

표 ESStb-S6, 물과 증기의 정압비열 (kJ/kg-K), Cp

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	4.179	4.183	4.197	4.216	4.247	4.315	4.405	4.562	5.032	6.127	23.20			
Sat. Vap.	1.941	1.966	2.016	2.076	2.175	2.413	2.715	3.190	4.438	7.147	45.68			
0	4.220	4.220	4.220	4.219	4.219	4.217	4.215	4.210	4.196	4.172	4.129	4.022	3.956	3.906
10	4.196	4.196	4.196	4.195	4.195	4.194	4.192	4.188	4.177	4.160	4.126	4.042	3.988	3.945
20	4.185	4.185	4.185	4.185	4.184	4.184	4.182	4.179	4.170	4.155	4.127	4.056	4.008	3.969
25	4.182	4.182	4.182	4.182	4.182	4.181	4.179	4.176	4.168	4.154	4.128	4.061	4.016	3.978
30	4.180	4.180	4.180	4.180	4.180	4.179	4.178	4.175	4.167	4.154	4.130	4.066	4.022	3.985
40	4.179	4.179	4.179	4.179	4.178	4.178	4.176	4.174	4.167	4.155	4.133	4.073	4.032	3.996
50	1.927	4.180	4.180	4.180	4.179	4.179	4.177	4.175	4.168	4.157	4.136	4.080	4.040	4.005
60	1.912	4.183	4.183	4.183	4.183	4.182	4.181	4.179	4.172	4.161	4.141	4.086	4.047	4.012
70	1.907	1.940	4.188	4.188	4.188	4.187	4.186	4.184	4.178	4.167	4.147	4.093	4.054	4.019
80	1.905	1.930	4.196	4.196	4.195	4.195	4.194	4.191	4.185	4.174	4.154	4.100	4.061	4.026
90	1.905	1.925	1.990	4.205	4.205	4.204	4.203	4.201	4.194	4.184	4.163	4.108	4.068	4.033
100	1.906	1.922	1.973	2.074	4.216	4.216	4.215	4.212	4.206	4.194	4.173	4.117	4.076	4.040
110	1.907	1.921	1.963	2.040	4.230	4.230	4.228	4.226	4.219	4.207	4.185	4.127	4.084	4.047
120	1.910	1.921	1.956	2.019	4.246	4.246	4.244	4.242	4.234	4.222	4.199	4.137	4.093	4.055
130	1.913	1.922	1.952	2.004	2.123	4.264	4.263	4.260	4.252	4.239	4.214	4.149	4.103	4.063
140	1.916	1.924	1.949	1.993	2.090	4.286	4.284	4.281	4.273	4.258	4.232	4.163	4.114	4.072
150	1.920	1.927	1.948	1.986	2.067	4.310	4.309	4.305	4.296	4.281	4.252	4.177	4.126	4.081
160	1.924	1.930	1.949	1.980	2.049	2.318	4.337	4.333	4.323	4.306	4.274	4.194	4.139	4.092
170	1.929	1.934	1.950	1.977	2.036	2.250	4.369	4.365	4.353	4.334	4.300	4.212	4.153	4.103
180	1.934	1.938	1.952	1.976	2.026	2.205	2.712	4.401	4.388	4.367	4.328	4.232	4.169	4.115
190	1.938	1.942	1.954	1.975	2.019	2.171	2.529	4.443	4.428	4.404	4.361	4.255	4.186	4.129
200	1.944	1.947	1.958	1.976	2.014	2.145	2.429	4.491	4.474	4.447	4.398	4.281	4.205	4.144
220	1.954	1.957	1.965	1.979	2.009	2.108	2.310	2.949	4.590	4.553	4.489	4.341	4.250	4.179
240	1.965	1.968	1.974	1.985	2.009	2.086	2.238	2.648	4.749	4.697	4.608	4.417	4.306	4.221
260	1.977	1.979	1.984	1.993	2.012	2.073	2.191	2.491	4.976	4.897	4.769	4.512	4.373	4.271
280	1.989	1.990	1.995	2.002	2.018	2.067	2.160	2.389	3.635	5.193	4.991	4.631	4.455	4.331
300	2.001	2.002	2.006	2.012	2.025	2.066	2.141	2.320	3.171	5.682	5.317	4.782	4.553	4.400
320	2.013	2.014	2.017	2.023	2.034	2.068	2.130	2.273	2.903	5.747	5.849	4.974	4.669	4.478
340	2.026	2.026	2.029	2.034	2.043	2.072	2.124	2.242	2.727	4.389	6.924	5.220	4.801	4.562
360	2.038	2.039	2.041	2.045	2.054	2.079	2.123	2.221	2.606	3.732	11.460	5.562	4.960	4.654
380	2.051	2.052	2.054	2.057	2.065	2.086	2.124	2.207	2.520	3.347	10.221	6.053	5.162	4.774
400	2.064	2.065	2.067	2.070	2.076	2.095	2.128	2.200	2.459	3.096	6.360	6.778	5.395	4.892
420	2.077	2.078	2.079	2.082	2.088	2.105	2.134	2.196	2.415	2.922	4.982	7.864	5.681	5.025
440	2.091	2.091	2.093	2.095	2.100	2.115	2.141	2.196	2.383	2.796	4.257	9.160	6.011	5.178
460	2.104	2.104	2.106	2.108	2.113	2.126	2.149	2.198	2.360	2.704	3.806	9.578	6.337	5.336
480	2.118	2.118	2.119	2.121	2.125	2.138	2.158	2.202	2.344	2.635	3.501	8.609	6.582	5.477
500	2.131	2.132	2.133	2.135	2.138	2.149	2.168	2.207	2.333	2.583	3.284	7.309	6.658	5.576
520	2.145	2.145	2.146	2.148	2.151	2.162	2.179	2.214	2.326	2.544	3.125	6.213	6.524	5.615
540	2.159	2.159	2.160	2.162	2.165	2.174	2.189	2.221	2.322	2.513	3.005	5.414	6.226	5.588
560	2.173	2.173	2.174	2.175	2.178	2.187	2.201	2.230	2.321	2.490	2.912	4.837	5.837	5.495
580	2.187	2.187	2.188	2.189	2.192	2.200	2.213	2.239	2.321	2.473	2.839	4.413	5.425	5.351
600	2.201	2.201	2.202	2.203	2.205	2.213	2.224	2.249	2.324	2.460	2.781	4.097	5.051	5.171
620	2.215	2.215	2.216	2.217	2.219	2.226	2.237	2.259	2.328	2.451	2.735	3.856	4.712	4.977
640	2.229	2.229	2.230	2.231	2.233	2.239	2.249	2.270	2.332	2.444	2.698	3.667	4.427	4.734
660	2.243	2.244	2.244	2.245	2.247	2.253	2.262	2.281	2.338	2.440	2.668	3.515	4.191	4.532
680	2.258	2.258	2.258	2.259	2.261	2.266	2.275	2.292	2.345	2.438	2.644	3.391	3.992	4.358
700	2.272	2.272	2.272	2.273	2.275	2.280	2.287	2.303	2.353	2.438	2.625	3.288	3.824	4.191
720	2.286	2.286	2.287	2.287	2.289	2.293	2.300	2.315	2.361	2.439	2.610	3.203	3.682	4.032
740	2.300	2.300	2.301	2.301	2.303	2.307	2.314	2.327	2.369	2.442	2.598	3.132	3.563	3.888
760	2.314	2.314	2.315	2.315	2.317	2.320	2.327	2.339	2.378	2.445	2.589	3.072	3.465	3.764
780	2.328	2.328	2.329	2.329	2.331	2.334	2.340	2.352	2.388	2.450	2.582	3.023	3.383	3.661
800	2.342	2.343	2.343	2.343	2.344	2.348	2.353	2.364	2.398	2.456	2.578	2.981	3.316	3.576
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S7, 물과 증기의 정적비열 (kJ/kg-K), Cv

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	4.045	3.974	3.864	3.770	3.667	3.518	3.397	3.271	3.115	3.044	3.441			
