

Code Requirements for Various Roofing Materials

Roof Covering	Code Section	Roof Deck Requirements	Slope	Double Underlay	Fasteners	Ice Barrier
Asphalt Shingles	905.2	Solidly Sheathed or 1x	2:12 Minimum	Yes for slopes < 4:12	Nails 12 ga w/3/8" head. Must penetrate >3/4" into sheathing. NO STAPLES	From Eave to 24" Inside Exterior Wall Line
Clay/Concrete Tile	905.3	Solid Sheathing or Spaced Structural Boards	2 1/2 : 12 Minimum	Yes for slopes < 4:12	Nails 11 ga. w/ 5/16 " head. Must penetrate >3/4" into sheathing.	Not Required
Metal Roof Shingles	905.4	Solid or Closely Fitted	3:12 Minimum	NO	Per Manufacturer's Installation Instructions	From Eave to 24" Inside Exterior Wall Line
Mineral Surfaced Roll Roofing	905.5	Solidly Sheathed	1:12 Minimum	NO	Per Manufacturer's Installation Instructions	From Eave to 24" Inside Exterior Wall Line
Slate or Slate-Type Shingles	905.6	Solidly Sheathed	4:12 Minimum	NO	Two Fasteners per Slate	From Eave to 24" Inside Exterior Wall Line
Wood Shingles	905.7	Solid or Spaced Sheathing	3:12 Minimum	NO	Corrosion resistant, penetrate 1/2" into Sheathing, 2 per	From Eave to 24" Inside Exterior Wall Line
Wood Shakes	905.8	Solid or Spaced Sheathing	3:12 Minimum	NO	Corrosion resistant, penetrate 1/2" into Sheathing, 2 per	From Eave to 24" Inside Exterior Wall Line
Built Up Roofs	905.9	Solid	1/4 : 12 Minimum	NO	Not Specified	Not Required
Metal Roof Panels	905.1	Solid or Spaced Sheathing	1/4:12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Modified Bitumen	905.11	Solid	1/4: 12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Thermoset Single-ply Roofing	905.12	Solid	1/4:12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Thermoplastic Single- ply Roofing	905.13	Solid	1/4"12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Spray Polyurethane Foam Roofing	905.14	Solid	1/4:12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Liquid Applied Roofing	905.15	Solid	1/4:12 Minimum	NO	Per Manufacturer's Installation Instructions	Not Required
Photovoltaic Module Shingles	905.16	Solid	2:12 Minimum	NO	Per Manufacturer's Installation Instructions	From Eave to 24" Inside Exterior Wall Line
Building-intergrated Photovoltaic Roof Panels	905.17	Solid	2:12 Minimum	NO	Per Manufacturer's Installation Instructions	From Eave to 24" Inside Exterior Wall Line

Required Ice Barrier Coverage (Inches)															
Roof Slope (A)	Overhang Amount in Inches (B)														
	6	9	12	15	18	21	24	27	30	36	48	60	72	84	96
2:12	34.5	37.5	40.6	43.6	46.6	49.7	52.7	55.8	58.8	64.9	77	89.2	101.4	113.5	125.7
3:12	35	38.1	41.2	44.3	47.4	50.5	53.6	56.7	59.8	66	78.3	90.7	103.1	115.4	127.8
4:12	35.8	39	42.2	45.3	48.5	51.7	54.8	58	61.1	67.5	80.1	92.8	105.4	118.1	130.7
5:12	36.8	40.1	43.3	46.6	49.8	53.1	56.3	59.6	62.8	69.3	82.3	95.3	108.3	121.3	134.3
6:12	38	41.4	44.7	48.1	51.4	54.8	58.1	61.5	64.8	71.6	85	98.4	111.8	125.2	138.6
8:12	40.9	44.5	48.1	51.7	55.3	58.9	62.5	66.1	69.7	76.9	91.3	105.8	120.2	134.6	149
10:12	44.3	48.2	52.1	56	59.9	63.8	67.7	71.6	75.5	83.3	98.9	114.6	130.2	145.8	161.4
12:12	48.1	52.3	56.6	60.8	65.1	69.3	73.5	77.8	82	90.5	107.5	124.5	141.4	158.4	175.4
16:12	56.7	61.7	66.7	71.7	76.7	81.7	86.7	91.7	96.7	106.7	126.7	146.7	166.7	186.7	206.7
20:12	66.1	71.9	77.7	83.6	89.4	95.2	101.1	106.9	112.7	124.4	147.7	171	194.4	217.7	241

The chart includes 24" inside the exterior wall line and a 4" exterior wall thickness. 1 row =36", 2 rows = 69", 3 rows = 102", 4 rows =135"

