

Table of R-Values or R-Factors for Typical Suspended Ceilings & Ceiling Panels©

Suspended Ceiling Panel Material	Suspended Ceiling Panel Thickness	Estimated R-Value per inch [7]
Drywall	1/2-inch: R 0.2	0.45
Fiberboard insulating board	1/2-inch: R 0.5	1.14
Fiberglass, batts, height density	1/2-inch: R 2.0	3.6 - 5
Fiberglass panel, rigid (fiberglass "boards")	1.2-inch: R 1.125	2.5
Polystyrene Expanded (EPS) insulation, low-density		3.6 - 4.7
Ceilume panels	0.79 - 0.91	Engineering judgment (not test data). Ceilume points out that we should be interested in heat flow resistance in both directions (up out of the conditioned space and down into the conditioned space) to accommodate both heating and cooling requirements [10]
Ceilite™ foil-faced glass wool insulating panels	R 2.6 - 5.9	Varies by season and by air space above the suspended ceiling. Combines polystyrene, reflective foil film, and an air space assumed still air [5]
Polystyrene board, extruded expanded high-density (XPS)	"up to 4.5" [6]	4.2 - 5.4
Armstrong mineral fiber ceiling panels ["inert mineral components"]		[8] no R-values claimed in consumer information.
USG Ceiling panels	"up to 1.5"	[9]
Owens Corning add-on Sonobatt suspended ceiling insulation	3 1/2" panel, R-11 6 1/4" panel, R-19 9 1/2" panel, R-30 12" panel, R-39	These are add-on insulating batts and do not include the actual suspended ceiling panel itself. Quoting: "Sonobatts Insulation are easily installed in suspended ceiling systems by simply laying them on top of the ceiling panel and suspension system. Sonobatts should fit tightly together to reduce the amount of heat loss." [11]

Notes to the Ceiling Panel R-Value Table:

[5] Ceilite, 4/22 Eastern Service Rd, Stapylton 4207 QLD, Australia, Email: sales@ceilite.com.au, Tel: 1300 663 755

[6] Silent Source Acoustical Ceilings, 58 Nonotuck Street Northampton, MA 01062 (413) 584-7944 Fax: (413) 584-2377 Email: info@silentsource.com, web search 10/21/2011, original source: silentsource.com/ceilings-ac-suspend-a-ceil.htmlhttp://www.silentsource.com/ceilings-ac-suspend-a-ceil.html

[7] See table of [INSULATION R-VALUES & PROPERTIES](#)

[8] Armstrong corporation, website search 10/21/2011, see page bottom footnote [1]. The phrase "inert mineral components" may refer to fiberglass. Here is Armstrong's comment about the insulation value "between floors" of their suspended ceilings:

Most ceilings are installed between floors that are maintained at the same temperature — making insulation unnecessary. Basement recreation rooms are at least partly heated by heat flow through the ceiling from the heated space above. In that case, attempting to insulate the basement ceiling surface could actually reduce heat flow. [2]

[9] U.S. Gypsum, web search 10/22/2011, original source: colorado-ceilings.com/usg-ceiling-tile.html

[10] Ceilume, 9270 Graton Road Graton, CA 95444, Tel: 800-557-0654, web search 10/21/2011, original source: ceilume.com/ceiling-tile-insulation.cfm

[11] Owens Corning World HQ, One Owens Corning Parkway, Toledo OH, USA, 43659, Tel: 1 - 800 - GET - PINK, Website: owenscorning.com

[12] 2003 IECC, 2006 IECC, 90.1-1999, 90.1-2001, 90.1-2004