Sat. Vap.	1.462	1.480	1.513	1.553	1.616	1.761	1.930	2.159	2.590	3.112	4.223			
0	4.217	4.217	4.217	4.217	4.217	4.215	4.213	4.208	4.194	4.172	4.129	4.017	3.940	3.875
10	4.191	4.191	4.191	4.191	4.190	4.189	4.187	4.183	4.171	4.152	4.115	4.018	3.949	3.890
20	4.158	4.158	4.158	4.157	4.157	4.156	4.154	4.151	4.140	4.123	4.090	4.003	3.941	3.886
25	4.138	4.138	4.138	4.138	4.138	4.137	4.135	4.132	4.122	4.106	4.075	3.992	3.932	3.880
30	4.118	4.118	4.118	4.117	4.117	4.116	4.115	4.111	4.102	4.087	4.057	3.978	3.921	3.870
40	4.073	4.073	4.073	4.073	4.072	4.071	4.070	4.067	4.059	4.045	4.019	3.946	3.894	3.846
50	1.451	4.024	4.024	4.024	4.024	4.023	4.022	4.019	4.012	3.999	3.976	3.910	3.861	3.817
60	1.440	3.974	3.974	3.974	3.973	3.973	3.972	3.969	3.963	3.952	3.930	3.870	3.825	3.784
70	1.437	1.460	3.922	3.922	3.922	3.921	3.920	3.918	3.912	3.902	3.883	3.828	3.787	3.749
80	1.436	1.453	3.870	3.870	3.870	3.870	3.869	3.867	3.861	3.853	3.835	3.786	3.748	3.713
90	1.437	1.450	1.495	3.819	3.819	3.818	3.817	3.816	3.811	3.803	3.787	3.742	3.707	3.675
100	1.439	1.450	1.484	1.551	3.768	3.767	3.766	3.765	3.761	3.753	3.739	3.698	3.666	3.637
110	1.441	1.450	1.478	1.528	3.717	3.717	3.716	3.715	3.711	3.705	3.692	3.654	3.625	3.598
120	1.444	1.452	1.475	1.515	3.668	3.668	3.667	3.666	3.662	3.656	3.645	3.611	3.584	3.559
130	1.448	1.454	1.473	1.506	1.581	3.619	3.619	3.618	3.615	3.609	3.599	3.568	3.543	3.521
140	1.452	1.457	1.473	1.500	1.561	3.572	3.572	3.571	3.568	3.563	3.553	3.525	3.502	3.482
150	1.456	1.460	1.474	1.497	1.547	3.526	3.526	3.525	3.522	3.518	3.509	3.483	3.462	3.444
160	1.461	1.464	1.476	1.495	1.537	1.698	3.481	3.480	3.478	3.474	3.466	3.442	3.423	3.406
170	1.465	1.468	1.478	1.495	1.530	1.656	3.438	3.437	3.435	3.431	3.423	3.402	3.384	3.369
180	1.470	1.473	1.481	1.495	1.525	1.629	1.928	3.395	3.393	3.389	3.382	3.362	3.346	3.332
190	1.475	1.478	1.485	1.497	1.523	1.610	1.812	3.355	3.353	3.349	3.343	3.324	3.310	3.297
200	1.481	1.483	1.489	1.499	1.521	1.596	1.753	3.317	3.314	3.311	3.304	3.287	3.274	3.263
220	1.492	1.493	1.498	1.506	1.522	1.577	1.687	2.018	3.243	3.239	3.233	3.218	3.207	3.198
240	1.503	1.504	1.508	1.514	1.526	1.568	1.649	1.856	3.179	3.175	3.169	3.155	3.146	3.139
260	1.515	1.515	1.518	1.523	1.533	1.565	1.626	1.777	3.125	3.120	3.113	3.099	3.091	3.085
280	1.526	1.527	1.529	1.533	1.541	1.566	1.614	1.727	2.252	3.076	3.066	3.050	3.043	3.037
300	1.539	1.539	1.541	1.544	1.551	1.571	1.608	1.695	2.061	3.050	3.032	3.008	2.999	2.993
320	1.551	1.551	1.553	1.556	1.561	1.577	1.607	1.676	1.950	2.777	3.013	2.969	2.957	2.949
340	1.564	1.564	1.565	1.567	1.572	1.586	1.610	1.665	1.877	2.420	3.023	2.931	2.913	2.904
360	1.576	1.577	1.578	1.580	1.583	1.595	1.615	1.660	1.828	2.220	3.174	2.901	2.871	2.857
380	1.589	1.589	1.590	1.592	1.595	1.605	1.623	1.660	1.795	2.093	3.141	2.883	2.842	2.829
400	1.602	1.602	1.603	1.605	1.608	1.616	1.631	1.663	1.773	2.009	2.701	2.873	2.810	2.795
420	1.615	1.616	1.616	1.618	1.620	1.628	1.641	1.668	1.760	1.950	2.460	2.884	2.784	2.764
440	1.629	1.629	1.630	1.631	1.633	1.640	1.651	1.675	1.753	1.909	2.307	2.899	2.765	2.738
460	1.642	1.642	1.643	1.644	1.646	1.652	1.662	1.683	1.750	1.880	2.200	2.872	2.746	2.714
480	1.656	1.656	1.657	1.657	1.659	1.665	1.674	1.692	1.750	1.860	2.122	2.787	2.721	2.689
500	1.670	1.670	1.670	1.671	1.673	1.677	1.685	1.702	1.753	1.848	2.066	2.678	2.685	2.662
520	1.683	1.683	1.684	1.685	1.686	1.690	1.698	1.712	1.758	1.840	2.024	2.561	2.640	2.633
540	1.697	1.697	1.698	1.698	1.700	1.704	1.710	1.724	1.764	1.836	1.994	2.458	2.587	2.601
560	1.711	1.711	1.712	1.712	1.713	1.717	1.723	1.735	1.772	1.836	1.972	2.374	2.531	2.567
580	1.725	1.725	1.726	1.726	1.727	1.731	1.736	1.747	1.780	1.837	1.957	2.307	2.475	2.533
600	1.739	1.739	1.740	1.740	1.741	1.744	1.749	1.759	1.789	1.840	1.946	2.254	2.427	2.489
620	1.753	1.754	1.754	1.754	1.755	1.758	1.763	1.772	1.799	1.845	1.939	2.215	2.378	2.473
640	1.768	1.768	1.768	1.768	1.769	1.772	1.776	1.784	1.809	1.851	1.935	2.183	2.336	2.418
660	1.782	1.782	1.782	1.783	1.783	1.786	1.789	1.797	1.820	1.857	1.934	2.158	2.301	2.371
680	1.796	1.796	1.796	1.797	1.797	1.799	1.803	1.810	1.831	1.865	1.934	2.137	2.271	2.343
700	1.810	1.810	1.810	1.811	1.811	1.813	1.817	1.823	1.842	1.873	1.936	2.120	2.243	2.323
720	1.824	1.824	1.825	1.825	1.825	1.827	1.830	1.836	1.853	1.882	1.939	2.106	2.219	2.303
740	1.838	1.839	1.839	1.839	1.839	1.841	1.844	1.849	1.865	1.891	1.943	2.096	2.200	2.282
760	1.853	1.853	1.853	1.853	1.854	1.855	1.857	1.862	1.877	1.901	1.948	2.089	2.186	2.265
780	1.867	1.867	1.867	1.867	1.868	1.869	1.871	1.876	1.889	1.911	1.954	2.084	2.178	2.251
800	1.881	1.881	1.881	1.881	1.882	1.883	1.885	1.889	1.901	1.921	1.961	2.083	2.176	2.241
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

Table ESStb-S8, 물과 증기의 비열비, Cp / Cv

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	1.033	1.053	1.086	1.118	1.158	1.227	1.297	1.395	1.615	2.013	6.743			
Sat. Vap.	1.327	1.328	1.332	1.337	1.346	1.370	1.406	1.478	1.713	2.297	10.817			
