



Hilti CFS-SP WB Firestop Joint Spray

Submission Folder

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Firestop joint spray CFS-SP WB



APPLICATIONS

- Sealing openings between the top of walls and concrete or metal floors / ceilings
- Sealing building perimeter gaps between floor slabs or vertical wall and exterior curtain wall facades

ADVANTAGES

- Water-based, low VOC, contains no halogens
- High degree of elasticity - movement capability of up to 50%
- Excellent sprayability and low slump characteristics
- Fast, efficient sealing of wide, difficult-to-access joints



Technical data

Chemical basis	Water-based acrylic dispersion
Base materials	Concrete, Masonry, Gypsum, Steel, Aluminium, Glass
Movement¹⁾	Up to 50 %
Approx. tack-free time (ventilated at 77°F, 80% rel. humidity)	180 min
Approx. curing time²⁾	3 mm/day
Average volume shrinkage	0,511
Application temperature range	4 - 40 °C
Temperature resistance range	-40 - 80 °C
Storage and transportation temperature range	4 - 25 °C
Shelf life³⁾	12 Months

¹⁾ according to HTC 1250

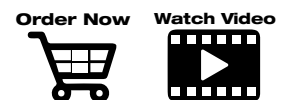
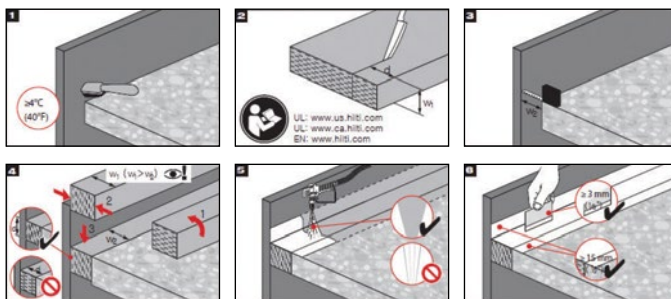
²⁾ at 75°F/24°C, 50% relative humidity

³⁾ at 77°F/25°C and 50% relative humidity; from date of manufacture

Consumption Guide (per 19000 ml bucket)

Joint width (mm)	With overlap 15 mm both sides (mm)	Meters per 19 litres pail (meters)
25	55	110
50	80	75
100	130	45
150	180	35
200	230	25

Application Procedure

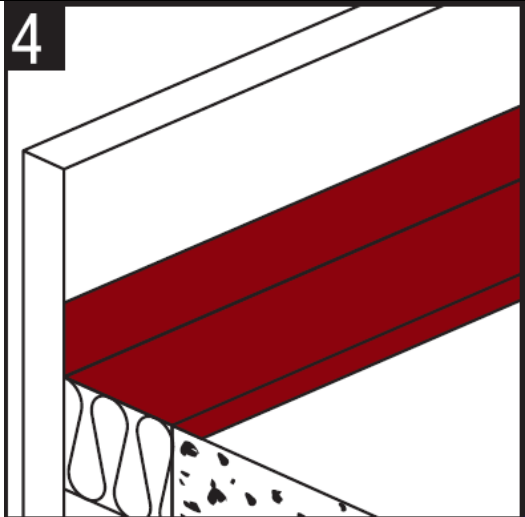
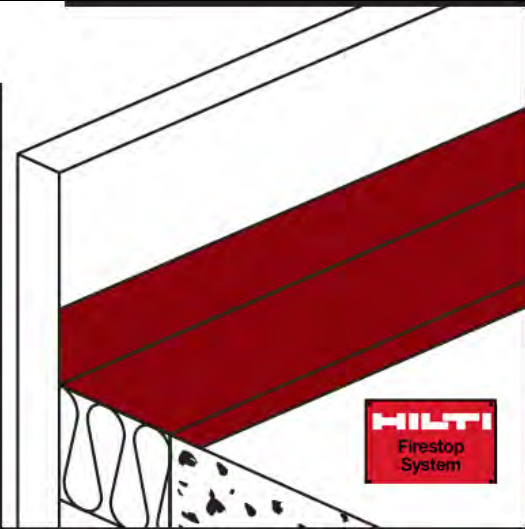


Ordering designation	Colour	Volume per unit	Packaging	Sales pack quantity	Item number
CFS-SP WB red	Red	19000 ml	Bucket	1 pc	430815

Please visit Hilti website for the latest item numbers and related products

Subject: Method Statement of CFS-SP WB
Material: CFS-SP WB Firestop joint spray
Accessory: Nil

Setting Operation		
1	<p>Clean the opening. Surfaces to which the Firestop Joint Spray will be applied should be cleaned of loose debris, dirt, oil, wax and grease. The surface should be moisture and frost free.</p>	
2	<p>Install the prescribed back filling material type and depth to obtain the desired rating.</p>	
3	<p>Apply the Firestop Joint Spray to the required thickness in order to obtain the desired rating (For wet thick: 3mm; For dry thick: 1.5mm). Make sure the Firestop Joint Spray contacts all surfaces and overlaps beyond all surrounding surfaces (Overlap length min 12.5mm).</p> <p>Titan Sprayers have been successful in applying Firestop Joint Spray. Hilti recommends the use of the Titan 600 (for application temperatures above 50°F / 10°C) or Firestop Joint Spray may also be brushed on with a paint brush.</p>	

4	Allow the Firestop Joint Spray to fully cure-- approx. 24 hours for typical application thickness (73°F / 23°C and 50% humidity). Users could use simple measuring tools to measure the thickness, for example: cardboard.	
5	For maintenance reasons, all Firestop Joint Spray applications can be permanently marked with an identification plate and fastened in a visible position next to the seal.	

