

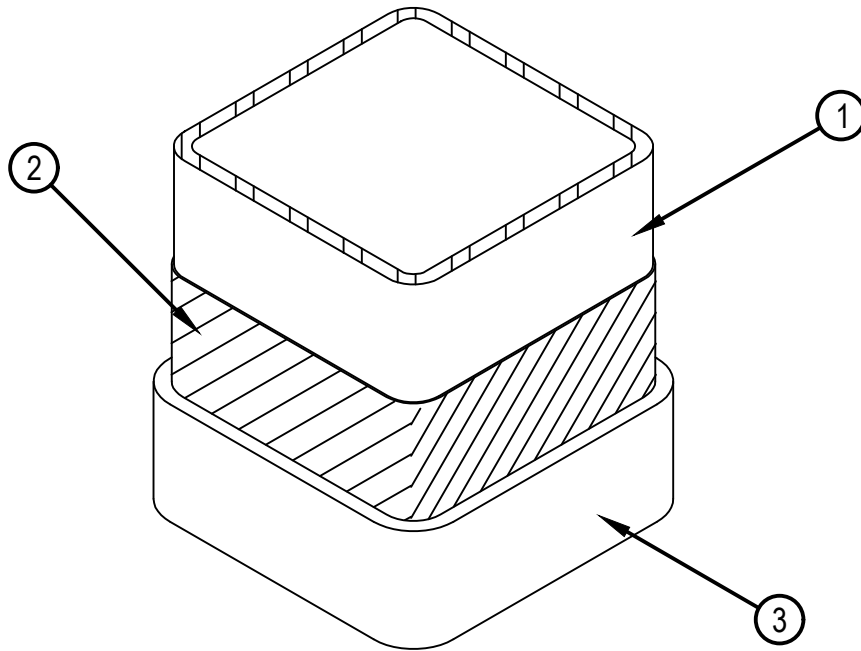


Classified by
Underwriters Laboratories, Inc.
to UL 263 and CAN/ULC-S101

Design No. Y634

Ratings - 1/2, 3/4, 1, 1-1/2, 2, 2-1/2, 3 and 3-1/2 Hr (See Item 3)

Y634



Hilti Firestop Systems

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May 12, 2022

1. Steel Tube Column — Steel rectangular tube (ST) or pipe (SP) columns with the minimum sizes shown in the tables below.
2. Primer Coating — 60 micron (2 mil) thickness of a two component epoxy primer or 60 micron (2 mil) thickness of an alkyd primer or 60 micron (2 mil) thickness of an acrylic primer or 60 micron (2 mil) thickness of a polyurethane primer.
3. Mastic & Intumescent Coating* — Coating spray or brush applied in accordance with the manufacturer's instructions at the minimum average dry thickness shown in the thickness below. The thickness shown does not include primer thickness.
4. Top Coat (not shown) — The following topcoats shall be used for compliance with Exterior Environmental Exposure requirement. Solvent Based 2 pack topcoat Type Hensotop 2K PU applied at a dry film thickness of 100 microns (4 mil) or Acrylic polyurethane topcoat Type Hi Solids Polyurethane 250 applied at a dry film thickness of 100 microns (4 mil) or Waterbased Urethane topcoat Type Acrolon 100HS at a dry film thickness of 100 microns (4 mil).

As an alternate to the table below, the required thickness of coating (in mm and inches) to be applied to surfaces of steel tube (ST) and steel pipe (SP) columns may be determined from the equations listed below.

The equations may only be used for the indicated hourly rating, and for the corresponding listed ranges of thickness (mm) and Hp/A.

Hourly Rating	Thickness Equation (mm)	Thickness Equation (mm)	Hp/A Section Factor Range
60 mins	$T = ((0.0248 \cdot Hp/A) - 0.4909)$	1.12 to 3.65	65 - 167
90 mins	$T = ((0.0302 \cdot Hp/A) + 0.8859)$	2.85 to 5.93	65 - 167
120 mins	$T = ((0.0383 \cdot Hp/A) + 1.8097)$	4.30 to 8.21	65 - 167

The equations may only be used for the indicated hourly rating, and for the corresponding listed ranges of thickness (inches) and A/P.