0	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.001	1.004	1.008
10	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.002	1.003	1.006	1.010	1.014
20	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.007	1.008	1.009	1.013	1.017	1.021
25	1.011	1.011	1.011	1.011	1.011	1.011	1.011	1.011	1.011	1.012	1.013	1.017	1.021	1.025
30	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.016	1.016	1.018	1.022	1.026	1.030
40	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.027	1.027	1.028	1.032	1.035	1.039
50	1.328	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.039	1.040	1.043	1.046	1.049
60	1.328	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.054	1.056	1.058	1.060
70	1.328	1.329	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.068	1.069	1.070	1.072
80	1.327	1.328	1.084	1.084	1.084	1.084	1.084	1.084	1.084	1.084	1.083	1.083	1.083	1.084
90	1.326	1.327	1.331	1.101	1.101	1.101	1.101	1.101	1.101	1.100	1.099	1.098	1.097	1.097
100	1.324	1.326	1.330	1.337	1.119	1.119	1.119	1.119	1.118	1.118	1.116	1.113	1.112	1.111
110	1.323	1.325	1.328	1.335	1.138	1.138	1.138	1.138	1.137	1.136	1.134	1.129	1.127	1.125
120	1.322	1.323	1.327	1.333	1.158	1.158	1.157	1.157	1.156	1.155	1.152	1.146	1.142	1.139
130	1.321	1.322	1.325	1.331	1.343	1.178	1.178	1.178	1.176	1.175	1.171	1.163	1.158	1.154
140	1.320	1.321	1.324	1.328	1.339	1.200	1.199	1.199	1.197	1.195	1.191	1.181	1.175	1.169
150	1.319	1.320	1.322	1.326	1.336	1.222	1.222	1.221	1.220	1.217	1.212	1.199	1.192	1.185
160	1.318	1.318	1.321	1.325	1.333	1.365	1.246	1.245	1.243	1.240	1.233	1.218	1.209	1.201
170	1.316	1.317	1.319	1.323	1.331	1.359	1.271	1.270	1.267	1.263	1.256	1.238	1.227	1.218
180	1.315	1.316	1.318	1.321	1.328	1.353	1.406	1.296	1.293	1.288	1.280	1.259	1.246	1.235
190	1.314	1.315	1.316	1.319	1.326	1.348	1.396	1.324	1.321	1.315	1.305	1.280	1.265	1.252
200	1.313	1.313	1.315	1.318	1.324	1.344	1.386	1.354	1.350	1.343	1.331	1.302	1.284	1.270
220	1.310	1.311	1.312	1.315	1.320	1.336	1.370	1.461	1.415	1.406	1.389	1.349	1.325	1.307
240	1.308	1.308	1.309	1.312	1.316	1.330	1.357	1.427	1.494	1.479	1.454	1.400	1.369	1.345
260	1.305	1.306	1.307	1.309	1.312	1.325	1.347	1.402	1.592	1.570	1.532	1.456	1.415	1.384
280	1.303	1.303	1.304	1.306	1.309	1.320	1.338	1.383	1.614	1.688	1.628	1.518	1.464	1.426
300	1.300	1.301	1.302	1.303	1.306	1.315	1.331	1.368	1.538	1.863	1.754	1.590	1.518	1.470
320	1.298	1.298	1.299	1.300	1.303	1.311	1.325	1.356	1.489	2.069	1.941	1.675	1.579	1.518
340	1.295	1.296	1.296	1.298	1.300	1.307	1.319	1.346	1.453	1.813	2.290	1.781	1.648	1.571
360	1.293	1.293	1.294	1.295	1.297	1.303	1.314	1.337	1.426	1.682	3.611	1.917	1.728	1.629
380	1.291	1.291	1.291	1.292	1.294	1.300	1.309	1.330	1.404	1.599	3.255	2.100	1.816	1.688
400	1.288	1.288	1.289	1.290	1.291	1.296	1.305	1.323	1.387	1.541	2.355	2.359	1.920	1.750
420	1.286	1.286	1.286	1.287	1.289	1.293	1.301	1.317	1.372	1.499	2.025	2.726	2.040	1.818
440	1.284	1.284	1.284	1.285	1.286	1.290	1.297	1.311	1.360	1.465	1.845	3.160	2.174	1.892
460	1.281	1.281	1.282	1.282	1.283	1.287	1.293	1.306	1.349	1.439	1.730	3.334	2.308	1.966
480	1.279	1.279	1.279	1.280	1.281	1.284	1.290	1.301	1.339	1.417	1.650	3.089	2.419	2.036
500	1.277	1.277	1.277	1.277	1.278	1.281	1.286	1.297	1.331	1.398	1.590	2.730	2.479	2.094
520	1.274	1.274	1.275	1.275	1.276	1.279	1.283	1.293	1.323	1.382	1.544	2.426	2.472	2.133
540	1.272	1.272	1.272	1.273	1.274	1.276	1.280	1.289	1.316	1.369	1.507	2.202	2.407	2.149
560	1.270	1.270	1.270	1.270	1.271	1.273	1.277	1.285	1.310	1.357	1.476	2.037	2.306	2.141
580	1.268	1.268	1.268	1.268	1.269	1.271	1.274	1.282	1.304	1.346	1.451	1.913	2.192	2.113
600	1.265	1.265	1.266	1.266	1.267	1.269	1.272	1.278	1.299	1.337	1.429	1.817	2.081	2.077
620	1.263	1.263	1.264	1.264	1.264	1.266	1.269	1.275	1.294	1.328	1.410	1.741	1.982	2.013
640	1.261	1.261	1.261	1.262	1.262	1.264	1.266	1.272	1.289	1.321	1.394	1.680	1.895	1.957
660	1.259	1.259	1.259	1.260	1.260	1.262	1.264	1.269	1.285	1.314	1.380	1.629	1.821	1.912
680	1.257	1.257	1.257	1.257	1.258	1.259	1.262	1.266	1.281	1.307	1.367	1.587	1.758	1.860
700	1.255	1.255	1.255	1.255	1.256	1.257	1.259	1.264	1.277	1.302	1.356	1.551	1.705	1.804
720	1.253	1.253	1.253	1.253	1.254	1.255	1.257	1.261	1.274	1.296	1.346	1.521	1.659	1.751
740	1.251	1.251	1.251	1.251	1.252	1.253	1.255	1.259	1.270	1.291	1.337	1.494	1.620	1.703
760	1.249	1.249	1.249	1.249	1.250	1.251	1.253	1.256	1.267	1.286	1.329	1.471	1.585	1.662
780	1.247	1.247	1.247	1.248	1.248	1.249	1.251	1.254	1.264	1.282	1.321	1.450	1.553	1.626
800	1.245	1.245	1.246	1.246	1.246	1.247	1.248	1.252	1.261	1.278	1.314	1.431	1.524	1.596
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S9, 물과 증기에서의 음속 (m/s)

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	1540.0	1553.8	1556.6	1545.5	1520.7	1462.0	1391.6	1290.6	1088.4	847.7	422.2			
Sat. Vap.	440.5	449.5	462.2	472.1	481.9	493.8	500.9	504.7	498.2	472.4	384.5			
0	1402.3	1402.3	1402.4	1402.4	1402.6	1403.1	1403.8	1405.4	1410.2	1418.2	1434.5	1485.9	1530.6	1575.5
