

Division	Description	Unit	Material	Labor & Equipment	Time	Output	Unit Cost	Source	URL	
Thermal & Moisture Protection Built-up bituminous Roofing Components	Asphalt saturated felt, #30, 2 square per roll	Sq.	4.09	4.55	0.138	58				
	#15, 4 sq per roll, plain or perforated, not mopped	Sq.	4.1	4.55	0.138	58				
	Roll roofing, smooth, #65	Sq.	7.35	17.6	0.533	15				
	#90	Sq.	23	17.6	0.533	15				
	Mineralized	Sq.	18.05	17.6	0.533	15				
	Double coverage, 19" selvage edge	Sq.	39	26.5	0.8	10				
	Adhesive (lap cement)	Gal.	4.37							
	Steep, flat or dead level asphalt, 10 ton lots, bulk	Ton	340							
	Packaged	Ton	575							
	Cold-applied Built-up Asphalt Roofing	3 ply system, installation only (components listed)	Sq.		27.31	0.8	50			
Spunbond poly. Fabric, 1.35 oz./SY, 36"W, 10.8 Sq/roll		Ea.	155							
49" wide, 14.6 Sq./roll		Ea.	214							
2.10 oz./SY, 36" wide, 10.8 Sq/roll		Ea.	234							
49" wide, 14.6 Sq./roll		Ea.	315							
Base & finish coat, 3 gal./Sq., 5 gal./can		Gal.	4.12							
Coating, ceramic granules, 1/2 Sq./bag		Ea.	14.55							
Aluminum, 2 gal./Sq.		Gal.	11.7							
Emulsion, fibered or non-fibered, 4 gal./Sq.		Gal.	5.4							
Built-up Roofing Systems		Asphalt flood coat w/gravel/slag surfacing, not including								
	Insulation, flashing or wood nailers									
	Asphalt base sheet, 3 plies #15 asphalt felt, mopped	Sq.	66.5	97.25	2.545	22				
	On nailable decks	Sq.	71	102.15	2.667	21				
	4 plies #15 asphalt felt, mopped	Sq.	93	107	2.8	20				
	On nailable decks	Sq.	83	112.5	2.947	19				
	Coated glass base sheet, 2 plies (type IV), mopped	Sq.	68.5	97.25	2.545	22				
	3 plies glass, mopped	Sq.	81.5	107	2.8	20				
	On nailable decks	Sq.	77	112.5	2.947	19				
	4 plies glass fiber felt (type IV), mopped	Sq.	100	107	2.8	20				
	On nailable decks	Sq.	90	112.5	2.947	19				
	Coated & saturated base sheet, 3 plies #15 asph. Felt, mopped	Sq.	74.5	107	2.8	20				
	On nailable decks	Sq.	70	112.5	2.947	19				
	4 plies #15 asphalt felt, mopped	Sq.	87	97.25	2.545	22				
	Asphalt flood coat, smooth surface									
	Asphalt base sheet, 3 plies #15 asphalt felt, mopped	Sq.	70.5	89.15	2.333	24				
	On nailable decks	Sq.	66	92.9	2.435	23				
	4 plies #15 asphalt felt, mopped	Sq.	83	89.15	2.333	24				
	On nailable decks	Sq.	78	92.9	2.435	23				
	Coated glass fiber base sheet, mopped, & 2 plies of glass fiber felt (type IV)	Sq.	63.5	85.5	2.24	25				
	On nailable decks	Sq.	59.5	89.15	2.333	24				
	3 plies, mopped	Sq.	76.5	92.9	2.435	23				
	On nailable decks	Sq.	71.5	7.25	2.545	22				
	4 plies glass fiber felt (type IV), mopped	Sq.	89.5	92.9	2.435	23				
	On nailable decks	Sq.	84.5	97.25	2.545	22				
	Coated & saturated base sheet, 3 plies #15 asph. Felt, mopped	Sq.	69.5	89.15	2.333	24				
	On nailable decks	Sq.	64.5	92.9	2.435	23				
	4 plies #15 organic felt, mopped	Sq.	81.5	97.25	2.545	22				
	Coal tar pitch w/gravel/slag surfacing									
	4 plies #15 tarred felt, mopped	Sq.	135	102.15	2.667	21				
