



Coffee Break Training - Fire Protection Series

Access and Water Supplies: Fire Flow Formulas: Part 15: Insurance Services Office Needed Fire Flow: Obtaining the Communication Factor Value P_i

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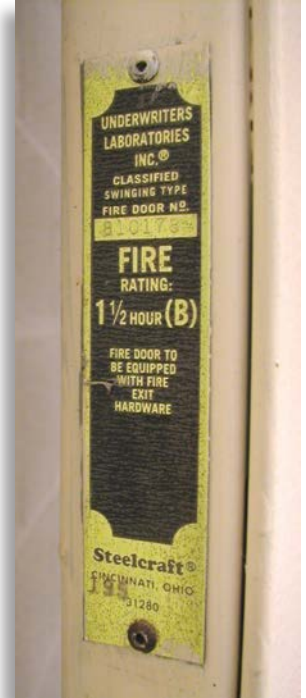
Learning Objective: The student will be able to obtain the communication factor variable, P_i , from a table for the Insurance Services Office (ISO) Needed Fire Flow (NFF) formula.

The communication (opening) factor variable, P_i , for the ISO NFF formula is derived from a table; it depends upon the protection for communicating party-wall openings as well as the length and construction of communications between fire divisions.

The following table is an extract from the “Guide for the Determination of Needed Fire Flow.” Notes specifically applicable to the table are at the bottom of this page.

Factor for Communications P_i											
Passageway Opening Description	Fire-Resistive, Non-Combustible or Slow-Burning Communications				Communications with Combustible Construction						
	Open	Enclosed			Open			Enclosed			
		Any Length	10 ft. or less	11-20 ft.	21-50* ft.	10 ft. or less	11-20 ft.	21-50* ft.	10 ft. or less	11-20 ft.	21-50* ft.
			3 m or less	3.3-6 m	6.4-15.2 m	3 m or less	3.3-6 m	6.4-15.2 m	3 m or less	3.3-6 m	6.4-15.2 m
Unprotected	0	††	0.30	0.20	0.30	0.20	0.10	††	††	0.30	
Single Class A fire door at one end of passageway	0	0.20	0.10	0	0.20	0.15	0	0.30	0.20	0.10	
Single Class B fire door at one end of passageway	0	0.30	0.20	0.10	0.25	0.20	0.10	0.35	0.25	0.15	

Note: The table continues with additional values.



The Class B label on this fire door assembly determines its suitability for application in the Insurance Services Office (ISO) Needed Fire Flow (NFF) formula for an enclosed opening.

*For more than 50 feet (15.2 m) $P_i = 0$.

†† For unprotected passageways, consider the two buildings as a single fire division.

- Where communications (openings) occur between the building under evaluation for fire flow and adjacent combustible construction (the exposure), the communicating opening must be at the top or at least one side of the building being evaluated for the factor to be included.
- The left-hand column of the table (passageway opening description) describes the classes of opening protectives that must be installed to achieve the “enclosed” value. (See Coffee Break Training 2006-16 for an explanation of fire door classes.)

For a complete version of the ISO “Guide for the Determination of Needed Fire Flow,” visit www.iso.com.

For additional information on fire protection, see National Fire Academy classes at <http://www.usfa.fema.gov/nfa/>.



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