10	1447.4	1447.4	1447.5	1447.6	1447.7	1448.2	1449.0	1450.6	1455.3	1463.3	1479.6	1530.0	1573.3	1616.8
20	1483.3	1483.3	1483.3	1483.4	1483.6	1484.0	1484.8	1486.4	1491.2	1499.2	1515.3	1564.9	1607.2	1649.6
25	1498.0	1498.0	1498.1	1498.2	1498.3	1498.8	1499.6	1501.2	1506.0	1514.0	1530.1	1579.5	1621.4	1663.4
30	1510.8	1510.9	1510.9	1511.0	1511.1	1511.6	1512.4	1514.0	1518.8	1526.8	1543.0	1592.3	1634.1	1675.8
40	1531.2	1531.2	1531.2	1531.3	1531.5	1531.9	1532.8	1534.4	1539.2	1547.4	1563.7	1613.3	1655.0	1696.4
50	443.7	1545.2	1545.2	1545.3	1545.5	1546.0	1546.8	1548.5	1553.5	1561.8	1578.4	1628.7	1670.8	1712.2
60	450.7	1553.7	1553.8	1553.9	1554.0	1554.5	1555.4	1557.1	1562.3	1570.8	1587.9	1639.3	1682.0	1723.7
70	457.5	456.7	1557.5	1557.6	1557.8	1558.3	1559.2	1561.0	1566.3	1575.2	1592.9	1645.6	1689.1	1731.3
80	464.1	463.4	1557.0	1557.1	1557.2	1557.8	1558.7	1560.6	1566.2	1575.4	1593.7	1648.1	1692.6	1735.4
90	470.5	470.0	468.3	1552.8	1553.0	1553.5	1554.5	1556.5	1562.3	1571.9	1591.0	1647.2	1692.8	1736.3
100	476.9	476.4	475.0	472.3	1545.3	1545.9	1546.9	1549.0	1555.1	1565.1	1585.0	1643.2	1690.1	1734.4
110	483.1	482.7	481.4	479.3	1534.6	1535.2	1536.3	1538.4	1544.8	1555.4	1576.2	1636.5	1684.8	1730.0
120	489.2	488.9	487.8	485.9	1521.0	1521.7	1522.8	1525.1	1531.8	1543.0	1564.7	1627.4	1677.1	1723.4
130	495.3	495.0	494.0	492.3	488.8	1505.6	1506.8	1509.2	1516.3	1528.0	1550.8	1616.0	1667.4	1714.7
140	501.2	500.9	500.1	498.6	495.5	1487.0	1488.3	1490.8	1498.4	1510.7	1534.7	1602.5	1655.6	1704.3
150	507.1	506.8	506.0	504.7	502.0	1466.0	1467.4	1470.1	1478.1	1491.2	1516.5	1587.2	1642.2	1692.1
160	512.8	512.6	511.9	510.7	508.3	500.2	1444.3	1447.2	1455.7	1469.6	1496.2	1570.1	1627.1	1678.5
170	518.5	518.3	517.7	516.6	514.4	507.3	1418.9	1422.0	1431.1	1445.8	1474.0	1551.4	1610.4	1663.6
180	524.1	523.9	523.4	522.4	520.4	514.1	501.0	1394.6	1404.3	1420.1	1450.0	1531.0	1592.4	1647.3
190	529.7	529.5	529.0	528.1	526.3	520.6	509.7	1365.0	1375.4	1392.2	1424.0	1509.1	1572.9	1629.8
200	535.1	535.0	534.5	533.7	532.0	526.8	517.3	1333.2	1344.3	1362.3	1396.2	1485.8	1552.2	1611.2
220	545.8	545.7	545.3	544.6	543.2	538.9	531.2	512.6	1275.4	1296.1	1334.8	1434.7	1506.9	1570.7
240	556.3	556.2	555.9	555.3	554.1	550.4	544.0	529.5	1197.1	1221.1	1265.7	1378.0	1457.1	1526.2
260	566.6	566.5	566.2	565.6	564.6	561.5	556.1	544.1	1107.7	1136.3	1188.5	1316.0	1402.9	1478.1
280	576.6	576.5	576.2	575.8	574.9	572.2	567.5	557.4	518.9	1038.9	1102.1	1249.0	1345.1	1426.9
300	586.4	586.3	586.1	585.7	584.9	582.6	578.5	569.9	538.8	922.8	1004.3	1177.3	1284.3	1373.4
320	596.0	595.9	595.7	595.4	594.7	592.6	589.1	581.7	555.8	491.7	890.3	1101.5	1221.3	1318.5
340	605.4	605.3	605.1	604.8	604.2	602.4	599.3	592.9	570.9	522.2	751.1	1021.7	1157.0	1263.0
360	614.6	614.5	614.4	614.1	613.6	612.0	609.2	603.6	584.8	545.5	542.7	936.0	1091.6	1207.4
380	623.7	623.6	623.5	623.2	622.8	621.3	618.9	613.9	597.6	565.0	461.3	846.8	1023.5	1150.7
400	632.6	632.5	632.4	632.2	631.8	630.5	628.3	623.9	609.6	582.0	507.3	755.1	955.9	1093.3
420	641.3	641.3	641.2	641.0	640.6	639.4	637.5	633.5	620.9	597.3	538.7	666.1	890.2	1037.2
440	649.9	649.9	649.8	649.6	649.2	648.2	646.5	642.9	631.7	611.3	563.4	593.6	828.7	983.7
460	658.4	658.3	658.2	658.1	657.8	656.8	655.3	652.1	642.1	624.2	584.1	596.7	774.3	934.4
480	666.7	666.6	666.6	666.4	666.1	665.3	663.9	661.0	652.1	636.4	602.3	554.8	730.1	890.4
500	674.9	674.8	674.8	674.6	674.4	673.6	672.3	669.8	661.8	647.9	618.6	568.9	698.6	852.7
520	682.9	682.9	682.8	682.7	682.5	681.8	680.7	678.3	671.2	658.8	633.5	588.1	680.3	821.9
540	690.9	690.9	690.8	690.7	690.5	689.9	688.8	686.7	680.3	669.3	647.2	607.7	673.0	798.0
560	698.7	698.7	698.6	698.6	698.4	697.8	696.9	694.9	689.2	679.4	660.1	626.2	674.1	781.0
580	706.4	706.4	706.4	706.3	706.1	705.6	704.8	703.0	697.8	689.1	672.2	643.4	679.5	770.0
600	714.1	714.1	714.0	713.9	713.8	713.3	712.5	711.0	706.3	698.5	683.7	659.2	687.4	766.5
620	721.6	721.6	721.5	721.5	721.3	720.9	720.2	718.8	714.6	707.7	694.7	673.9	697.2	762.8
640	729.0	729.0	729.0	728.9	728.8	728.4	727.8	726.5	722.8	716.6	705.2	687.7	707.9	764.7
660	736.4	736.3	736.3	736.3	736.1	735.8	735.2	734.1	730.7	725.3	715.3	700.7	718.9	770.5
680	743.6	743.6	743.6	743.5	743.4	743.1	742.6	741.6	738.6	733.7	725.0	713.1	730.0	777.3
700	750.8	750.7	750.7	750.7	750.6	750.3	749.9	749.0	746.3	742.0	734.5	725.0	741.0	784.1
720	757.8	757.8	757.8	757.8	757.7	757.4	757.0	756.2	753.9	750.1	743.6	736.3	751.9	790.9
740	764.8	764.8	764.8	764.8	764.7	764.5	764.1	763.4	761.3	758.1	752.6	747.2	762.5	797.9
760	771.8	771.8	771.7	771.7	771.6	771.4	771.1	770.5	768.7	765.9	761.2	757.7	772.8	805.2
780	778.6	778.6	778.6	778.6	778.5	778.3	778.1	777.5	776.0	773.6	769.7	767.7	782.6	812.8
800	785.4	785.4	785.4	785.3	785.3	785.1	784.9	784.4	783.1	781.1	778.0	777.4	791.8	821.0
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S10, 물과 증기의 절대 점도 (cP)

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	0.5873	0.4656	0.3483	0.2828	0.2316	0.1802	0.1505	0.1264	0.1001	0.0817	0.0562			
Sat. Vap	0.0104	0.0109	0.0116	0.0122	0.0129	0.0140	0.0150	0.0161	0.0180	0.0202	0.0274			