	3 plies glass fiber felt (type IV) mopped	Sq.	111	112.5	2.947	19				
	Coated glass fiber base sheet, mopped, & 2 plies of glass fiber felt (type IV)	Sq.	110	112.5	2.947	19				
	On nailable decks	Sq.	98	119	3.111	18				
	4 plies glass fiber felt (type IV), mopped	Sq.	153	102.15	2.667	21				
	On nailable decks	Sq.	141	107	2.8	20				
	APP Modified Bituminous Membrane Roofing	Base sheet, #15 glass fiber felt, nailed to deck	Sq.	5.75	4.55	0.138	58			

	Spot mopped to deck	Sq.	8.6	7.25	0.19	295		
	Fully mopped to deck	Sq.	12.05	11.15	0.292	192		
	#15 organic felt, nailed to deck	Sq.	4.69	4.55	0.138	58		
	Spot mopped to deck	Sq.	7.55	7.25	0.19	295		
	Fully mopped to deck	Sq.	11	11.15	0.292	192		
	APP mod, smooth cap sheet, poly reinf, torched 160mils	SF	0.47	0.65	0.019	2100		
	170 mils	SF	0.54	0.65	0.019	2100		
	Granule surface cap sheet, poly reinf, torched 180mils	SF	0.58	0.68	0.02	2000		
	Smooth surface flashing, torched, 160 mils	SF	0.47	1.08	0.032	1260		
	170 mils	SF	0.54	1.08	0.032	1260		
	Granule surface flashing, torched, 180 mils	SF	0.58	1.08	0.032	1260		
	Fibrated aluminum coating	SF	0.1	0.07	0.002	3800		
SBS Modified Bituminous Membrane	Granule surf cap sheet, polyester reinf, mopped	SF	0.52	1.07	0.028	2000		
	150 mils	SF	0.76	1.07	0.028	2000		
	160 mils	SF	0.48	1.07	0.028	2000		
	Glass fiber reinforced, mopped, 160 mils	SF	0.48	1.02	0.027	2100		
	Smooth surface cap sheet, mopped, 145 mils	SF	0.48	1.7	0.044	1260		
	150 mils	SF	0.47	1.7	0.044	1260		
	Granular surface flashing, 150 mils	SF	0.52	1.7	0.044	1260		
	160 mils	SF	0.76	1.7	0.044	1260		
Elastomeric Membrane - Chlorosulfanated Polyethylene Roofing	CSPE, 45 mils, .29 PSF, fully adhered	Sq.	141	52.35	1.538	26		
	Loose-laid & ballasted w/stone (10 PSF)	Sq.	149	26.75	0.784	51		
	Mechanically attached	Sq.	143	39.23	1.143	35		
	Plates w/adhesive attachment	Sq.	141	39.23	1.143	35		
EPDM Roofing	EPDM, 45 mils, .028 PSF							
	Loose-laid & ballasted w/stone (10 PSF)	Sq.	68.5	26.75	0.784	51		
	Mechanically attached	Sq.	59	39.23	1.143	35		
	Fully adhered w/ adhesive	Sq.	86	52.35	1.538	26		
	60 mils, .40 PSF							
	Loose-laid & ballasted w/stone (10 PSF)	Sq.	86.5	26.75	0.784	51		
	Mechanically attached	Sq.	76	39.23	1.143	35		
	Fully adhered w/ adhesive	Sq.	102	52.35	1.538	26		
	45 mil, .28 PSF, membrane only	SF	34					
	60 mil, .40 PSF, membrane	Sq.	49.5					
	Seam tape for membrane, 3"x100' roll	Ea.	46.5					
	Batten strips, 10' sections	Ea.	3.38					
	Cover tape for batten strips, 6"x100' roll	Ea.	172					
	Plate anchors	M	61					
	Adhesive for fully adhered systems, 60 SF/gal	Gal.	16.55					
Polyisobutylene Roofing	PIB 100 mils, .57 PSF							
	Loose-laid & ballasted w/stone/gravel (10 PSF)	Sq.	145	26.75	0.784	51		
	Partially Adhered w/adhesive	Sq.	182	39.23	1.143	35		
	Hot asphalt attachment	Sq.	173	39.23	1.143	35		
	Fully adhered w/contact cement	Sq.	188	52.35	1.538	26		
Thermoplastic Membrane Polyvinyl-Chloride Roofing	PVC, Heat welded seams, Reinforced, 48 mils, .33 PSF	Sq.						
