

Reynolds Metals Co., Inc.

19 Rector Street, New York City

400 Wrigley Building
Chicago, Ill.



345 Ninth Street
San Francisco, Calif.

REYNOLDS METALLATION

Reynolds Metallation is bright, polished sheet aluminum foil cemented to one or both sides of a tough Kraft paper. Reynolds Metallation reflects approximately 95 per cent of all radiated heat that strikes its exposed metal surface. Because of its low emissivity, it absorbs only about 5 per cent of the heat striking it.

Metallation's negligible heat storage capacity, is of particular importance when Metallation is used to insulate building walls, roofs or attics for summer cooling. This means that no heat is stored up in the insulation to be released into the rooms after the heat of the day has passed.

MADE IN ROLLS IN THREE TYPES

Type A—Genuine sheet aluminum cemented to both sides of a heavy, tough Kraft paper with 1½ in. plain paper margin exposed.

Type B—Genuine sheet aluminum cemented to both sides of a heavy, tough Kraft paper with no paper margins exposed.

Type C—Genuine sheet aluminum cemented to one side of a heavy, tough Kraft paper.

Type	Width of Roll	Length of Roll	Weight of Roll	Area of Roll
A	17 in.	175 ft 5 in.	18 lb	250 sq ft.
B	32 in.	93 ft 9 in.	16 lb	250 sq ft.
C	25 in.	120 ft	16 lb	250 sq ft.
	32 in.	93 ft 9 in.	13 lb	250 sq ft.

APPLICATION OF METALLATION

Metallation is applied between rafters, studs or joists so that the bright metallic surfaces face an air space. It can also be applied over sheathing and roof boards to combine insulating efficiency with weatherproof, windproof and moistureproof characteristics. Metallation is easy to install. See SWEETS Architectural Catalog for complete installation details or write the nearest Reynolds sales office.

ADVANTAGES OF METALLATION

High efficiency (see table on facing page). Low cost. Used by U. S. Government, leading architects and engineers. Easy to apply. Metallation gives permanent insulating efficiency. Will not corrode or tarnish. Low in weight and bulk. Impervious to moisture. Will not support combustion. Odorless and clean. No setting, warping or disintegration.

WHERE TO BUY METALLATION

Metallation is sold by leading lumber and building material dealers throughout the United States. Reynolds trained sales representatives are at your service on all unusual insulation problems.

NOTES FOR HEAT TRANSFERENCE TABLE on opposite page

^aComputed by standard methods from data in AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS GUIDE, Vol. 12 pp. 71-92, 1934, and from "Thermal Insulation of Buildings," American Architect, May, 1934, pp. 89-100.

^bOutside film resistances (f_o) are based on a 15 mph wind velocity; inside film resistances (f_i) are based on still air.

^cAll air spaces are at least ¾ in. wide.

^dThe thicknesses of 1 in. yellow pine sheathing and flooring is approximately ¾ in.

^ePlaster ¾ in. to 1 in. thick is applied to ECOD or expanded metal plaster base.

^fWall insulated as in Column IV with added 1 in. air space between brick and sheathing faced with Type C Metallation on outside of sheathing.

^gFour inches of face brick and four inches of common brick.

^hCurtain of either Type A or Type B Metallation in furred space, having one side facing masonry and the other side facing Type C or ECOD Metallation.

ⁱThe thickness of oak flooring is approximately 1½ in.

^jType A or Type B Metallation is so applied to joists or rafters, or flanged between them as to form an air space. One side of the Metallation faces the building material and the other side faces still air.

^kType A or Type B Metallation is so applied to joists or rafters, or flanged between them as to form an air space. One side of the Metallation faces Type C or ECOD Metallation, the other faces still air.

^lSpace insulated as in Column IV except that Metallation nearest still air is Type A or Type B.

^mNailing strips measure approximately ¾ by 3½ in. and are spaced 2 in. apart.

ⁿType A or Type B Metallation is applied between rafters and nailing strips to form one air space facing Metallation and a series of small air spaces facing shingles.

^oRoof insulated as in Column IV except that Type A or Type B Metallation is applied as in Note N.

^pType A or Type B Metallation is applied between nailing strips and rafters and also to under side of rafters.

^qType A or Type B Metallation is applied as in Note P and also as a central sheet parallel with the roof.

PERCENTAGE OF HEAT TRANSFER STOPPED BY REYNOLDS METALLATION

Coefficients (U) are expressed in Btu per hour per square foot per degree Fahrenheit difference in temperature between the air on the two sides of the construction. Columns (%) show the percentage of heat which REYNOLDS METALLATION stops from flowing through the respective constructions.