0	1.7920	1.7919	1.7919	1.7918	1.7915	1.7909	1.7897	1.7875	1.7810	1.7706	1.7512	1.7047	1.6779	1.6606
10	1.3060	1.3060	1.3059	1.3059	1.3058	1.3055	1.3051	1.3042	1.3016	1.2974	1.2898	1.2722	1.2633	1.2593
20	1.0016	1.0016	1.0016	1.0016	1.0016	1.0015	1.0013	1.0010	1.0001	0.9988	0.9964	0.9920	0.9913	0.9931
25	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8899	0.8898	0.8894	0.8888	0.8879	0.8872	0.8888	0.8924
30	0.7972	0.7972	0.7972	0.7972	0.7972	0.7972	0.7972	0.7972	0.7972	0.7971	0.7973	0.7992	0.8025	0.8071
40	0.6527	0.6527	0.6527	0.6527	0.6527	0.6528	0.6528	0.6530	0.6534	0.6540	0.6555	0.6606	0.6658	0.6718
50	0.0105	0.5465	0.5465	0.5465	0.5465	0.5466	0.5467	0.5469	0.5475	0.5485	0.5506	0.5574	0.5635	0.5701
60	0.0109	0.4660	0.4660	0.4660	0.4661	0.4661	0.4663	0.4665	0.4672	0.4684	0.4709	0.4784	0.4849	0.4917
70	0.0112	0.0112	0.4035	0.4036	0.4036	0.4037	0.4038	0.4040	0.4048	0.4061	0.4087	0.4166	0.4233	0.4301
80	0.0116	0.0116	0.3540	0.3541	0.3541	0.3542	0.3543	0.3546	0.3554	0.3567	0.3594	0.3674	0.3741	0.3808
90	0.0120	0.0119	0.0119	0.3142	0.3142	0.3143	0.3144	0.3147	0.3155	0.3169	0.3195	0.3275	0.3341	0.3407
100	0.0123	0.0123	0.0123	0.0122	0.2816	0.2817	0.2818	0.2821	0.2829	0.2842	0.2869	0.2948	0.3013	0.3077
110	0.0127	0.0127	0.0127	0.0126	0.2546	0.2547	0.2548	0.2551	0.2559	0.2572	0.2599	0.2676	0.2740	0.2802
120	0.0131	0.0131	0.0131	0.0130	0.2320	0.2321	0.2322	0.2325	0.2333	0.2346	0.2372	0.2448	0.2510	0.2571
130	0.0135	0.0135	0.0134	0.0134	0.0133	0.2130	0.2131	0.2134	0.2142	0.2155	0.2180	0.2255	0.2315	0.2375
140	0.0139	0.0138	0.0138	0.0138	0.0137	0.1967	0.1968	0.1971	0.1978	0.1991	0.2016	0.2090	0.2149	0.2207
150	0.0142	0.0142	0.0142	0.0142	0.0141	0.1826	0.1827	0.1830	0.1838	0.1850	0.1875	0.1947	0.2005	0.2062
160	0.0146	0.0146	0.0146	0.0146	0.0145	0.0144	0.1705	0.1708	0.1715	0.1728	0.1752	0.1823	0.1880	0.1935
170	0.0150	0.0150	0.0150	0.0150	0.0149	0.0148	0.1598	0.1601	0.1608	0.1621	0.1645	0.1715	0.1771	0.1825
180	0.0154	0.0154	0.0154	0.0154	0.0154	0.0152	0.0150	0.1506	0.1514	0.1526	0.1550	0.1620	0.1675	0.1728
190	0.0158	0.0158	0.0158	0.0158	0.0158	0.0156	0.0154	0.1422	0.1430	0.1442	0.1466	0.1535	0.1590	0.1642
200	0.0162	0.0162	0.0162	0.0162	0.0162	0.0161	0.0159	0.1347	0.1355	0.1367	0.1391	0.1460	0.1514	0.1565
220	0.0170	0.0170	0.0170	0.0170	0.0170	0.0169	0.0168	0.0165	0.1225	0.1238	0.1262	0.1331	0.1384	0.1435
240	0.0179	0.0179	0.0179	0.0178	0.0178	0.0177	0.0176	0.0174	0.1115	0.1129	0.1155	0.1225	0.1278	0.1328
260	0.0187	0.0187	0.0187	0.0187	0.0186	0.0186	0.0185	0.0183	0.1019	0.1034	0.1062	0.1135	0.1189	0.1238
280	0.0195	0.0195	0.0195	0.0195	0.0195	0.0194	0.0193	0.0192	0.0188	0.0948	0.0978	0.1057	0.1112	0.1162
300	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203	0.0202	0.0201	0.0198	0.0864	0.0901	0.0987	0.1045	0.1096
320	0.0211	0.0211	0.0211	0.0211	0.0211	0.0211	0.0211	0.0210	0.0208	0.0207	0.0824	0.0923	0.0984	0.1037
340	0.0220	0.0220	0.0220	0.0220	0.0220	0.0219	0.0219	0.0218	0.0217	0.0217	0.0742	0.0862	0.0929	0.0984
360	0.0228	0.0228	0.0228	0.0228	0.0228	0.0228	0.0228	0.0227	0.0226	0.0227	0.0628	0.0803	0.0876	0.0935
380	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0235	0.0236	0.0258	0.0743	0.0827	0.0889
400	0.0245	0.0245	0.0245	0.0245	0.0245	0.0244	0.0244	0.0244	0.0244	0.0246	0.0261	0.0681	0.0778	0.0846
420	0.0253	0.0253	0.0253	0.0253	0.0253	0.0253	0.0253	0.0253	0.0253	0.0255	0.0268	0.0614	0.0731	0.0805
440	0.0261	0.0261	0.0261	0.0261	0.0261	0.0261	0.0261	0.0261	0.0262	0.0264	0.0276	0.0544	0.0685	0.0766
460	0.0269	0.0269	0.0269	0.0269	0.0269	0.0269	0.0269	0.0269	0.0270	0.0272	0.0284	0.0479	0.0640	0.0728
480	0.0277	0.0277	0.0277	0.0277	0.0277	0.0278	0.0278	0.0278	0.0279	0.0281	0.0292	0.0434	0.0598	0.0692
500	0.0286	0.0286	0.0286	0.0286	0.0286	0.0286	0.0286	0.0286	0.0287	0.0290	0.0300	0.0409	0.0561	0.0658
520	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0295	0.0298	0.0308	0.0396	0.0529	0.0628
540	0.0302	0.0302	0.0302	0.0302	0.0302	0.0302	0.0302	0.0302	0.0304	0.0307	0.0316	0.0391	0.0504	0.0601
560	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0311	0.0312	0.0315	0.0324	0.0389	0.0486	0.0578
580	0.0318	0.0318	0.0318	0.0318	0.0318	0.0318	0.0318	0.0319	0.0320	0.0323	0.0332	0.0390	0.0474	0.0559
600	0.0326	0.0326	0.0326	0.0326	0.0326	0.0326	0.0326	0.0327	0.0328	0.0331	0.0340	0.0392	0.0465	0.0543
620	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0334	0.0335	0.0336	0.0339	0.0348	0.0395	0.0460	0.0531
640	0.0342	0.0342	0.0342	0.0342	0.0342	0.0342	0.0342	0.0343	0.0344	0.0347	0.0355	0.0399	0.0457	0.0522
660	0.0350	0.0350	0.0350	0.0350	0.0350	0.0350	0.0350	0.0351	0.0352	0.0355	0.0363	0.0404	0.0456	0.0515
680	0.0358	0.0358	0.0358	0.0358	0.0358	0.0358	0.0358	0.0359	0.0360	0.0363	0.0371	0.0409	0.0456	0.0510
700	0.0366	0.0366	0.0366	0.0366	0.0366	0.0366	0.0366	0.0367	0.0368	0.0371	0.0379	0.0415	0.0458	0.0507
720	0.0373	0.0373	0.0373	0.0373	0.0374	0.0374	0.0374	0.0374	0.0376	0.0379	0.0386	0.0420	0.0460	0.0505
740	0.0381	0.0381	0.0381	0.0381	0.0381	0.0381	0.0382	0.0382	0.0384	0.0387	0.0394	0.0426	0.0463	0.0505
