



FyreWrap®

Material Estimation Charts



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For additional information about product performance or to identify the recommended product for your application, please contact the Unifrax Application Engineering Group at 716-278-3888.

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FYREWAP® Elite 1.5 Duct Insulation - Two Layer ASTM E2336 SYSTEM

Material Estimation Chart

2 Hr. Grease Duct (GD) System (per ASTM E2336)

ICC ES Report ESR-2224

First Layer = Circumferential Butt Joint, Longitudinal Joint = 3" overlap

Second Layer = 3" overlaps, all joints

Estimating Notes:

All estimates are to be used as general guidelines.

Estimates based on NO consideration for waste or linear overlap requirements.

Number of pieces available per roll length will significantly impact material requirements.

FyreWrap system integrity is limited by the quality of the installation.

RECTANGULAR OR SQUARE DUCT

Layer 1= $(2(L+W) + 4(4.75)+3)/12$

Layer 2= $(2(L+W) + 4(7.13) +3)/12$

CIRCULAR DUCT

Layer 1= $(\pi (D+3)+3)/12$

Layer 2= $(\pi(D+7.5)+3)/12$

$\pi = 3.14$

Duct Size Semi-Perimeter (L+W) (inches)	Estimated Material Usage (SF/LF of Duct)		
	Layer 1	Layer 2	Total
18	4.83	5.63	10.46
20	5.17	5.96	11.13
22	5.50	6.29	11.79
24	5.83	6.63	12.46
26	6.17	6.96	13.13
28	6.50	7.29	13.79
30	6.83	7.63	14.46
32	7.17	7.96	15.13
34	7.50	8.29	15.79
36	7.83	8.63	16.46
38	8.17	8.96	17.13
40	8.50	9.29	17.79
44	9.17	9.96	19.13
48	9.83	10.63	20.46
52	10.50	11.29	21.79
56	11.17	11.96	23.13
60	11.83	12.63	24.46
64	12.50	13.29	25.79
68	13.17	13.96	27.13
72	13.83	14.63	28.46
76	14.50	15.29	29.79
80	15.17	15.96	31.13
84	15.83	16.63	32.46
88	16.50	17.29	33.79
92	17.17	17.96	35.13
96	17.83	18.63	36.46
100	18.50	19.29	37.79
104	19.17	19.96	39.13
108	19.83	20.63	40.46

Duct Size Diameter (inches)	Estimated Material Usage (SF/LF of Duct)		
	Layer 1	Layer 2	Total
4	2.87	4.44	7.30
6	3.39	4.96	8.35
8	3.91	5.48	9.40
10	4.44	6.01	10.44
12	4.96	6.53	11.49
14	5.48	7.05	12.54
16	6.01	7.58	13.58
18	6.53	8.10	14.63
20	7.05	8.62	15.68
22	7.58	9.15	16.72
24	8.10	9.67	17.77
26	8.62	10.19	18.82
28	9.15	10.72	19.86
30	9.67	11.24	20.91
32	10.19	11.76	21.96
34	10.72	12.29	23.00
36	11.24	12.81	24.05
40	12.29	13.86	26.14
44	13.33	14.90	28.24
48	14.38	15.95	30.33
52	15.43	17.00	32.42
56	16.47	18.04	34.52
60	17.52	19.09	36.61
64	18.57	20.14	38.70
68	19.61	21.18	40.80
72	20.66	22.23	42.89
76	21.71	23.28	44.98
80	22.75	24.32	47.08
84	23.80	25.37	49.17

FYREWAP® Elite 1.5 Duct Insulation - SINGLE LAYER with OVERLAPS

Material Estimation Chart

System Summary:

2 Hr. Grease Duct (GD) and Chemical Fume Duct (CFD) Systems (Tested per UL1978);
and Ventilation Air Duct (VAD) System (Tested per ISO 6944)
3" overlap required for all joints

Estimating Notes:

All estimates are to be used as general guidelines.
Estimates based on NO consideration for waste or linear overlap requirements.
Number of pieces available per roll length will significantly impact material requirements.
FyreWrap system integrity is limited by the quality of the installation.