	Loose-laid & ballasted w/stone/gravel (12 PSF)	Sq.	116	26.75	0.784	51		
	Mechanically attached	Sq.	106	39.23	1.143	35		
	Fully adhered w/adhesive	Sq.	155	52.35	1.538	26		
	PVC, Heat welded seams, Reinforced, 60 mils, .40 PSF	Sq.						
	Loose-laid & ballasted w/stone/gravel (12 PSF)	Sq.	116	26.75	0.784	51		
	Mechanically attached	Sq.	106	39.23	1.143	35		
	Fully adhered w/adhesive	Sq.	155	52.35	1.538	26		
Thermoplastic Polyolefin Roofing	TPO, 45 mils, looselaid & ballasted w/stone (1/2 ton/sq)	Sq.	90	26.75	0.784	51		
	Fully adhered	Sq.	129	54.6	1.6	25		
	Mechanically attached	Sq.	65.5	40.37	1.176	34		
	Self adhered	Sq.	74.5	40.23	1.143	35		
	60 mil membrane, heat welded seams, ballasted	Sq.	106	27.31	0.8	50		

	Fully adhered	Sq.	145	54.6	1.6	25		
	Mechanically attached	Sq.	96	40.37	1.176	34		
	Self adhered	Sq.	90.5	40.23	1.143	35		
	Asphalt Shingles							
	Standard Strip, Inorganic Class A pneumatic nailed	sq.	43	26	1.143	5.5	108	RS means
	standard, laminated multi-layered shingles pneum	sq.	53.3	32.5	1.422	5.63	118.5	RS means
	premium, laminated multi-layered shingles pneum	sq.	69.5	41.5	1.831	4.37	153	RS means
	For Steep Roofs (7 pitch and greater) add 50%							
	Aluminum roof panels, corrugated or ribbed, natur	S.F.	0.76	0.66	0.027	1200	1.96	RS means
	Copper Roofing, copper, over 10 square, 16 ounce	sq.	915	184	6.154	1.3	1310	RS means
	Aluminum siding, sandwich panels, smooth, white,	S.F.	1.72	0.83	0.031	515	3.29	RS means
	Vinyl siding, clapboard profile, woodgrain texture,	S.F.	0.8	0.86	0.032	495	2.34	RS means
	Steel Siding, galvanized, corrugated or ribbed, on	S.F.	1.59	1.02	0.041	775	3.48	RS means
	Wood Siding, Boards, board & batten, cedar, "B" g	S.F.	1.98	0.57	0.021	375	3.14	RS means
	Wood Siding, Boards, white pine, rough sawn, tong	S.F.	1.1	0.65	0.024	330	2.31	RS means
Thermal & Moisture Protection Built-up Bituminous Roofing	on slab, 1ply, felt mopped	SF	0.27	0.72	0.019	3000		
	on slab, 2 ply felt, mopped	SF	0.53	0.85	0.022	2500		
	on slab, 2 ply, glass fiber fabric, mopped		0.62	1.3	0.034	1650		
	on slab, 3 ply, felt, mopped		0.8	1.02	0.027	2100		
	on slab, 3 ply, glass fiber fabric, mopped		0.83	1.39	0.036	1550		
	Asphaltic hardboard protection board 1/8"		0.33	1.06	0.032	500		
	1/4" EPS membrane protection board		0.2	0.15	0.005	3500		
	3/8" thick		0.22	0.15	0.005	3500		
	1/2" thick, add		0.25	0.15	0.005	3500		
	Fiberglass fabric, black/white, 20/10 mesh		12	0.455	0.138	116		
Elastomeric Sheet Waterproofing & Access.	EPDM, plain, 45 mils thick	SF	1.12	0.91	0.028	580		
