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Anatomy of ANSI A117.1 and ICC Codes

By

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ADA Need: A117.1: Water supplies and drainpipes shall be insulated ...

Insulation: *the action of separating a conductor from conducting bodies by means of nonconductors so as to prevent transfer of electricity, **heat**, or sound;*
Merriam-Webster's Medical Dictionary

Insulation Material, R value

$$R = (T_e - T_i) / q / A, \text{ Deg F. ft sq. hr/Btu}$$

$T_e - T_i$ = Temperature difference between Exterior to Interior, Deg F

q/A = Rate of heat loss/ Cross Sectional Area, Btu/hr/ft sq

JP Holman, *Heat Transfer*, McGraw Hill, 1986.

Chapter 7: Section 719

THERMAL- AND SOUND-INSULATING MATERIALS

719.1 General. Insulating materials, Where flame spread index... with ASTM E84.

Exceptions:

1. Fiberboard insulation ... Chapter 23
2. Foam Plastic insulation ... Chapter 26
3. Duct and pipe insulation and duct and pipe covering and lining in plenums ... IMC

719.3 Exposed installation. Insulating materials ... flame spread index no more than 25 and a smoke-developed index of not more than 450.

719.7 Insulation and covering on pipe and tubing. ... flame spread index no more than 25 and a smoke-developed index of not more than 450.

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Chapter 8
INTERIOR FINISHES

803.8 Insulation. Thermal and acoustical insulation shall comply with section 719.

Chapter 26
Plastics

2602.1 DEFINITIONS. FOAM PLASTIC INSULATION. ... density less than 20 pcf.
2604.1 General. Plastic materials installed as interior finish or trim shall comply with Chapter 8. ... shall also meet the flame spread index requirements for interior finish in accordance with Chapter 8.

2604.2 Interior trim. ...

2604.2.4. Flame spread. The flame spread index shall not exceed 75 where tested in accordance with ASTM E 84. ...

IMC Chapter 12

1204.1 Insulation characteristics. Pipe insulation ... shall be tested in accordance with ASTM E84, ...

Chapter 8
INTERIOR FINISHES

806.5 Interior trim. *Interior trim is not and does not include the definition of the insulation.*