RECTANGULAR OR SQUARE DUCT

$$(2(L+W) + 4(4.75) + 3)/12$$

Duct Size Semi-Perimeter (L+W) (inches)	Estimated Material Usage (SF/LF of Duct)
18	4.83
20	5.17
22	5.50
24	5.83
26	6.17
28	6.50
30	6.83
32	7.17
34	7.50
36	7.83
38	8.17
40	8.50
44	9.17
48	9.83
52	10.50
56	11.17
60	11.83
64	12.50
68	13.17
72	13.83
76	14.50
80	15.17
84	15.83
88	16.50
92	17.17
96	17.83
100	18.50
104	19.17
108	19.83

CIRCULAR DUCT

$$\pi (D+4.5)+3)/12$$

$$\pi = 3.14$$

Duct Size Diameter (inches)	Estimated Material Usage (SF/LF of Duct)
4	2.47
6	3.00
8	3.52
10	4.04
12	4.57
14	5.09
16	5.61
18	6.14
20	6.66
22	7.18
24	7.71
26	8.23
28	8.75
30	9.28
32	9.80
34	10.32
36	10.85
40	11.89
44	12.94
48	13.99
52	15.03
56	16.08
60	17.13
64	18.17
68	19.22
72	20.27
76	21.31
80	22.36
84	23.41

FYREWRAP® Elite 1.5 Duct Insulation - SINGLE LAYER with COLLAR

Material Estimation Chart

2 Hr. Grease Duct (GD) and Chemical Fume Duct (CFD) Systems (Tested per UL1978);
 and Ventilation Air Duct (VAD) System (Tested per ISO 6944)
 Optional Installation Method: Butt joint with Collar
 Perimeter Joints - butt joint, 6" collar applied over perimeter joints
 Longitudinal Joints - 3" overlap

Estimating Notes:

All estimates are to be used as general guidelines.

Estimates based on NO consideration for waste.

Number of pieces available per roll length will significantly impact material requirements.

FyreWrap system integrity is limited by the quality of the installation.

FyreWrap Elite 1.5 Collar available as separate item (6" wide)

The amount of collar material varies depending on whether 24" or 48" wide FyreWrap is used.

RECTANGULAR OR SQUARE DUCT

Wrap Material: $(2(L+W) + 4(4.75)+3)/12$

Collar Material: $(2(L+W) + 4(7.13)+3)/12$

CIRCULAR DUCT

$(\pi (D+3)+3)/12$

$\pi (D+7.5)+3)/12$

$\pi = 3.14$

Duct Size Semi-Perimeter (L+W) (inches)	Estimated Wrap Material Usage (SF/LF of Duct)	Estimated 6" Collar Material (SF/LF of Duct) When Using	
		24" Wide Blanket	48" Wide Blanket
18	4.83	1.3	0.7
20	5.17	1.4	0.7
22	5.50	1.5	0.8
24	5.83	1.6	0.8
26	6.17	1.7	0.8
28	6.50	1.8	0.9
30	6.83	1.8	0.9
32	7.17	1.9	1.0
34	7.50	2.0	1.0
36	7.83	2.1	1.0
38	8.17	2.2	1.1
40	8.50	2.3	1.1
44	9.17	2.4	1.2
48	9.83	2.6	1.3
52	10.50	2.8	1.4
56	11.17	2.9	1.5
60	11.83	3.1	1.5
64	12.50	3.3	1.6
68	13.17	3.4	1.7
72	13.83	3.6	1.8
76	14.50	3.8	1.9
80	15.17	3.9	2.0
84	15.83	4.1	2.0
88	16.50	4.3	2.1
92	17.17	4.4	2.2
96	17.83	4.6	2.3
100	18.50	4.8	2.4
104	19.17	4.9	2.5
108	19.83	5.1	2.5

Duct Size Diameter (inches)	Estimated Wrap Material Usage (SF/LF of Duct)	Estimated 6" Collar Material (SF/LF of Duct) When Using	
		24" Wide Blanket	48" Wide Blanket
4	2.08	0.8	0.4
6	2.61	0.9	0.4
8	3.13	1.0	0.5
10	3.65	1.1	0.6
12	4.18	1.3	0.6
14	4.70	1.4	0.7
16	5.22	1.5	0.8
18	5.75	1.7	0.8
20	6.27	1.8	0.9
22	6.79	1.9	1.0
24	7.32	2.1	1.0
26	7.84	2.2	1.1
28	8.36	2.3	1.2
30	8.89	2.5	1.2
32	9.41	2.6	1.3
34	9.93	2.7	1.4
36	10.46	2.8	1.4
40	11.50	3.1	1.6
44	12.55	3.4	1.7
48	13.60	3.6	1.8
52	14.64	3.9	1.9
56	15.69	4.2	2.1
60	16.74	4.4	2.2
64	17.78	4.7	2.3
68	18.83	4.9	2.5
72	19.88	5.2	2.6
76	20.92	5.5	2.7
80	21.97	5.7	2.9
84	23.02	6.0	3.0