	60 mils thick	SF	1.21	0.93	0.028	570		
	Nylon reinforcing sheets, 45 mils thick	SF	1.1	0.91	0.028	580		
	60 mils thick	SF	1.4	0.93	0.028	570		
	Vulcanizing splicing tape, 2" wide	CLF	39					
	4" wide	CLF	89.5					
	Adhesive, bonding, 60 SF per gal	GAL	15.2					
	Splicing, 75 SF per gal	GAL	25					
	Neoprene sheets, plain, 45 mils thick	SF	1.5	0.91	0.028	580		
	60 mils thick	SF	2.55	0.93	0.028	570		
	Nylon reinforcing sheets, 45 mils thick	SF	1.56	0.91	0.028	580		
	60 mils thick	SF	2.2	0.93	0.028	570		
	120 mils thick	SF	3.58	1.06	0.032	500		
	Adhesive, splicing, 150 SF p.gal p.coat	GAL	19					
	Fiberglass reinforced, fluid applied, 1/8"	SF	1.65	1.06	0.032	500		
	Polyethelene & rubberized asphalt sheets, 1/8"	SF	0.55	0.96	0.029	550		
	Asphaltic hardboard protection board, 1/8"	SF	0.33	1.06	0.032	500		
	1/4" thick	SF	0.57	1.17	0.036	450		
	Polyvinyl chloride sheets, plain, 10 mils thick	SF	0.17	0.91	0.028	580		
	20 mils thick	SF	0.28	0.93	0.028	570		
	30 mils thick	SF	0.39	0.94	0.029	560		
	Adhesives, trowel grade, 40-100 SF per gal	GAL	25.5					
	Brush grade, 100-250 SF per gal	GAL	25.5					
	Bit. Mod. polyurethane, fluid applied, 55 mils	SF	0.69	0.79	0.024	665		
	Vinyl plastic, sprayed on, 25-40 mils thick	SF	1.11	1.11	0.034	475		
Cementitious (Crystalline) Waterproofing	1/8" application, sprayed on	SF	1.62	1.3	0.024	1000		
	2coat cementitious/metallic slurry, troweled, 1/4"	CSF	24	119	3.226	2.48		
	3 coat, 3/8" thick	CSF	42.5	161	4.348	1.84		
	4 coat, 1/2" thick	CSF	56.5	247	6.667	1.2		
Bentonite Panel Waterproofing	Panels, 4'x4', 3/16" thick	SF	0.83	0.42	0.013	625		
	Rolls, 3/8", w/geotextile fabric both sides	SF	1.02	0.48	0.015	550		
	Granular bentonite, 50 lb. bags (.625 CF)	Bag	19.9					
	3/8" thick, troweled on	SF	0.99	0.56	0.017	475		
	Drain Board, expanded polystyrene, binder encapsulated, 1.5" thick	SF	1.16	0.12	0.005	1600		
	2" thick	SF	1.56	0.12	0.005	1600		

	3" thick	SF	2.33		0.12	0.005	1600			
	4" thick	SF	3.09		0.12	0.005	1600			
	With filter fabric, 1.5" thick	SF	1.41		0.12	0.005	1600			
	2" thick	SF	1.85		0.12	0.005	1600			
	3" thick	SF	2.63		0.12	0.005	1600			
	4" thick	SF	3.41		0.12	0.005	1600			
Silicone Based Water Repellents	Water base liquid, roller applied	SF	0.6		0.08	0.002	7000			
	Silicone or stearate, sprayed on CMU, 1 coat	SF	0.34		0.07	0.002	4000			
	2 coats	SF	0.68		0.09	0.003	3000			
Vapor Retarders - Natural and Synthetic Materials	Aluminum & kraft laminated, foil 1 side	Sq.	5.15		8.25	0.216	37			
	Foil 2 sides	Sq.	8.15		8.25	0.216	37			