Safety precautions:

- Store in a cool dry area
- Keep from freezing. Store between 4°C and 25°C.
- Keep out of reach of children
- Use with adequate ventilation. Keep container closed when not in use.
- Do not get into the eyes
- Do not cover the coating with anything during the curing time.
- Avoid prolonged or repeated contact with the skin.
- Never use in areas immersed in water or on hot surface (over 80°C)



檢測報告

No. 2018-A49

試件名稱： Hilti Firestop Joint Spray CFS-SP WB

報告發送致送檢單位：

送檢單位： Hilti (Hong Kong) Ltd.

(已取代原報告：No. 2015-A39)

複檢日期(第二次)： 2019年03月21日

再次複檢日期： 2022年03月21日

澳門大學



檢測報告


No: 2018-A49

試件名稱	Hilti Firestop Joint Spray CFS-SP WB
送檢單位名稱	Hilti (Hong Kong) Ltd.
試件製造商	Hilti
試件產地	德國
試件型號規格	防火噴塗劑尺寸：925mm(L) × 225mm(W) 防火噴塗劑厚度：1mm (Dry Thickness, 正背面) 岩棉厚度：150mm 密度：60 kg/m ³
送樣日期	2012年10月05日
送檢時附上報告	MFPA Test Report: PB 3.2/10-137-1 MFPA Test Report: PB 3.2/10-137-2
檢測項目	防火填充材料耐火性能
檢測依據	BS476- 20: 1987
檢測日期	2012年10月12日
檢測結論	經檢驗，此防火噴塗劑連岩棉系統的耐火隔熱性達到 180 分鐘，耐火完整性達到 180 分鐘。需注意本試件只適用於填充的用途，而不可作為一整幅間隔牆體使用。

檢測人員，

審核，


黃傑勇
實驗員


譚立武
澳門大學機電工程系教授
澳門發展及質量研究所理事會理事長

1 檢測目的

- 1.1 根據英國標準 BS476 第 20 部分：1987，測試 CFS-SP WB 防火噴塗劑連岩棉系統之耐火性能。

2 引言

- 2.1 根據送檢單位的要求，防火噴塗劑連岩棉系統之耐火測試需滿足英國標準 BS476 第 20 部份：1987 之要求。
- 2.2 試件由送檢單位於 2012 年 10 月 05 日安裝，並於 2012 年 10 月 12 日進行測試。
- 2.3 試件之向火面及背火面由送檢單位指定。

3 試件構造

- 3.1 試件由輕質混凝土及防火噴塗劑組成。主要測試試件尺寸為 925mm × 225mm × 150mm，由前後各一層的防火噴塗劑施工於 150mm 厚、密度為 60 kg/m³ 的岩棉所組成。試件以輕質混凝土安裝於檢測框內，試件之外觀及試件組成部分可參考送檢單位所提供之圖 1 至圖 3。詳細圖則及試件構造可參照附錄 A。
- 3.2 本報告所繪製之圖則及試件組成部份是根據送檢單位所提供的資料而作。試件之厚度、外觀及組成部份已由本實驗室檢測員檢查。

3.3 試件由送檢單位送樣並安裝於檢測框上進行測試，該檢測框由本實驗室提供。

3.4 試件在檢測前幾天內安裝完畢。

4 測試設備及程序

4.1 測試設備按照英國標準 BS476 第 20 部份：1987 的要求設置。

4.2 爐體內部之平均溫度值由平均分佈於爐內的熱電偶取得，根據英國標準 BS476：第 20 部分：1987 所指定之溫度時間關係而操控升溫。溫度時間記錄圖見附錄 B 之圖 5。

4.3 爐體內設有壓力計以監察爐體壓力。

4.4 試件背火面設有 5 個熱電偶以作監察溫度之用，熱電偶分佈位置附錄 A 之圖 4。試件背火面所有熱電偶均用作判斷試件的耐火隔熱性。

4.5 測試過程中，棉墊及縫隙測量探棒用作評估試件的耐火完整性。

4.6 測試過程中，應記錄試件的變形情況和試件出現全部或部分毀壞時的時間。試件背火面如有火焰並持續 10 秒或以上，以及有煙散發出的情況也應記錄。

4.7 試件背火面及試件向火面於測試前後需拍照記錄。測試過程中，需拍照及用攝錄機記錄試件背火面情況以作日後評估之用。

5 測試數據及資料

- 5.1 測試過程所記錄之數據可參考附錄 B，記錄內容如下：
 - 5.1.1 實際爐溫按照英國標準 BS476：第 20 部分：1987 所指定溫度時間關係圖。
 - 5.1.2 由熱電偶所記錄試件背火面的溫度。
- 5.2 在測試過程中，試件的實驗狀況已詳細記錄於附錄 C 中以供參考。
- 5.3 有關試件圖片，見附錄 D。
- 5.4 測試開始時周圍環境溫度為 25°C。
- 5.5 在送檢單位的同意下在 180 分鐘終止本試件整個測試。

6 耐火極限之評定條件

- 6.1 按英國標準 BS476 第 20 部份：1987 之標準，試件之耐火表現將會根據以下之條件作評定：
 - 6.1.1 耐火完整性 – 當測試過程中，i) 在試件之背火面進行棉墊點燃測試；ii) 如試件背火面出現較大的裂縫，用 6mm 及 25mm 直徑之量測棒來量測裂縫之寬和深度。如棉墊沒有被試件背火面之高溫點燃及試件背火面未出現能讓量測棒插入貫通之裂縫，試件之耐火完整性才被判斷為合格。
 - 6.1.2 耐火隔熱性 – 試件背火面最高平均溫度升幅不得超過 140°C 及單點溫度升幅不得超過 180°C。

