

Perforation Guide

Carritec has created actual size perforation patterns to be used as a guide for aesthetic selection and performance criteria.

Noise reduction may be achieved by adding acoustical absorbing material. Your acoustical consultant may make specific recommendations. Contact Carritec for available options.

Acoustical Absorption

Sound Absorbing Materials

Standard

- Carritec non-woven acoustical liner laminated to panel (0.008"/.2mm thick)
- Average NRC .75
- Class A Status, ASTM E84
- Colors: Black, Dove Gray, White and Natural
- Requires minimum 6-7" deep plenum space to achieve results. Not recommended as sole acoustical backing for wall panels.
- White fabric backing is not recommended with certain high percentage open perforation patterns. Contact factory for details.
- Carritec has acoustically tested a variety of the perforation patterns offered to ASTM method 423-99A. Reports may be available upon request for professionals. The average NRC is .75 for Carritec perforation patterns 5% and greater, using a non-woven backing.

Optional Fiberglass or Ultra-Sorb Reconstituted Cotton

If higher levels of absorption are desired, other substances may be supplied in lieu of, or in addition to, Carritec's non-woven acoustical liner. Some of the approximate ranges of NRC levels are listed below. Contact Carritec for specific data.

- Carritec non-woven acoustical liner: .75 NRC
- 1" THK, 1.5 lb/cu.ft. Fiberglass: .80 NRC
- 1.5" THK, 1.5 lb/cu.ft. Fiberglass: .85 NRC
- 2" THK, 3 lb/cu.ft. Fiberglass: .95 NRC

Perforation Types

Perforation Pattern	Description	Open Area
C-Perf-M1	Ø 0.062" round holes @ 0.354" straight centers	2.3%
C-Perf-M2	Ø 0.062" round holes @ 0.250" 90° diagonal centers	4.6%
C-Perf-M3	Ø 0.062" round holes @ 0.204" 60° diagonal centers	8.4%
C-Perf-M4	Ø 0.125" round holes @ 0.500" straight centers	5%
C-Perf-M5	Ø 0.125" round holes @ 0.250" straight centers	20%
C-Perf-M6	Ø 0.125" round holes @ 0.354" 90° diagonal centers	10%
C-Perf-M7	Ø 0.125" round holes @ 0.500" 60° diagonal centers	22.7%
C-Perf-M8	Ø 0.625" round holes @ 0.125" straight centers	19.6%
C-Perf-M9	1.000" x 0.125" oblong holes @ 0.375" straight centers	28.8%
C-Perf-M10	1.750" x 0.437" oblong holes @ 1.125" (V) & 1.938" (H) centers	33.2%
C-Perf-M11	0.500" x 1.000" square holes @ 1.236" (V) & 0.736" (H) centers	55%
C-Perf-M12	2.375" x 0.438" oblong holes @ 0.688" (V) & 3.250" (H) centers	44.7%

Sample Perforation Pattern NRC Data

Perforation Pattern	Acoustical Backer	NRC
C-Perf-M1 (2.3% OA)	Carritec non-woven acoustical liner	0.65
C-Perf-M1 (2.3% OA)	1" thick fibreglass acoustical backing	0.80
C-Perf-M1 (2.3% OA)	1.5" thick fibreglass acoustical backing	0.85
C-Perf-M1 (2.3% OA)	2" thick fibreglass acoustical backing	0.90
C-Perf-M2 (4.6% OA)	Carritec non-woven acoustical liner	0.65
C-Perf-M2 (4.6% OA)	1" thick fibreglass acoustical backing	0.80
C-Perf-M2 (4.6% OA)	1.5" thick fibreglass acoustical backing	0.85
C-Perf-M2 (4.6% OA)	2" thick fibreglass acoustical backing	0.90
C-Perf-M3 (8.4% OA)	Carritec non-woven acoustical liner	0.70
C-Perf-M3 (8.4% OA)	1" thick fibreglass acoustical backing	0.85
C-Perf-M3 (8.4% OA)	1.5" thick fibreglass acoustical backing	0.90
C-Perf-M3 (8.4% OA)	2" thick fibreglass acoustical backing	0.95
C-Perf-M4 (5% OA)	Carritec non-woven acoustical liner	0.70
C-Perf-M4 (5% OA)	1" thick fibreglass acoustical backing	0.85
C-Perf-M4 (5% OA)	1.5" thick fibreglass acoustical backing	0.90
C-Perf-M4 (5% OA)	2" thick fibreglass acoustical backing	0.95
C-Perf-M5 (20% OA)	Carritec non-woven acoustical liner	0.70
C-Perf-M5 (20% OA)	1" thick fibreglass acoustical backing	0.85
C-Perf-M5 (20% OA)	1.5" thick fibreglass acoustical backing	0.90
C-Perf-M5 (20% OA)	2" thick fibreglass acoustical backing	0.95
C-Perf-M6 (10% OA)	Carritec non-woven acoustical liner	0.70
C-Perf-M6 (10% OA)	1" thick fibreglass acoustical backing	0.85
C-Perf-M6 (10% OA)	1.5" thick fibreglass acoustical backing	0.90
C-Perf-M6 (10% OA)	2" thick fibreglass acoustical backing	0.95