

4.2.2.5 Optional Performance Grades (Design Pressures)

NOTE: This section contains additional requirements and tests for products when required by the specifier. It incorporates both higher uniform load deflection and structural test pressures and higher water penetration resistance test pressures than those contained in Section 9.

As specified below, this section is to be used in conjunction with Section 8. All products tested under this section are required to conform to all of the particular requirements of Sections 7, 8 and 9 for the product designation under consideration. Prior to being considered for an Optional Performance Grade (design pressure), a product must:

- comply with the general requirements of Sections 5, 6 and 7;
- comply with the Gateway Performance Requirements for the minimum Performance Grade listed in Section 8;
- comply with all of the specific product performance requirements listed in Section 8 for that product type;
- comply with all of the appropriate material and component requirements listed in Section 6.

After complying with these requirements at the minimum gateway test size for that product, a product is permitted to be tested in the same or a smaller test size for conformance to an Optional Performance Grade (design pressure) in multiple increments of 240 Pa (5 psf) as listed in Table 4.4. Optional Performance Grades (design pressures) shall not be allowed for design pressures greater than the Gateway design pressure for the Performance Class plus 2880 Pa (60 psf) except in the case of the highest Performance Class indicated in section 8 for each Operator Type. For example, Residential products shall not be rated at a design pressure greater than 3600 Pa (75 psf). Light Commercial products shall be capped at 4080 Pa (85 psf), Commercial products shall be capped at 4320 Pa (90 psf) and Heavy Commercial products shall be capped at 4800 Pa (100 psf). AW product Optional Performance Grades (design pressures) shall never be capped. See section 5.1 for testing sequence.

Optional Performance Grade	Product Performance Class	Design Pressure		Structural Test Pressure		Water Pent. Resist. Test Pressure			
		Pa	(lb/ft ²)	Pa	(lb/sq ft ²)	R, LC, C and HC		AW	
						Pa	(lb/sq ft ²)	Pa	(lb/sq ft ²)
20	R	960	(20.00)	1440	(30.00)	150	(3.00)	-	-
25	R	1200	(25.00)	1800	(37.50)	180	(3.75)	-	-
30	R, LC	1440	(30.00)	2160	(45.00)	220	(4.50)	-	-
35	R, LC, C	1680	(35.00)	2520	(52.50)	260	(5.25)	-	-
40	R, LC, C	1920	(40.00)	2880	(60.00)	290	(6.00)	-	-
45	R, LC, C, HC, AW	2160	(45.00)	3240	(67.50)	330	(6.75)	440	(9.00)
50	R, LC, C, HC, AW	2400	(50.00)	3600	(75.00)	360	(7.50)	480	(10.00)
55	R, LC, C, HC, AW	2640	(55.00)	3960	(82.50)	400	(8.25)	530	(11.00)
60	R, LC, C, HC, AW	2880	(60.00)	4320	(90.00)	440	(9.00)	580	(12.00)
65	R, LC, C, HC, AW	3120	(65.00)	4680	(97.50)	470	(9.75)	630	(13.00)
70	R, LC, C, HC, AW	3360	(70.00)	5040	(105.00)	510	(10.50)	680	(14.00)
75	R, LC, C, HC, AW	3600	(75.00)	5400	(112.50)	540	(11.25)	720	(15.00)
80	LC, C, HC, AW	3840	(80.00)	5760	(120.00)	580	(12.00)	720	(15.00)
85	LC, C, HC, AW	4080	(85.00)	6120	(127.50)	620	(12.75)	720	(15.00)
90	C, HC, AW	4320	(90.00)	6480	(135.00)	650	(13.50)	720	(15.00)
95	HC, AW	4560	(95.00)	6840	(142.50)	690	(14.25)	720	(15.00)
100	HC, AW	4800	(100.00)	7200	(150.00)	720	(15.00)	720	(15.00)
105	AW	5040	(105.00)	7560	(157.50)	720	(15.00)	720	(15.00)

TABLE 4.4