760	0.0389	0.0389	0.0389	0.0389	0.0389	0.0389	0.0389	0.0390	0.0391	0.0394	0.0401	0.0432	0.0466	0.0505
780	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0398	0.0399	0.0402	0.0409	0.0438	0.0470	0.0506
800	0.0404	0.0404	0.0404	0.0404	0.0404	0.0405	0.0405	0.0405	0.0407	0.0409	0.0416	0.0444	0.0474	0.0508
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S11, 물과 증기의 동 점도 (cSt)

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	0.5933	0.4736	0.3587	0.2950	0.2456	0.1969	0.1696	0.1487	0.1288	0.1187	0.1146			
Sat. Vap	152.23	83.025	37.535	20.698	11.456	5.2563	2.9116	1.6023	0.7086	0.3642	0.1605			
0	1.7923	1.7923	1.7922	1.7920	1.7917	1.7908	1.7892	1.7861	1.7769	1.7621	1.7344	1.6651	1.6214	1.5887
10	1.3064	1.3064	1.3064	1.3063	1.3061	1.3057	1.3049	1.3034	1.2989	1.2918	1.2783	1.2444	1.2232	1.2076
20	1.0035	1.0035	1.0034	1.0034	1.0033	1.0031	1.0027	1.0020	0.9997	0.9961	0.9893	0.9726	0.9624	0.9553
25	0.8927	0.8927	0.8927	0.8927	0.8926	0.8924	0.8922	0.8916	0.8901	0.8875	0.8828	0.8711	0.8643	0.8598
30	0.8007	0.8007	0.8007	0.8007	0.8007	0.8006	0.8004	0.8000	0.7989	0.7971	0.7939	0.7860	0.7816	0.7791
40	0.6579	0.6579	0.6579	0.6578	0.6578	0.6578	0.6577	0.6575	0.6571	0.6563	0.6550	0.6521	0.6510	0.6510
50	156.42	0.5531	0.5531	0.5531	0.5531	0.5531	0.5531	0.5531	0.5529	0.5528	0.5526	0.5526	0.5534	0.5548
60	166.69	0.4740	0.4740	0.4740	0.4740	0.4740	0.4740	0.4741	0.4742	0.4744	0.4748	0.4766	0.4785	0.4809
70	177.38	88.375	0.4127	0.4127	0.4127	0.4128	0.4128	0.4129	0.4131	0.4135	0.4144	0.4172	0.4199	0.4228
80	188.50	93.959	0.3643	0.3643	0.3643	0.3644	0.3644	0.3645	0.3649	0.3654	0.3665	0.3700	0.3731	0.3764
90	200.03	99.749	39.577	0.3255	0.3255	0.3255	0.3256	0.3257	0.3261	0.3267	0.3280	0.3319	0.3353	0.3387
100	211.98	105.75	42.002	20.748	0.2938	0.2939	0.2939	0.2941	0.2945	0.2952	0.2966	0.3007	0.3042	0.3078
110	224.35	111.95	44.505	22.020	0.2678	0.2678	0.2679	0.2680	0.2685	0.2692	0.2706	0.2749	0.2785	0.2821
120	237.14	118.36	47.089	23.329	0.2460	0.2461	0.2462	0.2463	0.2468	0.2475	0.2490	0.2534	0.2570	0.2606
130	250.34	124.98	49.753	24.676	12.132	0.2278	0.2279	0.2280	0.2285	0.2293	0.2308	0.2352	0.2388	0.2424
140	263.97	131.80	52.498	26.062	12.840	0.2123	0.2124	0.2126	0.2130	0.2138	0.2153	0.2198	0.2234	0.2269
150	278.00	138.83	55.324	27.487	13.565	0.1991	0.1992	0.1994	0.1998	0.2006	0.2021	0.2065	0.2101	0.2137
160	292.45	146.06	58.230	28.951	14.308	5.5133	0.1879	0.1880	0.1885	0.1893	0.1908	0.1952	0.1987	0.2022
170	307.32	153.51	61.218	30.455	15.070	5.8324	0.1781	0.1782	0.1787	0.1795	0.1810	0.1853	0.1889	0.1923
180	322.59	161.15	64.287	31.998	15.851	6.1572	2.9136	0.1697	0.1702	0.1709	0.1724	0.1768	0.1803	0.1836
190	338.28	169.00	67.437	33.581	16.651	6.4883	3.0915	0.1623	0.1627	0.1635	0.1650	0.1693	0.1728	0.1761
200	354.37	177.06	70.667	35.203	17.470	6.8258	3.2705	0.1557	0.1562	0.1570	0.1585	0.1628	0.1662	0.1694
220	387.78	193.78	77.370	38.567	19.165	7.5214	3.6352	1.6810	0.1454	0.1461	0.1477	0.1519	0.1552	0.1584
240	422.81	211.30	84.393	42.090	20.938	8.2450	4.0106	1.8864	0.1368	0.1376	0.1392	0.1434	0.1467	0.1498
260	459.45	229.63	91.735	45.771	22.788	8.9974	4.3982	2.0939	0.1300	0.1308	0.1324	0.1367	0.1399	0.1429
280	497.68	248.75	99.394	49.609	24.716	9.7791	4.7987	2.3053	0.7947	0.1253	0.1270	0.1313	0.1345	0.1375
300	537.48	268.66	107.37	53.603	26.720	10.590	5.2126	2.5216	0.8976	0.1208	0.1226	0.1271	0.1302	0.1332
320	578.85	289.35	115.65	57.752	28.802	11.431	5.6402	2.7433	0.9990	0.3982	0.1191	0.1237	0.1268	0.1297
340	621.77	310.82	124.25	62.055	30.959	12.301	6.0818	2.9711	1.1005	0.4659	0.1164	0.1211	0.1242	0.1270
360	666.23	333.05	133.14	66.510	33.192	13.201	6.5375	3.2050	1.2028	0.5287	0.1146	0.1192	0.1222	0.1248
380	712.20	356.04	142.35	71.116	35.500	14.131	7.0072	3.4452	1.3064	0.5894	0.2132	0.1180	0.1207	0.1232
400	759.68	379.79	151.85	75.872	37.883	15.089	7.4911	3.6920	1.4117	0.6492	0.2601	0.1178	0.1199	0.1221
420	808.64	404.27	161.65	80.776	40.339	16.077	7.9891	3.9454	1.5188	0.7087	0.3001	0.1192	0.1197	0.1215
440	859.08	429.50	171.74	85.827	42.868	17.093	8.5012	4.2054	1.6279	0.7683	0.3375	0.1232	0.1203	0.1214
460	910.98	455.45	182.13	91.023	45.470	18.138	9.0272	4.4720	1.7392	0.8284	0.3734	0.1316	0.1220	0.1218
480	964.33	482.12	192.80	96.363	48.143	19.211	9.5672	4.7454	1.8527	0.8891	0.4086	0.1442	0.1249	0.1229
500	1019.1	509.51	203.76	101.85	50.887	20.312	10.121	5.0253	1.9685	0.9505	0.4434	0.1592	0.1294	0.1246
520	1075.3	537.61	215.00	107.47	53.702	21.442	10.688	5.3119	2.0867	1.0127	0.4780	0.1751	0.1353	0.1272
540	1132.9	566.40	226.52	113.23	56.586	22.598	11.269	5.6051	2.2072	1.0758	0.5127	0.1912	0.1426	0.1306
560	1191.8	595.89	238.32	119.13	59.539	23.783	11.864	5.9048	2.3301	1.1398	0.5475	0.2073	0.1510	0.1347
580	1252.2	626.06	250.39	125.17	62.560	24.994	12.472	6.2111	2.4554	1.2049	0.5825	0.2233	0.1602	0.1396
600	1313.9	656.91	262.74	131.34	65.649	26.232	13.093	6.5238	2.5831	1.2710	0.6178	0.2394	0.1699	0.1452
620	1376.9	688.43	275.35	137.65	68.805	27.497	13.727	6.8430	2.7132	1.3381	0.6534	0.2554	0.1800	0.1514