7 結論

- 7.1 根據 BS476 英國標準第 20 部分對防火填充材料所制定的準則 - 耐火完整性及耐火隔熱性，評估試件的耐火性能測試結果如下：

耐火隔熱性	180 分鐘
耐火完整性	180 分鐘

8 限制說明

- 8.1 本測試結果僅反映特定測試條件下，建築構件之試驗情況。此測試結果並非判斷試件在實際應用時防火特性的唯一標準，同時亦不反映試樣在實際火場上所能表現的防火性能。
- 8.2 本試驗結果只反映與報告相同之物料、結構、厚度及安裝方法之系統，如將此試驗結果應用於試件組合型式不同的情況時，應按照實際設計而作出相應之評估。
- 8.3 檢測報告僅對送檢試件負責。

附錄 A
試件構造說明及附圖

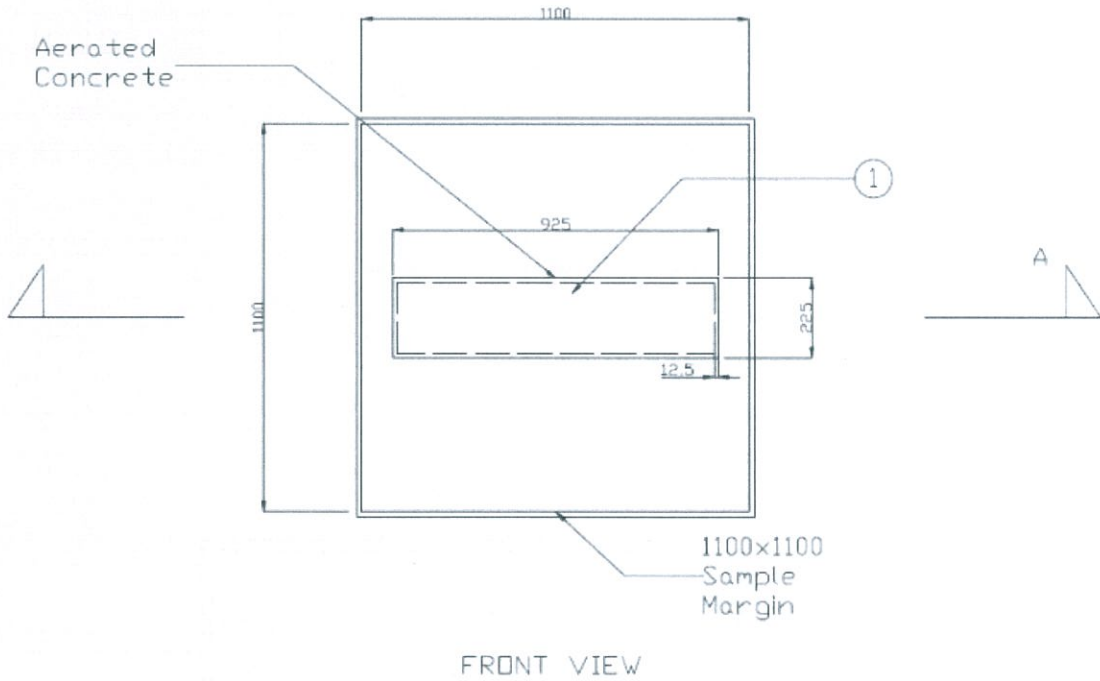


圖 1 測試試件之背火面圖

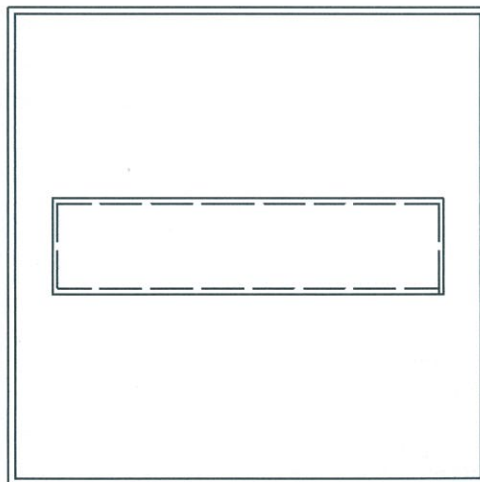
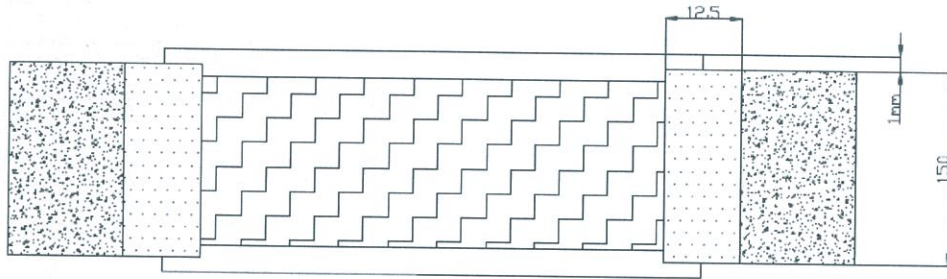
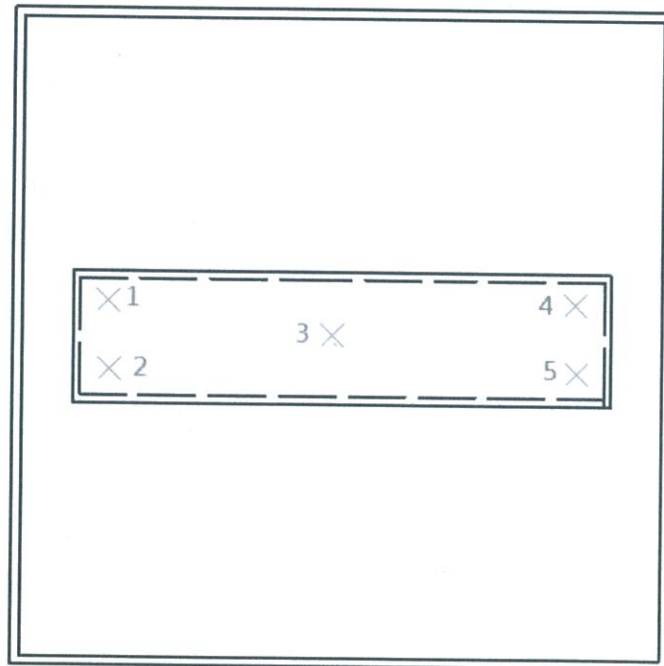