	Asphalt felt sheathing paper, 15#	Sq.	4.1		8.25	0.216	37			
	Housewrap, ext., spun bonded polypropylene									
	Small roll	SF	0.24		0.08	0.002	3800			
	Large roll	SF	0.13		0.08	0.002	4000			
	Material only, 3' x 111.1' roll	Ea.	81							
	9' x 111.1' roll	Ea.	131							
	Polyethylene vapor barrier, standard, .002" .004" thick	Sq.	1.09		8.25	0.216	37			
	.004" thick	Sq.	3.06		8.25	0.216	37			
	.006" thick	Sq.	4.72		8.25	0.216	37			
	.010" thick	Sq.	5.4		8.25	0.216	37			
	Clear reinforced, fire retardant, .008" thick	Sq.	9.85		8.25	0.216	37			
	Cross laminated type, .003" thick	Sq.	6.9		8.25	0.216	37			
	.004" thick	Sq.	7.6		8.25	0.216	37			
	Red rosin paper, 5 sq rolls, 4 lb per square	Sq.	2.11		8.25	0.216	37			
	5 lbs. per square	Sq.	2.83		8.25	0.216	37			
	Reinf. Waterproof, .002" polyethylene backing, 1 side	Sq.	5.15		8.25	0.216	37			
	2 sides	Sq.	6.75		8.25	0.216	37			
	Asphalt felt roof deck vapor barrier, class 1 metal decks	Sq.	15.1		7.15	0.216	37			
	For all other decks	Sq.	11		7.15	0.216	37			
	Waterproofed kraft with sisal or fiberglass fibers, minimum	Sq.	5.55		8.25	0.216	37			
	Max.	Sq.	13.75		8.25	0.216	37			
		Unit	Material	Labor	Equip.	Total	Source			
	Loose fill insulation						http://www.get-a-quote.net/QuoteEngine/costbook.asp?WCI=CostFram			
	4" masonry cavity wall fill	SF	0.5		0.26	0.76				
	8" masonry cavity wall fill	SF	0.74		0.34	1.08				
	Expanded shale	SF	2.17		2.16	0.02	4.35			
	Vermiculite or perlite poured 3" deep	SF	0.71		0.3	1.01				
	R4 polystyrene	SF	0.54		2.16	0.02	2.72			
	Blown-in fiberglass or rockwool						http://www.get-a-quote.net/QuoteEngine/costbook.asp?WCI=CostFram			
	6" (150 mm) R13	SF	0.36		0.4	0.07	0.83			
	8" (200mm) R19	SF	0.47		0.49	0.09	1.05			
	10" (250 mm) R22	SF	0.75		0.62	0.11	1.48			
	12" (300 mm) R26	SF	0.81		0.66	0.12	1.59			
	15" (375 mm) R30	SF	0.9		0.71	0.13	1.74			
	Rigid insulation for roofs						http://www.get-a-quote.net/QuoteEngine/costbook.asp?WCI=CostFram			
	1" mineral fiberboard, R4.17	SF	0.46		0.52	0.98				
	2" mineral fiberboard, R5.26	SF	0.98		0.52	1.5				
	3" mineral fiberboard	SF	1.17		0.56	1.73				
	1" fiberglass, R3.5	SF	0.69		0.44	1.13				
	2" fiberglass, R8.2	SF	1.01		0.52	1.53				
	3" fiberglass, R12.4	SF	1.45		0.56	2.01				
	1" polystyrene, R4.0	SF	0.5		0.52	1.02				
	2" polystyrene, R8.0	SF	0.87		0.52	1.39				
	3" polystyrene, R15.0	SF	1.37		0.56	1.93				
	3/4" urethane, R5.1	SF	0.55		0.44	0.99				
	1" urethane, R6.7	SF	0.72		0.52	1.24				
	1-1/2" urethane, R10	SF	0.97		0.52	1.49				
	2" urethane, R13.3	SF	1.27		0.52	1.79				
