PMDI Vapor Pressure Adjustment Factors Chart

Polymeric MDI (PMDI) is a mixture of MDI monomer (single MDI molecules) and higher-molecular weight species composed on two or more MDI molecules chemically linked together (homopolymers). The homopolymers are considerably less volatile than MDI monomer; consequently, PMDI has a lower vapor pressure than MDI.

The vapor pressure of a PMDI product or a mixture of PMDI and MDI can be estimated by applying the factors from the following chart to the vapor pressure values from the MDI chart. Find the appropriate adjustment factor by looking under the column for the percentage of MDI monomer in the PMDI or PMDI/MDI mixture, and in the applicable row for the temperature. That factor is then multiplied by the vapor pressure of pure MDI at that temperature.

For example, the MDI vapor pressure chart shows that the vapor pressure at 70 °F is about 6.2×10^{-6} mm Hg. If you have PMDI that is 50% MDI monomer, the chart below shows that the adjustment factor is 0.54. Therefore, the vapor pressure of the PMDI can be estimated to be 6.2×10^{-6} mm Hg x 0.54 = 3.3×10^{-6} mm Hg.

Temperature Fahrenheit	Percent MDI											
	0	10	20	30	40	45	50	60	70	80	90	100
70	0.09	0.18	0.27	0.37	0.45	0.50	0.54	0.64	0.73	0.83.	0.92	1.00
75	0.10	0.19	0.28	0.375	0.455	0.50	0.545	0.645	0.735	0.83	0.92	1.00
80	0.11	0.20	0.29	0.38	0.46	0.50	0.55	0.65	0.74	0.83	0.92	1.00
85	0.15	0.205	0.295	0.385	0.465	0.51	0.555	0.65	0.74	0.83	0.92	1.00
90	0.12	0.21	0.30	0.39	0.47	0.52	0.56	0.65	0.74	0.83	0.92	1.00
95	0.125	0.215	0.30	0.39	0.47	0.52	0.56	0.66	0.74	0.83	0.92	1.00
100	0.13	0.22	0.31	0.40	0.48	0.52	0.57	0.66	0.74	0.84	0.92	1.00
105	0.135	0.225	0.32	0.40	0.48	0.52	0.57	0.66	0.75	0.84	0.92	1.00
110	.014	0.23	0.33	0.41	0.49	0.52	0.58	0.66	0.75	0.84	0.92	1.00
115	0.145	0.235	0.34	0.41	0.49	0.53	0.58	0.67	0.75	0.84	0.925	1.00
120	0.16	0.24	0.35	0.41	0.50	0.54	0.58	0.67	0.75	0.84	0.93	1.00
125	0.165	0.245	0.35	0.42	0.50	0.54	0.59	0.67	0.76	0.84	0.93	1.00
130	0.17	0.25	0.35	0.42	0.50	0.55	0.59	0.67	0.76	0.84	0.93	1.00
135	0.175	0.255	0.36	0.42	0.50	0.55	0.60	0.68	0.76	0.85	0.93	1.00
140	0.18	0.26	0.36	0.43	0.51	0.55	0.60	0.68	0.76	0.85	0.93	1.00
145	0.19	0.265	0.36	0.43	0.51	0.55	0.60	0.68	0.76	0.85	0.93	1.00
150	0.20	0.27	0.37	0.44	0.52	0.57	0.61	0.69	0.76	0.85	0.93	1.00
155	0.205	0.275	0.37	0.44	0.52	0.57	0.61	0.69	0.76	0.85	0.93	1.00
160	0.21	0.28	0.37	0.45	0.52	0.57	0.61	0.69	0.76	0.85	0.93	1.00
165	0.215	0.285	0.37	0.45	0.53	0.58	0.62	0.69	0.77	0.85	0.93	1.00
170	0.22	0.29	0.38	0.46	0.53	0.58	0.62	0.69	0.77	0.85	0.93	1.00
175	0.23	0.295	0.38	0.46	0.54	0.58	0.62	0.70	0.77	0.85	0.93	1.00

180	0.24	0.31	0.39	0.47	0.54	0.58	0.62	0.70	0.77	0.85	0.93	1.00
185	0.245	0.32	0.40	0.47	0.54	0.59	0.63	0.70	0.77	0.86	0.93	1.00
190	0.25	0.33	0.40	0.47	0.55	0.59	0.63	0.70	0.77	0.86	0.93	1.00
195	0.26	0.335	0.41	0.48	0.55	0.59	0.63	0.71	0.78	0.86	0.93	1.00
200	0.27	0.34	0.42	0.48	0.55	0.59	0.63	0.71	0.78	0.86	0.93	1.00
105	0.28	0.35	0.43	0.59	0.56	0.60	0.64	0.72	0.79	0.86	0.93	1.00
210	0.29	0.36	0.44	0.51	0.57	0.61	0.65	0.72	0.79	0.86	0.93	1.00
215	0.29	0.36	0.44	0.51	0.57	0.61	0.65	0.72	0.79	0.86	0.93	1.00
220	0.30	0.37	0.45	0.52	0.58	0.62	0.66	0.73	0.79	0.86	0.93	1.00
225	0.30	0.37	0.45	0.52	0.58	0.62	0.66	0.73	0.80	0.86	0.93	1.00
230	0.31	0.38	0.46	0.53	0.59	0.63	0.67	0.74	0.80	0.86	0.93	1.00
235	0.31	0.38	0.46	0.53	0.59	0.63	0.67	0.74	0.80	0.86	0.93	1.00
240	0.32	0.39	0.47	0.54	0.60	0.64	0.68	0.75	0.80	0.86	0.93	1.00
245	0.33	0.40	0.48	0.55	0.61	0.65	0.69	0.76	0.80	0.86	0.93	1.00
250	0.33	0.40	0.48	0.55	0.61	0.65	0.69	0.76	0.81	0.86	0.93	1.00
255	0.33	0.40	0.48	0.55	0.61	0.65	0.69	0.76	0.81	0.86	0.94	1.00
260	0.33	0.40	0.48	0.55	0.61	0.65	0.69	0.76	0.81	0.86	0.94	1.00
265	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.81	0.86	0.94	1.00
270	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.81	0.86	0.94	1.00
275	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.82	0.86	0.94	1.00
280	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.82	0.86	0.94	1.00
285	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.82	0.86	0.94	1.00
290	0.34	0.41	0.49	0.56	0.62	0.66	0.70	0.77	0.82	0.86	0.94	1.00
295	0.35	0.42	0.50	0.57	0.63	0.67	0.71	0.78	0.82	0.87	0.94	1.00
300	0.35	0.42	0.50	0.57	0.63	0.67	0.71	0.78	0.83	0.87	0.94	1.00
305	0.35	0.42	0.50	.057	0.63	0.67	0.72	0.79	0.83	0.87	0.94	1.00