圖 2 測試試件之向火面圖



SECTION A-A

圖 3 測試試件之截面圖



X: 熱電偶

圖 4 測試試件之熱電偶位置圖

試件組件資料

(參照附錄 A 之圖 1 至圖 3)

(除非有特別指定，否則全部數值都為理論值)

(全部資料和數值由送檢單位 Hilti (Hong Kong) Ltd.提供，本實驗室並沒有求證有關數值)

表 1 試件組件資料列表

項目	組件	描述
1.	Firestop Joint Spray	品牌：Hilti 型號：CFS-SP WB 防火噴塗劑尺寸：925mm(L) × 225mm(W) 防火噴塗劑厚度：1mm (Dry Thickness，正背面) 岩棉厚度：150mm 密度：60 kg/m ³
2.	Mineral Wool	品牌：Roxul 型號：RockSafe 厚度：150mm 密度：60kg/m ³

附錄 B
測試數據

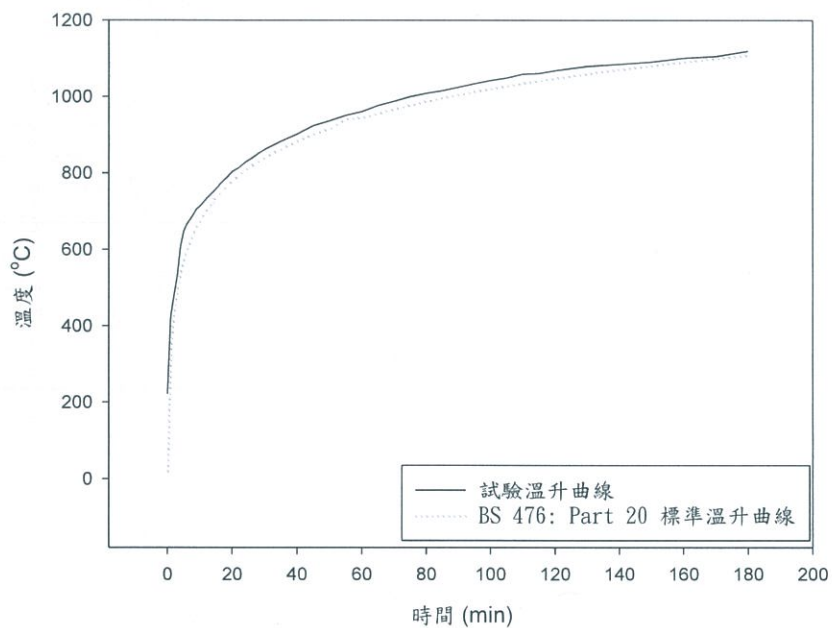


圖 5 平均爐溫與標準(溫度/時間)曲線圖

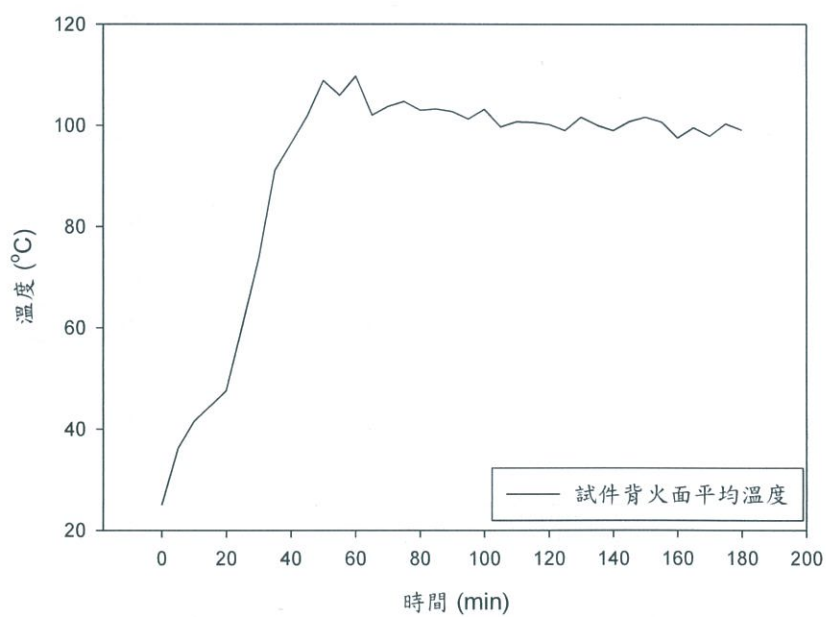


圖 6 試件背火面平均溫度/時間曲線圖

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表 2 平均爐溫與標準溫度之比較

時間 (min)	標準爐內溫度 (°C)	爐內平均溫度 (°C)	標準允許公差 (%)	實際允差 (%)
0	20.00	221.00		
1	349.21	424.00		
2	444.50	480.23		
3	502.29	531.07		
4	543.89	606.33		
5	576.41	647.77		
6	603.12	666.37		
7	625.78	678.87		
8	645.46	691.83		
9	662.85	705.63		
10	678.43	712.77	±15	14.47
12	705.44	732.43		
14	728.31	749.03		
16	748.15	767.60		
18	765.67	784.77		
20	781.35	803.83		
22	795.55	813.33		
24	808.52	827.60		
26	820.45	837.87		
28	831.50	850.80		
30	841.80	861.33	±10	3.64
35	864.80	882.27		
40	884.74	901.97		
45	902.34	923.53		
50	918.08	936.23		
55	942.83	950.63		
60	945.34	961.13		
65	957.31	976.43		
70	968.39	987.33		
75	978.71	999.70		
80	988.37	1008.67		
85	997.44	1014.87		
90	1005.99	1024.73		
95	1014.08	1033.93		
100	1021.75	1042.13		
105	1029.06	1048.83		
110	1036.02	1058.80		
115	1042.67	1060.30		
120	1049.04	1067.87		
130	1061.02	1079.67		
140	1072.11	1085.40		
150	1082.44	1090.53		
160	1092.10	1100.93		
170	1101.18	1105.30		
180	1109.74	1119.70	±5	2.70



表 3 試件背火面單點及平均溫度

時間 (min)	單點熱電偶溫度 (°C)					平均溫度 (°C)
	1	2	3	4	5	
0	25.00	25.00	25.00	25.00	25.00	25.00
5	37.00	42.60	37.40	30.20	34.00	36.24
10	44.30	49.20	44.00	37.70	32.70	41.58
15	52.40	52.30	44.90	33.90	39.10	44.52
20	52.90	55.10	49.70	42.20	38.10	47.60
25	73.70	65.30	55.90	57.10	50.60	60.52
30	88.00	75.50	70.50	72.30	62.20	73.70
35	93.60	83.40	102.50	87.80	88.00	91.06
40	96.10	90.70	100.90	100.40	94.20	96.46
45	100.40	96.00	105.20	102.30	105.50	101.88
50	129.80	98.40	104.00	105.90	106.10	108.84
55	113.10	106.40	101.30	107.00	101.90	105.94
60	117.80	116.50	105.30	105.60	103.30	109.70
65	111.20	96.20	100.30	99.70	102.60	102.00
70	95.40	107.00	102.30	106.10	107.80	103.72