FYREWAP® Elite 1.5 Duct Insulation - SINGLE LAYER with butt joints/pins

Material Estimation Chart

System Summary:

2 Hr. Grease Duct (GD) and Chemical Fume Duct (CFD) Systems (Tested per UL1978);
and Ventilation Air Duct (VAD) System (Tested per ISO 6944)

Optional Installation Method: Butt joints with pins used for attachment on all sides

Estimating Notes:

All estimates are to be used as general guidelines.

Estimates based on NO consideration for waste or linear overlap requirements.

Number of pieces available per roll length will significantly impact material requirements.

FyreWrap system integrity is limited by the quality of the installation.

RECTANGULAR OR SQUARE DUCT

$$(2(L+W) + 4(4.75) + 2)/12$$

Duct Size Semi-Perimeter (L+W) (inches)	Estimated Material Usage (SF/LF of Duct)
18	4.75
20	5.08
22	5.42
24	5.75
26	6.08
28	6.42
30	6.75
32	7.08
34	7.42
36	7.75
38	8.08
40	8.42
44	9.08
48	9.75
52	10.42
56	11.08
60	11.75
64	12.42
68	13.08
72	13.75
76	14.42
80	15.08
84	15.75
88	16.42
92	17.08
96	17.75
100	18.42
104	19.08
108	19.75

CIRCULAR DUCT

$$\pi (D+4.5)+2)/12$$

$$\pi = 3.14$$

Duct Size Diameter (inches)	Estimated Material Usage (SF/LF of Duct)
4	2.39
6	2.91
8	3.44
10	3.96
12	4.48
14	5.01
16	5.53
18	6.05
20	6.58
22	7.10
24	7.62
26	8.15
28	8.67
30	9.19
32	9.72
34	10.24
36	10.76
40	11.81
44	12.86
48	13.90
52	14.95
56	16.00
60	17.04
64	18.09
68	19.14
72	20.18
76	21.23
80	22.28
84	23.32

FYREWRA® 0.5 Plenum Insulation - Single Layer

Material Estimation Chart

System Summary:

Plenum Protection (PP) System

1" overlap required for all joints

Estimating Notes:

All estimates are to be used as general guidelines.

Estimates based on NO consideration for waste or linear overlap requirements.

Number of pieces available per roll length will significantly impact material requirements.

FyreWrap system integrity is limited by the quality of the installation.

RECTANGULAR OR SQUARE ITEM

$$(2(L+W) + 4(1.60) + 1)/12$$

Item Size Semi-Perimeter (L+W) (inches)	Estimated Material Usage (SF/LF of Item)
18	3.62
20	3.95
22	4.28
24	4.62
26	4.95
28	5.28
30	5.62
32	5.95
34	6.28
36	6.62
38	6.95
40	7.28
44	7.95
48	8.62
52	9.28
56	9.95
60	10.62
64	11.28
68	11.95
72	12.62
76	13.28
80	13.95
84	14.62
88	15.28
92	15.95
96	16.62
100	17.28
104	17.95
108	18.62

CIRCULAR ITEM or BUNDLE

$$(\pi (D+1.5)+1)/12$$

$$\pi = 3.14$$

Item Size Diameter (inches)	Estimated Material Usage (SF/LF of Item)
4	1.52
6	2.05
8	2.57
10	3.09
12	3.62
14	4.14
16	4.66
18	5.19
20	5.71
22	6.23
24	6.76
26	7.28
28	7.80
30	8.33
32	8.85
34	9.37
36	9.90
40	10.94
44	11.99
48	13.04
52	14.08
56	15.13
60	16.18
64	17.22
68	18.27
72	19.32
76	20.36
80	21.41
84	22.46