640	1441.3	720.61	288.22	144.09	72.026	28.788	14.375	7.1686	2.8458	1.4062	0.6894	0.2714	0.1903	0.1580
660	1506.9	753.45	301.36	150.66	75.313	30.105	15.035	7.5005	2.9807	1.4755	0.7258	0.2875	0.2008	0.1649
680	1573.9	786.94	314.76	157.36	78.665	31.447	15.708	7.8388	3.1180	1.5458	0.7626	0.3037	0.2115	0.1723
700	1642.2	821.07	328.41	164.19	82.081	32.816	16.394	8.1833	3.2577	1.6173	0.7999	0.3199	0.2223	0.1798
720	1711.7	855.84	342.32	171.15	85.561	34.209	17.092	8.5340	3.3998	1.6898	0.8376	0.3362	0.2333	0.1876
740	1782.5	891.24	356.48	178.23	89.104	35.628	17.803	8.8908	3.5442	1.7635	0.8758	0.3527	0.2443	0.1955
760	1854.5	927.26	370.89	185.44	92.709	37.072	18.526	9.2537	3.6911	1.8382	0.9144	0.3693	0.2555	0.2036
780	1927.8	963.91	385.55	192.77	96.375	38.540	19.262	9.6227	3.8402	1.9140	0.9536	0.3860	0.2668	0.2118
800	2002.3	1001.2	400.45	200.22	100.10	40.032	20.009	9.9977	3.9917	1.9910	0.9932	0.4028	0.2782	0.2202
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S12, 물과 증기의 열 전도도 (W/m-K / 1000)

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	635.7	650.8	667.8	677.6	683.6	683.6	674.7	654.4	600.5	524.5	403.7			
Sat. Vap.	19.9	21.1	23.0	24.8	27.0	31.0	35.4	41.6	55.6	79.0	226.5			
0	562.0	562.0	562.0	562.0	562.1	562.3	562.6	563.2	564.9	567.8	573.6	590.3	603.5	616.0
10	581.9	581.9	581.9	582.0	582.0	582.2	582.5	583.0	584.7	587.5	593.0	608.8	621.4	633.4
20	599.5	599.5	599.5	599.5	599.6	599.7	600.0	600.6	602.2	604.8	610.1	625.4	637.5	649.1
25	607.5	607.5	607.5	607.5	607.6	607.7	608.0	608.5	610.1	612.7	617.9	633.0	645.0	656.4
30	615.0	615.0	615.0	615.0	615.1	615.2	615.5	616.0	617.6	620.2	625.3	640.2	652.1	663.4
40	628.6	628.6	628.6	628.6	628.7	628.8	629.1	629.6	631.1	633.7	638.8	653.5	665.1	676.3
50	20.3	640.5	640.5	640.5	640.6	640.7	641.0	641.5	643.0	645.6	650.6	665.2	676.8	687.8
60	21.0	650.8	650.8	650.8	650.9	651.0	651.3	651.8	653.3	655.9	661.0	675.5	687.1	698.1
70	21.8	21.9	659.6	659.6	659.7	659.8	660.1	660.6	662.2	664.8	669.8	684.5	696.1	707.2
80	22.6	22.7	667.0	667.0	667.0	667.2	667.5	668.0	669.6	672.2	677.4	692.2	703.9	715.1
90	23.4	23.5	23.6	673.0	673.1	673.2	673.5	674.1	675.7	678.3	683.6	698.7	710.5	721.8
100	24.3	24.3	24.4	24.8	677.8	678.0	678.3	678.8	680.5	683.2	688.6	704.0	716.0	727.5
110	25.1	25.1	25.2	25.5	681.3	681.5	681.8	682.3	684.1	686.9	692.4	708.2	720.5	732.1
120	26.0	26.0	26.1	26.3	683.6	683.8	684.1	684.7	686.4	689.4	695.1	711.3	723.8	735.7
130	26.8	26.8	26.9	27.1	27.6	684.9	685.2	685.9	687.7	690.7	696.6	713.3	726.2	738.4
140	27.7	27.7	27.8	27.9	28.4	685.0	685.3	685.9	687.8	691.0	697.1	714.3	727.7	740.2
150	28.6	28.6	28.7	28.8	29.2	683.9	684.2	684.9	686.9	690.2	696.5	714.4	728.2	741.0
160	29.5	29.5	29.6	29.7	30.0	31.4	682.1	682.8	684.9	688.3	695.0	713.6	727.8	741.0
170	30.4	30.4	30.5	30.6	30.8	32.0	678.9	679.6	681.8	685.4	692.4	711.8	726.5	740.2
180	31.4	31.4	31.4	31.5	31.7	32.7	35.4	675.4	677.7	681.5	688.9	709.1	724.5	738.6
190	32.3	32.3	32.3	32.4	32.6	33.4	35.6	670.1	672.6	676.6	684.4	705.6	721.6	736.2
200	33.2	33.3	33.3	33.4	33.5	34.2	36.1	663.8	666.4	670.7	678.9	701.3	717.9	733.2
220	35.2	35.2	35.2	35.3	35.4	36.0	37.3	41.5	650.9	655.8	665.2	690.2	708.4	724.9
240	37.2	37.2	37.2	37.3	37.4	37.8	38.8	41.8	630.9	636.7	647.5	675.8	696.0	714.0
260	39.2	39.2	39.2	39.3	39.4	39.8	40.6	42.8	606.0	613.0	625.8	658.4	681.0	700.8
280	41.3	41.3	41.3	41.4	41.5	41.8	42.5	44.2	53.7	584.0	599.7	637.8	663.3	685.2
300	43.4	43.4	43.4	43.5	43.6	43.9	44.5	46.0	53.0	548.1	568.3	614.0	643.0	667.4
320	45.6	45.6	45.6	45.7	45.7	46.0	46.6	47.8	53.5	74.7	530.4	586.8	620.3	647.6
340	47.8	47.8	47.8	47.9	47.9	48.2	48.7	49.8	54.5	69.8	483.1	556.0	595.1	625.9
360	50.0	50.0	50.1	50.1	50.2	50.4	50.9	51.9	56.0	67.7	419.8	521.1	567.4	602.3
380	52.3	52.3	52.3	52.4	52.5	52.7	53.1	54.1	57.6	66.7	129.4	481.7	537.2	576.9
400	54.6	54.7	54.7	54.7	54.8	55.0	55.4	56.3	59.5	67.2	103.4	438.3	504.7	550.0
420	57.0	57.0	57.0	57.1	57.2	57.4	57.8	58.6	61.6	68.3	94.6	391.5	470.4	521.9
440	59.4	59.4	59.4	59.5	59.5	59.8	60.1	60.9	63.7	69.7	90.8	342.0	434.7	492.7
460	61.9	61.9	61.9	61.9	62.0	62.2	62.6	63.3	65.9	71.4	89.1	289.0	398.9	463.1
480	64.3	64.3	64.4	64.4	64.5	64.7	65.0	65.8	68.2	73.3	88.7	240.3	363.9	433.5
500	66.8	66.8	66.9	66.9	67.0	67.2	67.5	68.2	70.6	75.3	89.1	205.5	330.9	404.8
520	69.4	69.4	69.4	69.4	69.5	69.7	70.0	70.7	73.0	77.5	90.0	182.8	300.6	377.7
540	72.0	72.0	72.0	72.0	72.1	72.3	72.6	73.3	75.4	79.7	91.2	168.2	273.8	352.7
560	74.6	74.6	74.6	74.6	74.7	74.9	75.2	75.8	77.9	82.0	92.7	158.5	251.4	329.9
580	77.2	77.2	77.2	77.2	77.3	77.5	77.8	78.4	80.5	84.3	94.4	152.0	233.4	309.6
600	79.8	79.9	79.9	79.9	80.0	80.1	80.4	81.0	83.0	86.8	96.2	147.7	219.2	291.7
620	82.5	82.5	82.6	82.6	82.6	82.8	83.1	83.7	85.6	89.2	98.2	144.8	208.2	276.2
640	85.2	85.3	85.3	85.3	85.4	85.5	85.8	86.4	88.2	91.7	100.3	142.9	199.8	263.0
660	88.0	88.0	88.0	88.0	88.1	88.2	88.5	89.1	90.9	94.3	102.5	141.9	193.3	252.0
680	90.7	90.7	90.8	90.8	90.8	91.0	91.3	91.8	93.6	96.9	104.7	141.4	188.3	242.7