ILLUSTRATION	Construction Number	CONSTRUCTION	I II III IV				
			Uninsulated	Type C or ECOD Metallation on one side of air space. (Except where noted)	Type C or ECOD Metallation on both sides of air space. (Except where noted)	Type A or Type B Metallation forming curtain between two air spaces. (Except where noted)	Type A or Type B Metallation forming curtain between two air spaces. (Except where noted)
			U %	U %	U %	U %	U %
	1	FRAME OR VENEER WALL. Shingles or Clapboards, Sheathing, Stud Space, Plaster	.26 0	.19 27	.18 31	.14 46	.13 50
	2	Drap Siding, no Sheathing, Stud Space, Plaster	.37 0	.25 32	.24 35	.16 57	.15 59
	3	1-In. Stucco with ECOD Base, Stud Space, Plaster	.50 0	.31 38	.28 44	.18 64	.17 66
	4	1-In. Stucco with ECOD Base, Sheathing, Stud Space, Plaster	.33 0	.24 27	.22 33	.16 56	.14 58
	5	4-In. Face Brick Veneer, Sheathing, Stud Space, Plaster	.30 0	.22 27	.21 30	.15 50	.11 (f) 63
	6	MASONRY WALL. 8-In. Solid Bricks, Furred Space, Plaster	.32 0	.23 28		.15 53	.15 (h) 53
	7	4-In. Face Brick on 8-In. Hollow Clay Tile, Furred Space, Plaster	.25 0	.19 24		.13 48	.13 (h) 48
	8	1-In. Stucco on 12-In. Hollow Clay Tile, Furred Space, Plaster	.22 0	.17 23		.13 41	.12 (h) 46
	9	12-In. Hollow Concrete Blocks, Furred Space, Plaster	.32 0	.23 28		.15 53	.15 (h) 53
	10	FRAME MIDDLE STORY FLOOR. Single Yellow Pine Floor, Joint Space, Plaster	.30 0	.22 27	.21 30	.15 50	.14 53
	11	Oak Floor Yellow Pine Sub-Floor, Joint Space, Plaster	.25 0	.19 24	.18 28	.13 48	.13 48
	12	FRAME ATTIC FLOOR. No Floor, Joint Space, Plaster	.69 0	.26 (i) 62	.24 (k) 65	.26 (i) 62	.15 (l) 78
	13	Single Yellow Pine Floor, Joint Space, Plaster	.30 0	.22 27	.21 30	.15 50	.14 53
	14	FRAME FIRST STORY FLOOR. Single Yellow Pine Floor, Joint Space, no Ceiling	.46 0	.22 (i) 52	.21 (k) 54	.22 (i) 52	.14 (l) 70
	15	Oak Floor, Yellow Pine Sub-Floor, Joint Space, no Ceiling	.35 0	.19 (i) 46	.18 (k) 49	.19 (i) 46	.12 (l) 66
	16	MASONRY FLOOR—SUSPENDED CEILING. 4-In. Reinforced Concrete, Furred Space, Plaster	.37 0	.25 32		.16 57	.16 (h) 57
	17	6-In. Reinforced Concrete, Furred Space, Plaster	.35 0	.24 31		.16 54	.15 (h) 57
	18	4-In. Concrete, 4-In. Hollow Tile, Furred Space, Plaster	.27 0	.20 26		.14 48	.14 (h) 43
	19	4-In. Concrete, 8-In. Hollow Tile, Furred Space, Plaster	.23 0	.18 22		.13 43	.12 (h) 48
	20	FRAME ROOF. Wood Shingles, Nailing Strips, Rafters, no Ceiling	.30 0	.22 27	.18 (n) 40	.15 50	.12 (o) 60
	21	Wood Shingles, Nailing Strips, Rafters, no Ceiling	.46 0	.22 (i) 52	.18 (p) 61	.22 (i) 52	.12 (q) 7
	22	Composition or Asphalt Shingles, Nailing Strips, Rafters, no Ceiling	.37 0	.25 32	.20 (n) 46	.16 57	.13 (o) 65
	23	Composition or Asphalt Shingles, Nailing Strips, Rafters, no Ceiling	.64 0	.25 (i) 61	.20 (p) 69	.25 (i) 61	.14 (q) 78
	24	FRAME ROOF. Wood Shingles, Sheathing, Rafters, no Ceiling	.27 0	.20 26	.19 30	.14 48	.13 52
	25	Wood Shingles, Sheathing, Rafters, no Ceiling	.40 0	.20 (i) 50	.19 (k) 53	.20 (i) 50	.13 (l) 68
	26	Slate or Cement Shingles, Sheathing, Rafters, no Ceiling	.34 0	.24 29	.22 35	.16 53	.14 59
	27	Slate or Cement Shingles, Sheathing, Rafters, no Ceiling	.56 0	.24 (i) 57	.22 (k) 61	.24 (j) 57	.14 (l) 75