



## Technical Data Sheet

<b>Material Identifier:</b>	Elven Flameproof Composite
<b>Manufacturer's Name:</b>	Elven Technologies, Inc.
<b>Address:</b>	2155 Pantages Circle, Rancho Cordova, 95670, CA, USA
<b>Telephone number:</b>	+1 916-827-0713
<b>Email:</b>	contact@elventech.net

## Description of material

**Thickness:** 5mm and 10mm versions

**Weight:** 5mm - 0.27g/cm<sup>3</sup>;  
10mm - 0.36g/cm<sup>3</sup>;

**Color:** Dark gray/Black

**Flame resistace:** >2000°C/3600°F

Elven material is a flameproof, flexible composite, with very low heat conductivity and long-term resistance to extremely high-temperature flame. It does not melt, or drip, and maintains barrier function and low thermal conductivity while constantly being subjected to 2000°C/3600°F flame for >10 minutes.

For internal test results, please contact us at  
contact@elventech.net

## 3rd Party Tests Conducted

### 1. Thermal Protective Performance (TPP) Test

**Method:** ASTM F2700

**Sample Tested:** Elven 5mm Flameproof Composite

**Lab:** RIT / Golisano Institute of Sustainability

**Results:**

#### 1. Heat Transfer Performance Values:

Sample	Heat Protective Performance Value	
	J/cm2	cal/cm2
1	804.10	192.06
2	847.53	202.43
3	702.03	167.68
4	787.55	188.10
5	769.89	183.89
Average	782.2	186.8

#### 2. ASTM 2700 Annex X2 Observations:

Sample	Ignition	Breakopen	Melting	Dripping	Charring	Embrittlement	Shrinking	Sticking
1	2 - Slight Smoke	None	None	None	None	2 - Slight, specimen starts to harden	None	None
2	2 - Slight Smoke	None	None	None	None	2 - Slight, specimen starts to harden	None	None
3	2 - Slight Smoke	None	None	None	None	2 - Slight, specimen starts to harden	None	None
4	2 - Slight Smoke	None	None	None	None	2 - Slight, specimen starts to harden	None	None
5	2 - Slight Smoke	None	None	None	None	2 - Slight, specimen starts to harden	None	None

## 2. Vertical Flammability Testing

**Method:** ASTM D6413

**Sample Tested:** Elven 10mm Flameproof Composite

**Lab:** RIT / Golisano Institute of Sustainability

**Results:** Afterglow Time, After Flame Time, Char Length and Soot Length

Sample ID	After Glow (s)	After Flame (s)	Back Char Length		Front Char Length		Back Soot Length		Front Soot Length	
			in	cm	in	cm	in	cm	in	cm
1L	20	0	0.35	0.89	0	0	12.0	30.48	5.5	13.97
2L	2	0	0.17	0.43	0	0	6.0	15.24	4.5	11.43
3L	2	0	0.13	0.33	0	0	4.3	10.92	3.3	8.38
4L	6	0	0.20	0.51	0	0	5.5	13.97	3.8	9.65
5L	4	0	0.28	0.71	0	0	7.0	17.78	2.8	7.11
1W	0	0	0.06	0.15	0	0	3.8	9.65	1.5	3.81
2W	0	0	0.16	0.40	0	0	6.0	15.24	1.3	3.30
3W	1	0	0.13	0.33	0	0	4.3	10.92	2.8	7.11
4W	2	0	0.25	0.63	0	0	6.0	15.24	1.3	3.30
5W	2	0	0.18	0.46	0	0	4.5	11.43	2.5	6.35

As the samples are not flammable following exposure to the flame, After Flame Time (time before the flame on material is extinguished after removing flame source) could not be recorded. Due to the discoloration from soot generated during the flame application, an alternative measurement of the soot length was also documented on each sample which is not part of the ASTM D6413 standard.