700	93.5	93.5	93.5	93.6	93.6	93.8	94.0	94.6	96.3	99.5	107.0	141.4	184.5	235.0
720	96.3	96.3	96.3	96.4	96.4	96.6	96.8	97.4	99.0	102.1	109.4	141.8	181.7	228.7
740	99.1	99.1	99.2	99.2	99.2	99.4	99.6	100.2	101.8	104.8	111.8	142.5	179.6	223.5
760	102.0	102.0	102.0	102.0	102.1	102.2	102.5	103.0	104.6	107.5	114.3	143.5	178.2	219.3
780	104.8	104.8	104.8	104.9	104.9	105.1	105.3	105.8	107.4	110.2	116.8	144.6	177.2	215.9
800	107.7	107.7	107.7	107.7	107.8	107.9	108.2	108.6	110.2	113.0	119.3	145.9	176.7	213.2
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													

표 ESStb-S13, 물과 증기의 프란틀 수 (Prandtl Number)

온도 oC	압력 (bar a)													
	0.1	0.2	0.5	1	2	5	10	20	50	100	200	500	750	1000
Sat. Liq	3.86	2.99	2.19	1.76	1.44	1.14	0.98	0.88	0.84	0.95	3.23			
Sat. Vap.	1.01	1.01	1.02	1.02	1.04	1.09	1.15	1.23	1.43	1.83	5.53			
0	13.46	13.46	13.45	13.45	13.45	13.43	13.41	13.36	13.23	13.01	12.61	11.62	11.00	10.53
10	9.42	9.42	9.42	9.41	9.41	9.40	9.39	9.37	9.30	9.19	8.98	8.45	8.11	7.84
20	6.99	6.99	6.99	6.99	6.99	6.99	6.98	6.97	6.93	6.86	6.74	6.43	6.23	6.07
25	6.13	6.13	6.13	6.13	6.13	6.12	6.12	6.11	6.08	6.03	5.93	5.69	5.53	5.41
30	5.42	5.42	5.42	5.42	5.42	5.42	5.41	5.40	5.38	5.34	5.27	5.08	4.95	4.85
40	4.34	4.34	4.34	4.34	4.34	4.34	4.33	4.33	4.31	4.29	4.24	4.12	4.04	3.97
50	1.00	3.57	3.57	3.57	3.57	3.56	3.56	3.56	3.55	3.53	3.50	3.42	3.36	3.32
60	0.99	3.00	3.00	3.00	3.00	2.99	2.99	2.99	2.98	2.97	2.95	2.89	2.86	2.83
70	0.98	0.99	2.56	2.56	2.56	2.56	2.56	2.56	2.55	2.55	2.53	2.49	2.46	2.44
80	0.98	0.99	2.23	2.23	2.23	2.23	2.23	2.22	2.22	2.22	2.20	2.18	2.16	2.14
90	0.97	0.98	1.00	1.96	1.96	1.96	1.96	1.96	1.96	1.95	1.95	1.93	1.91	1.90
100	0.97	0.97	0.99	1.02	1.75	1.75	1.75	1.75	1.75	1.75	1.74	1.72	1.71	1.71
110	0.97	0.97	0.99	1.01	1.58	1.58	1.58	1.58	1.58	1.58	1.57	1.56	1.55	1.55
120	0.96	0.97	0.98	1.00	1.44	1.44	1.44	1.44	1.44	1.44	1.43	1.42	1.42	1.42
130	0.96	0.96	0.97	0.99	1.02	1.33	1.33	1.33	1.32	1.32	1.32	1.31	1.31	1.31
140	0.96	0.96	0.97	0.98	1.01	1.23	1.23	1.23	1.23	1.23	1.22	1.22	1.21	1.21
150	0.96	0.96	0.97	0.98	1.00	1.15	1.15	1.15	1.15	1.15	1.14	1.14	1.14	1.14
160	0.95	0.96	0.96	0.97	0.99	1.06	1.08	1.08	1.08	1.08	1.08	1.07	1.07	1.07
170	0.95	0.96	0.96	0.97	0.99	1.04	1.03	1.03	1.03	1.02	1.02	1.01	1.01	1.01
180	0.95	0.95	0.96	0.97	0.98	1.03	1.15	0.98	0.98	0.98	0.97	0.97	0.96	0.96
190	0.95	0.95	0.96	0.96	0.98	1.02	1.10	0.94	0.94	0.94	0.93	0.93	0.92	0.92
200	0.95	0.95	0.95	0.96	0.97	1.01	1.07	0.91	0.91	0.91	0.90	0.89	0.89	0.88
220	0.95	0.95	0.95	0.95	0.96	0.99	1.04	1.17	0.86	0.86	0.85	0.84	0.83	0.83
240	0.94	0.94	0.95	0.95	0.96	0.98	1.02	1.10	0.84	0.83	0.82	0.80	0.79	0.78
260	0.94	0.94	0.94	0.95	0.95	0.97	1.00	1.07	0.84	0.83	0.81	0.78	0.76	0.75
280	0.94	0.94	0.94	0.94	0.95	0.96	0.98	1.04	1.27	0.84	0.81	0.77	0.75	0.73
300	0.94	0.94	0.94	0.94	0.94	0.95	0.97	1.01	1.18	0.90	0.84	0.77	0.74	0.72
320	0.93	0.93	0.94	0.94	0.94	0.95	0.96	1.00	1.13	1.59	0.91	0.78	0.74	0.72
340	0.93	0.93	0.93	0.93	0.94	0.94	0.96	0.98	1.08	1.36	1.06	0.81	0.75	0.72
360	0.93	0.93	0.93	0.93	0.93	0.94	0.95	0.97	1.05	1.25	1.71	0.86	0.77	0.72
380	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.96	1.03	1.19	2.04	0.93	0.79	0.74
400	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.95	1.01	1.13	1.61	1.05	0.83	0.75
420	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.95	0.99	1.09	1.41	1.23	0.88	0.78
440	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.94	0.98	1.06	1.29	1.46	0.95	0.80
460	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.97	1.03	1.21	1.59	1.02	0.84
480	0.91	0.91	0.91	0.91	0.91	0.92	0.92	0.93	0.96	1.01	1.15	1.56	1.08	0.87
500	0.91	0.91	0.91	0.91	0.91	0.91	0.92	0.93	0.95	0.99	1.10	1.46	1.13	0.91
520	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92	0.94	0.98	1.07	1.35	1.15	0.93
540	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92	0.93	0.97	1.04	1.26	1.15	0.95
560	0.90	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.93	0.96	1.02	1.19	1.13	0.96
580	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.91	0.92	0.95	1.00	1.13	1.10	0.97
600	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.92	0.94	0.98	1.09	1.07	0.96
620	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.93	0.97	1.05	1.04	0.96
640	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.90	0.91	0.93	0.96	1.02	1.01	0.94
660	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.91	0.92	0.95	1.00	0.99	0.93
680	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.91	0.94	0.98	0.97	0.92
700	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.91	0.93	0.96	0.95	0.90
720	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.92	0.95	0.93	0.89
740	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.90	0.91	0.94	0.92	0.88
760	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.90	0.91	0.92	0.91	0.87
780	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.90	0.92	0.90	0.86
800	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.90	0.91	0.89	0.85
	45.81	60.06	81.32	99.61	120.21	151.84	179.89	212.38	263.94	311.00	365.75			
	포화 온도 (oC)													