Hourly Rating	Thickness Equation (mm)	Thickness Range (in.)	A/P Section Factor Range
60 mins	$T = ((0.03844507/(A/P)) - 0.01932677)$	0.044 to 0.144	0.236 - 0.606
90 mins	$T = ((0.04681617/(A/P)) + 0.03487795)$	0.112 to 0.233	0.236 - 0.606
120 mins	$T = ((0.05937283/(A/P)) + 0.07124803)$	0.169 to 0.323	0.236 - 0.606

T = Thickness of coating in mm

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Required Thickness (mm.)
Rating Period (min)

Hp/A	30	45	60	90	120	150	180	210
303	4.84	4.84	N/A	N/A	N/A	N/A	N/A	N/A
213	3.40	3.61	4.06	6.78	10.04	N/A	N/A	N/A
167	2.46	2.51	3.65	5.93	8.21	N/A	N/A	N/A
165	N/A	2.47	3.60	5.87	8.13	N/A	N/A	N/A
160	N/A	2.36	3.48	5.72	7.94	N/A	N/A	N/A
155	N/A	2.25	3.35	5.57	7.75	N/A	N/A	N/A
150	N/A	2.14	3.23	5.42	7.55	N/A	N/A	N/A
145	N/A	2.03	3.11	5.26	7.36	N/A	N/A	N/A
140	N/A	1.92	2.98	5.11	7.17	N/A	N/A	N/A
135	N/A	1.81	2.86	4.96	6.98	N/A	N/A	N/A
130	N/A	1.70	2.73	4.81	6.79	N/A	N/A	N/A
125	N/A	1.58	2.61	4.66	6.60	N/A	N/A	N/A
120	N/A	1.47	2.49	4.51	6.41	N/A	N/A	N/A
115	N/A	1.36	2.36	4.36	6.21	N/A	N/A	N/A
110	N/A	1.25	2.24	4.21	6.02	N/A	N/A	N/A
105	N/A	1.14	2.11	4.06	5.83	N/A	N/A	N/A
100	N/A	N/A	1.99	3.91	5.64	N/A	N/A	N/A
95	N/A	N/A	1.87	3.75	5.45	N/A	N/A	N/A
90	N/A	N/A	1.74	3.60	5.26	N/A	N/A	N/A
85	N/A	N/A	1.62	3.45	5.07	6.28	7.19	8.14
80	N/A	N/A	1.49	3.30	4.87	6.28	7.19	8.14
75	N/A	N/A	1.37	3.15	4.68	6.28	7.19	8.14
70	N/A	N/A	1.25	3.00	4.49	6.28	7.19	8.14
65	N/A	N/A	1.12	2.85	4.30	6.28	7.19	8.14



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Required Thickness (in.)
Rating Period (min)

A/P	30	45	60	90	120	150	180	210
0.130	0.191	0.191	N/A	N/A	N/A	N/A	N/A	N/A
0.185	0.134	0.142	0.160	0.267	0.395	N/A	N/A	N/A
0.236	0.097	0.099	0.144	0.233	0.323	N/A	N/A	N/A
0.239	N/A	0.097	0.142	0.231	0.320	N/A	N/A	N/A
0.246	N/A	0.093	0.137	0.225	0.313	N/A	N/A	N/A
0.254	N/A	0.088	0.132	0.219	0.305	N/A	N/A	N/A
0.262	N/A	0.084	0.127	0.213	0.297	N/A	N/A	N/A
0.272	N/A	0.080	0.122	0.207	0.290	N/A	N/A	N/A
0.281	N/A	0.075	0.117	0.201	0.282	N/A	N/A	N/A
0.292	N/A	0.071	0.112	0.195	0.275	N/A	N/A	N/A
0.303	N/A	0.067	0.108	0.189	0.267	N/A	N/A	N/A
0.315	N/A	0.062	0.103	0.184	0.260	N/A	N/A	N/A
0.328	N/A	0.058	0.098	0.178	0.252	N/A	N/A	N/A
0.342	N/A	0.054	0.093	0.172	0.245	N/A	N/A	N/A
0.358	N/A	0.049	0.088	0.166	0.237	N/A	N/A	N/A
0.375	N/A	0.045	0.083	0.160	0.230	N/A	N/A	N/A
0.394	N/A	N/A	0.078	0.154	0.222	N/A	N/A	N/A
0.414	N/A	N/A	0.073	0.148	0.214	N/A	N/A	N/A
0.437	N/A	N/A	0.069	0.142	0.207	N/A	N/A	N/A
0.463	N/A	N/A	0.064	0.136	0.199	0.247	0.283	0.320
0.492	N/A	N/A	0.059	0.130	0.192	0.247	0.283	0.320
0.525	N/A	N/A	0.054	0.124	0.184	0.247	0.283	0.320
0.562	N/A	N/A	0.049	0.118	0.177	0.247	0.283	0.320
0.606	N/A	N/A	0.044	0.112	0.169	0.247	0.283	0.320

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Fire Finish 120+ CFP-SP WB investigated for Conditioned Interior Space Purpose and Interior General Purpose and UL2431 CLASSIFICATION CATEGORY II- A-3

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Fire Finish 120+ CFP-SP WB investigated for exterior environmental purpose and UL2431 CLASSIFICATION CATEGORY I- A WITH TOPCOAT - TYPE HENSOTOP 2K PU or TYPE HI SOLIDS POLYURETHANE 250

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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