

# PermaTherm 427 Pipe Insulation for Ammonia Refrigeration Harsh Outdoor Conditions

<b>Ambient Temperature</b> 100° Fahrenheit	<b>Ambient Relative Humidity</b> 90%	<b>Dew Point</b> 95.5° Fahrenheit	<b>Wind Velocity</b> 8 MPH
Pipe is in horizontal position		Table based on ASTM C 680-95	

NPS Pipe Size Inches	Service Temperature Fahrenheit							
	-300	-200	-100	-40	-20	0	20	40
0.5	5.5	5	4	3	2.5	2.5	2	1.5
0.75	6	5.5	4	3.5	2.5	2.5	2	1.5
1	7	6	4.5	3.5	3	2.5	2	1.5
1.25	7	6	5	4	3.5	3	2.5	1.5
1.5	7	6	5	4	3.5	3	2.5	2
2	7.5	6.5	5.5	4	3.5	3	2.5	2
2.5	8	6.5	5.5	4.5	4	3.5	2.5	2.5
3	8.5	7.5	5.5	4.5	4	3.5	3	2.5
4	9	8	6	5	4.5	3.5	3	2.5
5	9.5	8.5	6.5	5.5	5	4	3	2.5
6	10	9	7	5.5	5	4	3.5	2.5
8	11	10	7.5	5.5	5	4	3.5	2.5
10	11	10	7.5	6	5	4.5	3.5	3
12	12	10.5	8	6.5	5.5	4.5	4	3
14	12	11	8.5	6.5	6	5	4	3
16	12	11	9	6.5	6	5	4	3
18	13	11.5	9.5	7	6	5	4	3
20	13	11.5	9.5	7	6	5	4	3
22	13	11.5	9.5	7	6.5	5	4.5	4.5
24	14	12	11	7.5	6.5	6	5	4.5

The suggested thicknesses assume proper installation. Tables are to be used for guidelines only. Consult a design engineer familiar with this application for proper system design specifications.

Blue Indicates Double Layer