only.*
- *These properties are dependent on the formulation and manufacturing processes used, other product within a generic class of materials may have significantly different properties.*
- *Everage values based on s minimum of 10 test specimens from NBS TN 1136,1981. NBS Solar collector durability and reliability test program plan by D. Wakman , E. street, and T. seiler*

(a) (b)

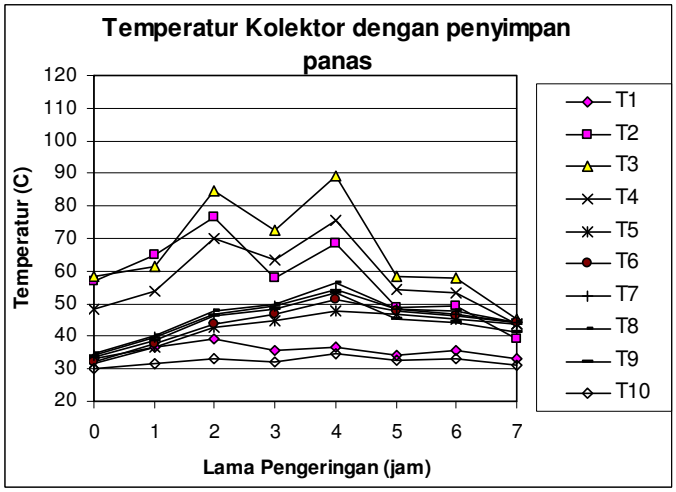
Gambar Hasil pengeringan menggunakan kolektor (a)
dan hasil pengeringan dijemur langsung (b)

Gambar Alat Pengering Surya jenis Pemanasan tidak langsung

Gambar Rak Ruang Pengering



Gambar 2. Distribusi temperatur pengeringan hari 1



Gambar 3. Distribusi temperatur pengeringan hari 2