75	104.10	99.60	113.40	100.10	106.40	104.72
80	106.80	101.00	101.10	104.80	101.10	102.96
85	101.50	104.10	99.10	105.90	105.50	103.22
90	99.50	107.30	101.90	99.30	105.60	102.72
95	107.60	100.10	100.30	98.20	100.00	101.24
100	100.50	107.80	102.90	100.30	104.40	103.18
105	99.30	98.00	99.60	99.00	102.60	99.70
110	102.20	102.50	100.20	98.00	100.80	100.74
115	99.70	98.80	103.30	97.60	103.60	100.60
120	100.90	98.20	103.80	98.10	99.80	100.16
125	101.60	99.90	100.10	93.10	100.40	99.02
130	100.60	97.80	105.00	100.30	104.50	101.64
135	99.40	100.50	100.60	94.40	105.20	100.02
140	101.20	99.10	100.10	93.30	101.40	99.02
145	103.70	98.50	101.50	96.10	104.20	100.80
150	106.20	99.00	104.60	97.30	101.10	101.64
155	99.80	100.20	99.90	101.30	102.30	100.70
160	101.30	93.40	99.40	93.20	100.50	97.56
165	105.10	92.80	100.50	97.90	101.50	99.56
170	102.40	93.20	100.50	92.80	100.60	97.90
175	98.10	95.60	100.70	102.50	104.70	100.32
180	99.40	93.00	101.10	97.10	104.60	99.04

附錄 C
觀察情況

表 4 測試過程中，觀察試件情況如下

時間 (小時:分鐘)	事件
-0:01	攝錄機、監察和操控儀器啓動。
0:00	開啓石油氣閥，測試開始。周圍環境溫度為 25°C。
0:15	試件背火面沒有明顯變化。
0:20	試件背火面有少量液體滲出。
0:35	試件背火面有少量白煙冒出。
0:50	試件背火面上方持續冒煙。
1:00	試件之耐火完整性及耐火隔熱性仍能符合標準。
1:15	試件背火面上方持續冒煙。
1:30	試件背火面沒有明顯變化。
2:00	試件之耐火完整性及耐火隔熱性仍能符合標準。
2:30	試件背火面情況沒有明顯變化。
3:00	試件背火面情況沒有明顯變化，在送檢單位同意情況下，測試結束。 試件之耐火完整性及耐火隔熱性仍能符合標準。
<i>備註</i>	<i>試件背火面結構仍完整(見圖 16)</i>

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附錄 D

圖片



圖 7 測試前試件背火面



圖 8 測試前試件向火面



圖 9 測試 15min 時試件背火面



圖 10 測試 30min 時試件背火面



圖 11 測試 45min 時試件背火面



圖 12 測試 60min 時試件背火面



圖 13 測試 90min 時試件背火面



圖 14 測試 120min 時試件背火面



圖 15 測試 150min 時試件背火面



圖 16 測試 180min 時試件背火面



圖 17 測試後試件向火面

-----報告結束-----



88 Empire Drive • St. Paul, Minnesota • 55103
 (651) 642-1150 • fax (651) 642-1239

VOC Content Test Certificate

May 11, 2011

Supplier: Hilti Entwicklungsgesellschaft mbH
 BU Chemicals
 Hiltistrasse 6
 86916 Kaufering
 GERMANY

Sample Description: Hilti CFS-SP WB Firestop Joint Spray

Date Tested: May 10, 2011

Test Method: SCAQMD method 304-91 "Determination of Volatile Organic Compounds (VOC) in Various Materials" as referenced by South Coast Air Quality Management District (SCAQMD) Rule 1168. The values also comply with the requirements of EPA test method #24.

