ENERGY CODE COMPLIANCE

ICC: International Code Council was established in 1994 as a nonprofit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes. The founders of the ICC are Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO), and Southern Building Code Congress International, Inc. (SBCCI). Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the International Code Council. Codes are updated and printed every 36 months and are identified by the publishing year (i.e. 2000, 2003, 2006, and 2009).

Within the International Energy Conservation Code (IECC) there are several conditional and system guidelines that Nomaco Insulation products will aid in meeting and exceeding the minimum requirements. Depending on the section and year of publication, pipe insulation guidelines are noted in required minimum wall thickness (inches) and/or "R" value. The chart below will aid in identification of corresponding "R" values by wall thickness for Nomaco Insulation's standard polyolefin line of pipe insulation products. Also we have listed corresponding sections within the IECC, by years that define the minimum requirements for pipe insulation.

Nominal Size (Inches)		**R-Value**			
Insulation I.D	**CTS Tube I.D.**	**3/8" Wall**	**1/2" Wall**	**3/4" Wall**	**1" Wall**
3/8	**1/4**	2.5	3.6	6.0	8.8
1/2	**3/8**	**2.3**	**3.3**	**5.5**	**8.0**
5/8	**1/2**	2.2	3.1	5.2	7.5
3/4	**5/8**	2.1	3.0	4.9	7.1
7/8	**3/4**	2.0	2.9	4.7	6.8
1-1/8	**1**	1.9	2.7	4.4	6.5
1-3/8	**1-1/4**	1.8	2.6	4.2	6.1
1-5/8	**1-1/2**	1.8	2.5	4.1	5.8
2-1/8	**2**	1.7	2.4	3.9	5.5
2-3/8	**2-1/4**	1.7	2.4	3.8	5.3
2-5/8	**2-1/2**	1.7	2.3	3.7	5.2
2-7/8	**2-3/4**	1.7	2.3	3.7	5.1
3-1/8"	**3**	1.7	2.3	3.6	5.1
3-5/8	**3-1/2**	1.6	2.3	3.5	4.9
4-1/8	**4**	1.6	2.2	3.5	4.8

Note: "R" values were calculated using a K value of 0.250 @ 75°F, 24°C mean temp and nominal wall thickness is each case.

Energy Code Compliance: Pipe Insulation

2009 International Energy Conservation Code (2009 IECC)

Chapter 4: Residential Energy Efficiency
Section 403.3 Mechanical System Piping Insulation
Section 403.4 Circulating Hot Water Systems
Chapter 5: Commercial Energy Efficiency
Section 503.2.8 Table Minimum Pipe Insulation
Section 504.5 Pipe Insulation for automatic-circulating hot water systems

2006 International Energy Conservation Code (2006 IECC)

Chapter 4: Residential Energy Efficiency
Section 403.3 Mechanical System Piping Insulation
Section 403.4 Circulating Hot Water Systems
Chapter 5: Commercial Energy Efficiency
Section 503.2.8 Table Minimum Pipe Insulation
Section 504.5 Pipe Insulation for automatic-circulating hot water systems

2003 International Energy Conservation Code (2003 IECC)

Chapter 5: Residential — Component Performance Approach
Section 503.3.1 Piping Insulation
Table 503.3.1 Minimum Pipe Insulation
Section 504.5 Pipe Insulation for automatic-circulating hot water systems
Chapter 8: Acceptable Practice for Commercial Building
Section 803.3.7 Piping Insulation
Table 803.3.7 Minimum Pipe Insulation
Section 804.5 Pipe Insulation for automatic-circulating hot water systems

2000 International Energy Conservation Code (2000 IECC)

Chapter 5: Residential — Component Performance Approach
Section 503.3.3 Piping Insulation
Section 503.3.3.1 Piping Insulation
Table 503.3.3.1 Minimum Pipe Insulation
Section 503.3.3.2 Other Insulation Thicknesses
Section 504.5 Pipe Insulation for automatic-circulating hot water systems
Chapter 8: Acceptable Practice for Commercial Building
Section 803.3.7 Piping Insulation
Table 803.3.7 Minimum Pipe Insulation
Section 804.5 Pipe Insulation for automatic-circulating hot water systems

Nomaco's pipe insulation will meet the IECC requirements for all hot water, chilled water, brine, or refrigerant systems. For specific energy conservation requirements on your project please reference your city and state energy conservation code or contact your local inspector's office for specific details for your area.