	3" urethane, R25	SF	2.11		0.56	2.67				
	1" foam glass, R2.6	SF	1.74		0.52	2.26				
	1-1/2" foam glass, R3.9	SF	2.36		0.52	2.88				
	2" foam glass, R5.2	SF	2.85		0.52	3.37				
	3" foam glass, R7.89	SF	3.35		0.52	3.87				

1" wood fiber, R4.0	SF	2.61	0.52	3.13			
2" wood fiber, R8.0	SF	3.16	0.56	3.72			
3" wood fiber	SF	3.97	0.68	4.66			
3/4"particle board, R2.08	SF	0.56	0.44	1			
1" particle board, R2.78	SF	0.77	0.52	1.29			
2" particle board, R5.20	SF	0.93	0.56	1.49			
3" particle board, R7.5	SF	1.12	0.58	1.81			
Add for vapor barrier integral with insulation	SF	0.02		0.02			
Add for foil coating integral with insulation	SF	0.06		0.06			
Add for factory painted on one side	SF	0.02		0.02			
Add for tapered roof insulation			50				
Add for application on vertical surfaces			10				
Rigid foil backed polystyrene roof insulation panels						http://www.get-a-quote.net/QuoteEngine/costbook.asp?WCI=CostFram	
3/8" polystyrene	SF	0.69	0.56	0.01	1.26		
1/2" polystyrene	SF	0.5	0.56	0.01	1.07		
3/4" polystyrene	SF	0.6	0.56	0.01	1.17		
Sprayed on insulation						http://www.get-a-quote.net/QuoteEngine/costbook.asp?WCI=CostFram	
1" foam spray, R4 polystyrene	SF	0.37	0.39	0.04	0.8		
1" foam spray, R7.7 urethane	SF	0.57	0.39	0.04	1		
2" foam spray, R8 polystyrene	SF	0.62	0.59	0.06	1.27		
2" foam spray, R15.4 urethane	SF	0.79	0.59	0.06	1.44		
Add for 1" (25mm) thick installation on vertical surfaces			10				
Add for 2" (51mm) thick installation on vertical surfaces			17				
Sprayed perlite insulation							
1" perlite, R2.7	SF	0.44	0.63	0.06	1.13		
Asphalt Shingles							
Standard Strip, Inorganic Class A pneumatic nailed	sq. (43	26	1.143	5.5	108	RS means
standard, laminated multi-layered shingles pneumatic	sq.	53.3	32.5	1.422	5.63	118.5	RS means
premium, laminated multi-layered shingles pneumatic	sq.	69.5	41.5	1.831	4.37	153	RS means
For Steep Roofs (7 pitch and greater) add 50%							
Aluminum roof panels, corrugated or ribbed, natural	S.F.	0.76	0.66	0.027	1200	1.96	RS means
Copper Roofing, copper, over 10 square, 16 ounce	sq.	915	184	6.154	1.3	1310	RS means
Aluminum siding, sandwich panels, smooth, white,	S.F.	1.72	0.83	0.031	515	3.29	RS means
Vinyl siding, clapboard profile, woodgrain texture,	S.F.	0.8	0.86	0.032	495	2.34	RS means
Steel Siding, galvanized, corrugated or ribbed, on	S.F.	1.59	1.02	0.041	775	3.48	RS means
Wood Siding, Boards, board & batten, cedar, "B" grade	S.F.	1.98	0.57	0.021	375	3.14	RS means
Wood Siding, Boards, white pine, rough sawn, tongue	S.F.	1.1	0.65	0.024	330	2.31	RS means