Test Data:

Specification	Product
LEED 2009 (LEED 3.0) LEED 2.2 IEQ-4.1: Low-Emitting Materials – Adhesives and Sealants	Hilti CFS-SP WB Firestop Joint Spray
Green Building Council of Australia Green Star Office Design 3.0, IEQ-13 Green Star Office Design 2.0, IEQ-13 Green Star Office Interiors 1.1, IEQ-11	
Architectural Sealant; VOC Limit: 250 g/L	
Product contains: 34 g/L of VOC	

William Welbes
 Vice President of Laboratory Operations

Tom Barrett
 Senior Chemist



澳門特別行政區政府
 Governo da Região Administrativa Especial de Macau
 消防局
 Corpo de Bombeiros

頁碼號 1/2
 Pág. n.º
 文件編號 3219/DT/SEL/2012
 Inf. n.º
 日期: 26 / 12 / 2012
 Data

核閱
 Visto

於 27/12/2012
 Em 技術廳代廳長
 O Chefe do D.T.Subst

意見書

光臨

事由：要求審批“HILTI”喜利得防火延燒產品 - CFS-SP WB Firestop Joint Spray

參件編號：進入編號：14222(06/12/2012)

喜利得(香港)有限公司來函編號：JT12012

意見書編號 3218/DT/SEL/2012

於 06/12/2012 收到 HILTI 喜利得上述編號文書及其附錄文件，本局之意見如下：

Ø1. 產品列表：

序號	材料/設備名稱	製造商	型號
1	防火延燒產品	HILTI	CFS-SP WB Firestop Joint Spray

1.1 根據上述交來資料分析：

1.1.1 澳門大學發出之檢測報告 No.2012-FRT31 材料列表：

防火噴塗劑尺寸：925mm(L) x 225(W)	
防火噴塗劑厚度：1mm(Dry Thickness, 正背面)	
岩棉厚度：150mm, 密度為 60kg/m ³	
Item	Description
1. Specimen	(i) Product Hilti Firestop Joint CFS-SP WB (1mm dry thickness; overlap 12.5mm)
	(ii) Joint 225mm width x 925mm length
	(iii) Backing Roxul RockSafe-Density 60Kg/m ³ , Mineral wool

1.1.2 根據澳門大學發出之 No.2012-FRT31, HILTI Firestop Joint Spray CFS-SP WB 檢測報告結論：經 BS476:Part20，此防火噴塗劑連岩棉系統的隔熱性及完整性均能達到 180 分鐘；

1.1.3 上述結果只反映與 1.1.1 點相同之物料、結構、厚度及安裝方法之系統；

1.1.4 英國 Warrington 防火研究中心評估報告編號 No.198795，根據 BS476:Part20 部份的準則測試後，發出的 WARRES No.127030 測試報告顯示，CFS-SP WB Firestop Joint Spray 用於兩件不同試件組合時，該兩件試件組合都具有 132 分鐘完整性耐火能力，而且分別具有 111 分鐘及 123 分鐘之隔熱性耐火能力；

1.2 就上述 1.1 的資料分析後，“HILTI” Firestop Joint Spray CFS-SP WB 防火噴塗劑連岩棉系統之耐火性能測試：完整性及隔熱性具 180 分鐘。然而，上述試件組合試驗結果的耐火能力 (CRF)，並不代表“HILTI” Firestop Joint Spray CFS-SP WB (防火噴塗劑) 具備獨立之耐火能力。因此，如將此組件應用於不同組合型式使用時，應按照實際用途而作出相應評估；



澳門特別行政區政府
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- 1.3 根據交來之資料分析，本局對“HILTI” Firestop Joint Spray CFS-SP WB 使用於合符《防火安全規章》規範的標準時沒有異議。然而，當上述物料在落實個案使用時，應徵詢權限部門（土地工務運輸局）之最終意見。

二零一二年十二月二十六日於澳門消防局，技術廳研究暨試驗科

陳瑪莉
副消防區長

This certificate is issued for the following firestopping products:

CFS-IS P High Performance Intumescent Firestop Sealant	CFS-C Firestop Collar
CFS-CID Cast-In Firestop Device	CFS-S-ACR Flexible Firestop Sealant
CFS-CID N Cast-In Firestop Device	CFS-SP WB Firestop Joint Spray
CFS-CID P Cast-In Firestop Device	CFS-F-SOL Firestop Foam
CFS-W-EL Wrap Strip	CFS-BL Firestop Block
CFS-P ST Firestop Putty Sticks	CFS-PL 2" and CFS-PL 4"
CFS-S-SIL Elastomeric Firestop Sealant	CFS-DID Firestop Drop-In Device
CFS-M-RG Firestop Mortar	CFS-CT Firestop Board
Cable Transit System CFS-T Frame and Sealing Modules	CFS-CT Firestop Coating

Prepared for:

Hilti AG
Feldkircherstrasse 100
FL-9494 Schaan
Liechtenstein

FM Approvals Class: 4990

Approval Identification: 3051456 Approval Granted: June 4, 2014

To verify the availability of the Approved product, please refer to www.approvalguide.com.

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.



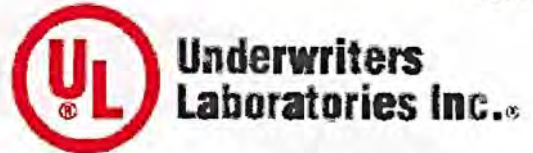
Cynthia E. Frank
AVP - Manager, Materials
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062

Issued: June 30, 2016

Certificate of Compliance

Certificate Number **20100527-R13240**
Report Reference **2010 May 27**
Issue Date **2010 May 27**

Page 1 of 1



Issued to: **Hilti, Inc.**

54 S 122ND East Ave
Tulsa, OK 74146 USA

*This is to certify that
representative samples of*

Fill, Void or Cavity Materials
CFS-SP WB

Have been investigated by Underwriters Laboratories Inc.® (UL) or any authorized licensee of UL in accordance with the Standard(s) indicated on this Certificate.


Standard(s) for Safety:

ANSI/UL 2079 "Tests for Fire Resistance of Building Joint Systems," Fourth Edition, revised June 30, 2008. ANSI/ASTM E2307-04, "Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-story Test Apparatus." Standard CAN/ULC-S115-05, Standard Method of Fire Tests of Firestop Systems

Additional Information:

CFS-SP WB Firestop Spray for use in Joint System, Perimeter Fire Containment System and Through-Penetration Firestop Systems Certified for Canada as currently described in the UL Fire Resistance Directory.

Only those products bearing the UL Classification Mark should be considered as being covered by UL's Classification and Follow-Up Service.

The UL Classification Mark includes: UL in a circle symbol:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and, the product category name (product identity) as indicated in the appropriate UL Directory.

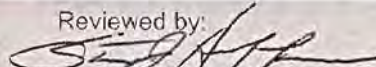
Look for the UL Classification Mark on the product

Issued by:


Mona Couloute

Underwriters Laboratories Inc.

Reviewed by:


Steven Hoffman

Underwriters Laboratories Inc.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Attn. : To whom it may concern

Date : 26 September 2023
Ref. : 101/FP/DY/23

Subject : Country of Origin- Hilti CFS-SP WB Firestop Joint Spray

Dear Sir / Madam,

Enclosed please find the information of Hilti CFS-SP WB Firestop Joint Spray.

Brand Name : Hilti

Model Name : Hilti CFS-SP WB Firestop Joint Spray

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Dennis Yeung

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Dennis Yeung (+852 9723 4621)

Country of Origin : Germany

Should you have further questions, please do not hesitate to contact our Technical Representatives, Customer Service Hotline at 8228-8118, or email us at hksales@hilti.com.

Yours faithfully,



Dennis Yeung
Head of Product Leadership Strategy, F&P

Date: 24 June 2021

Ref.: 068/FP/BL/21

Subject: Hilti CFS-SP WB Firestop Joint Spray – LEED Information

To Whom It May Concern:

- The Hilti CFS-SP WB Firestop Joint Spray is manufactured in Germany.
- The package of Hilti CFS-SP WB Firestop Joint Spray can be completely recycled
- There is no recycled content in the Hilti CFS-SP WB Firestop Joint Spray and it cannot be recycled.
- The Hilti CFS-SP WB Firestop Joint Spray does not share any rapidly renewable materials.
- The VOC content of the Hilti CFS-SP WB Firestop Joint Spray is 34 g/l.

If you would like to know more about Hilti solutions for LEED buildings or should you have any further questions, please do not hesitate to contact our Customer Service Hotline at 8228-8118 or email us at hksales@hilti.com.

Yours faithfully,



Bill Lee
Product Portfolio Manager
Hilti (Hong Kong) Ltd.

To whom it may concern

Date: 22nd April 2016

Dear Sir / Madam,

Subject: Hilti Firestop Products non-CFC and Ozone Confirmation

Referring to your enquiry about the captioned subject, please be advised that:

Hilti firestop products, CFS-SP WB Firestop Joint Spray is free of CFC, HCFC nor other ozone depletion elements.

CFC, HCFC and ozone depletion elements were not used during the product process neither.

Should you have further questions, please do not hesitate to contact our Technical Representatives or Customer Service Hotline at 8228-8118.

Yours sincerely,



Andrew Lau
Product Manger

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

Date of issue: 05/03/2019

Version: 4.3

Revision date: 05/03/2019

Supersedes: 12/12/2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	Mixture
Product name	CFS-SP WB; CP 672
Product code	BU Fire Protection



Product group	Trade product
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Flexible joint spray
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1.3. Details of the supplier of the safety data sheet

Hilti (Hong Kong) Ltd.
701-704, 7/F, Tower A, Manulife Financial Centre
223 Wai Yip Street, Kwun Tong
Kowloon - Hong Kong
T +852 27734 700
hksales@hilti.com

Supplier

Hilti (Hong Kong) Ltd.
701-704, 7/F, Tower A, Manulife Financial Centre
223 Wai Yip Street, Kwun Tong
Kowloon - Hong Kong
T +852 27734 700
hksales@hilti.com

1.4. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +852 27734 700
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS (Rev. 4, 2011)

Not classified

2.2. Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

No labelling applicable

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the applicable regulations

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	Not expected to present a significant hazard under anticipated conditions of normal use.
Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect spillage.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

Hygiene measures Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products Strong bases. Strong acids.

Incompatible materials Sources of ignition. Direct sunlight.

Storage temperature 5 - 25 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Appropriate engineering controls

Other information Do not eat, drink or smoke during use.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing Wear protective clothing

Hand protection Wear protective gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	1 (> 10 minutes)	>0.4		EN 374

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

Zinc borate (138265-88-0)	
LD50 oral rat	> 5000 mg/kg bodyweight (FIFRA (40 CFR), Rat, Male / female, Experimental value of similar product, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value of similar product, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 4.95 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation (dust), 14 day(s))

Skin corrosion/irritation	Not classified pH: ≈ 8.6
Serious eye damage/irritation	Not classified pH: ≈ 8.6
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

Potential adverse human health effects and symptoms Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

Zinc borate (138265-88-0)	
LC50 fish 1	169 µg/l (ASTM E729-88, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Read-across)
EC50 Daphnia 1	155 - 413 µg/l (US EPA, 48 h, Ceriodaphnia dubia, Static system, Fresh water, Read-across)

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

12.2. Persistence and degradability

CFS-SP WB; CP 672	
Persistence and degradability	Not established.
Zinc borate (138265-88-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

CFS-SP WB; CP 672	
Bioaccumulative potential	Not established.
Zinc borate (138265-88-0)	
BCF fish 1	116 - 60960 (21 day(s), Semi-static system, Marine water, Read-across, Fresh weight)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

12.4. Mobility in soil

Zinc borate (138265-88-0)	
Surface tension	Data waiving
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available
Other information	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	Dispose in a safe manner in accordance with local/national regulations.
Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

CFS-SP WB; CP 672

Safety Data Sheet

according to the United Nations GHS (Rev. 4, 2011)

14.6. Special precautions for user

- **Overland transport**

- **Transport by sea**

No data available

- **Air transport**

No data available

- **Rail transport**

Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No additional information available

SECTION 16: Other information

SDS Major/Minor None
 Date of issue 05/03/2019
 Revision date 05/03/2019
 Supersedes 12/12/2016

Indication of changes:

Section	Changed item	Change	Comments
			layout
			general update

Other information None.

Full text of H-statements:

H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

SDS_UN_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



Hilti CFS-SP WB Firestop Joint Spray Job Reference

Year	Project Name	Customer Name	Project type
2020	TKO LOHAS PARK PH9 (SITE J)	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2020	TAI PO LAI CHI SHAN (221)	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2020	KAI TAK AREA 1F SITE 2, NKIL 6556	JANGHO HONG KONG HOLDINGS LIMITED	Office
2020	TAI WAI STATION NW RES	WAH TUNG FACADE COMPANY LIMITED	Residential
2020	TUNG CHAU ST TREASURY BLDG	FAR EAST FACADE (HONG KONG) LIMITED	Office
2020	KAI TAK AREA 1K1 (6567)	POLYFAIR CONSTRUCTION & ENGINEERING	Residential
2020	SIN FAT RD, KWUN TONG NKIL 6584	ACME METAL WORKS (INTERNATIONAL)	Residential
2020	68 LEE NAM RD	HACELY FACADE ENGINEERING LIMITED	Residential
2020	TIN SHUI WAI AREA 112 LOT 33	ACME METAL WORKS (INTERNATIONAL)	Residential
2020	SHEUNG SHING ST HO MAN TIN(11257)	ENTASIS LIMITED	Residential
2021	TAIKOO PLACE PH 2B	FAR EAST FACADE (HONG KONG) LIMITED	Office
2021	CHEUNG SHUN ST (6582)	HIP SENG FACADE ENGINEERING	Office
2021	KAI TAK INLAND REVENUE TOWER	PMB-CYBERWALL LIMITED	Office
2021	CASTLE PEAK RD, AREA 48 (547)	CHEVALIER (ALUMINIUM ENGINEERING)	Residential
2021	KAI TAK AREA 1F SITE 2, NKIL 6556	JANGHO HONG KONG HOLDINGS LIMITED	Office
2021	WONG CHUK HANG STATION PH2 (SITE B)	FORERUNNER SPECIALIST LIMITED	Residential
2021	TAI WAI STATION NW RES	WAH TUNG FACADE COMPANY LIMITED	Residential
2021	YAU MA TEI- KWONG WAH HOSPITAL PHASE 1	FAR EAST FACADE (HONG KONG) LIMITED	Health
2021	21 WANG YIP WEST ST YLTL 461	POLYFAIR CONSTRUCTION & ENGINEERING	Residential
2021	YUEN LONG STATION YLTL 510	ACME METAL WORKS (INTERNATIONAL)	Residential
2022	14 Wang Tai Road Office	CHEVALIER (ALUMINIUM ENGINEERING)	Office
2022	TAIKOO PLACE PH 2B	FAR EAST FACADE (HONG KONG) LIMITED	Office
2022	KAI TAK AREA 4B, SITE 3, NKIL 6574	JANGHO CURTAIN WALL ENGINEERING	Residential
2022	YAU MA TEI- KWONG WAH HOSPITAL PHASE 1	FAR EAST FACADE (HONG KONG) LIMITED	Health
2022	36 WONG CHUK HANG RD	JANGHO CURTAIN WALL ENGINEERING	Industrial
2022	11 MIDDLE RD - KIMPTON HONG KONG	JANGHO CURTAIN WALL ENGINEERING	Hospitality
2022	HING WAH ST WEST LOT 6550 HOTEL	CHEVALIER (ALUMINIUM ENGINEERING)	Hospitality
2022	KAI TAK 1E SITE 2A&B (6557)	PMB-CYBERWALL LIMITED	Office
2022	WING HONG, WING MING, YU CHAU W ST	HIP SENG FACADE ENGINEERING	Office
2022	KAI TAK SPORTS PARK	PMB-CYBERWALL LIMITED	Sport & Recreation