

# AIM ALTITUDE

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## FIRE TEST REPORT

2795

Lab. Ref. No.:	FST34652 Iss 1	S.O No.:	L18140	Page 1 of 2
Material:	VFR203, BATCH NO MC22912			
Customer:	VIKING EXTRUSIONS LTD	P.O. No.:	23833	
Date of Test:	13/03/2017	Rel. Note No.:	N/A	
Specimen Conditioning:	24hr. min. at 22.5 +/- 1.5°C and 50 +/- 5% RH	Test Plan / Document	N/A	

TEST METHOD / SPECIFICATION	TEST RESULT			MEAN	CRITERIA (max. average)	PASS/FAIL	
	1	2	3				
<b>FLAMMABILITY</b>							
F1 CS 25.853(a) Amdt.18 App.F Pt.I(a)(1)(i) & (b)(4) 60s. Vert.	Afterflame (sec)	10.0	22.0	5.0	12.3	15 sec.	PASS
	Burn Length (in)	0.6	1.0	0.6	0.7	6 in.	
	Drip Extng Time (sec)	0.0	0.0	0.0	0.0	3 sec.	
F2 CS 25.853(a) Amdt.18 App.F Pt.I(a)(1)(ii) & (b)(4) 12s. Vert.	Afterflame (sec)					15 sec.	
	Burn Length (in)					8 in.	
	Drip Extng Time (sec)					5 sec.	
F3 CS 25.853(a) Amdt.18 App.F Pt.I(a)(1)(iv) & (b)(5) 15s. Horiz.	Burn Rate (in/min)					2.5 in/min.	
F4 CS 25.853(a) Amdt.18 App.F Pt.I(a)(1)(v) & (b)(5) 15s Horiz.	Burn Rate (in/min)					4.0 in/min.	
F5 CS 25.855(d) Amdt.18 App.F Pt.I(a)(2)(ii) & (b)(6) 30sec/45°	Afterflame (sec)					15 sec.	
	Afterglow (sec)					10 sec.	
	Flame Penetration					NONE	
F6 CS 25.1713(c) Amdt.18 App.F Pt.I(a)(3) (b)(7) 30sec/60°	Afterflame (sec)					30 sec.	
	Burn Length (in)					3 in.	
	Drip Extng Time (sec)					3 sec.	
F7 HEAT RELEASE * CS 25.853(d) Amdt 18 App.F Pt.IV (e) & (g)	2 min THR (kWmin/m <sup>2</sup> )					65(kWmin/m <sup>2</sup> )	
	Peak HR (kW/m <sup>2</sup> )					65(kW/m <sup>2</sup> )	
F8 SMOKE EMISSION * CS 25.853(d) Amdt 18 App.F Pt.V(a) & (b)	Ds Max in 4 min. (Flaming)					200	
F9 SMOKE EMISSION * ABD0031 IssF/D6-51377 REVG ABD0031 IssF	Ds Max in 4 min. (Flaming)					150/200	
	(Non Flaming)					200	
F10 TOXIC GAS EMISSION (ppm) ABD0031 IssF/D6-51377 REVG	CO (Flaming)					1000/3500	
	CO (Non-Flaming)						
	HCN (Flaming)					150/150	
	HCN (Non-Flaming)						
	HF (Flaming)					100/200	
	HF (Non-Flaming)						
	HCL (Flaming)					150/500	
	HCL (Non-Flaming)						
	SO <sub>2</sub> (Flaming)					100/100	
	SO <sub>2</sub> (Non-Flaming)						
	NO <sub>x</sub> (Flaming)					100/100	
	NO <sub>x</sub> (Non-Flaming)						

\* SEE ATTACHED GRAPHS

FILENAMES:

The results detailed above relate only to the items tested.

**COMMENTS:**

Flammability: Flame Temp. (Min. 843C (1550F)): 853°C  
Smoke Emission: Heat Flux (25 +/- 0.5kW/m<sup>2</sup>):

Heat Release: Calibration Factor: 0.2797 kW/mV  
Heat Flux (35 +/- 0.5kW/m<sup>2</sup>):

**TESTED BY:**

NAME:  
TITLE:  
DATE:

*N. ORPWOOD*  
N. ORPWOOD  
TEST ENGINEER  
13/03/2017

**AUTHORISED BY:**

NAME:  
TITLE:  
DATE:

*D. MOORE*  
D. MOORE  
TEST LABORATORY MANAGER  
13/03/2017

**UNCERTAINTY OF MEASUREMENT**

Flammability - Afterflame/Drip Extng Time +/- 0.7sec, Burnlength +/- 0.1in, Burn Rate +/- 0.1in/min Heat Release +/- 1.5% Smoke Emission +/- 4% Toxic Gas Emission +/- 15%



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Material:	VFR203, BATCH NO MC22912			
Customer:	VIKING EXTRUSIONS LTD	P.O. No.:	23833	
Date of Test:	13/03/2017	Rel. Note No.:	N/A	
Specimen Conditioning:	24hr. min. at 22.5 +/- 1.5°C and 50 +/- 5% RH	Test Plan / Document	N/A	

### Test Laboratory Equipment Used

"H" Number	"P" Number	Instrument	Serial No.	Expiry Date	Item Used For Test
270	001	OSU Chamber	K11234	08 August 2017	
421	012	Vertical Flam Chamber	N/A	06 July 2017	*
422	013	Horizontal Flam Chamber	N/A	06 July 2017	
286	033	HAVEN THERMOCAL II CALIBRATOR	29461-116	25 August 2017	
	113	H/R Vatel TG1000-1	9181	15 November 2017	
490	099	Data Acquisition/Switch Unit	MY41028196	14 October 2017	
524	121	FTT Smoke Box	1111527	05 January 2018	
	175	Radiometer ***	16314	20 December 2017	
530	123	testo 350 flue gas analyzer	2291442/2293550	18 August 2017	
	131	STOP WATCH		06 July 2017	*
508	114	TME TEMP READER***	46949	06 July 2017	*
	109	Conditioning chamber	46518	25 July 2017	*
586	146	16 Channel Reed Multiplexer	MY41017297	14 October 2017	
-	155	WET GAS METER	0.53F.GH4	22 June 2017	
-	156	Dräger X-act 500	ERHC-0715	05 July 2017	
-	157	Dräger X-act 500	ERHC-0041	05 July 2017	
-	158	Dräger X-act 500	ERHC-0135	05 July 2017	
-	159	45/60° flamm chamber	N/A	20 October 2017	
86P5	ORPWOOD	12" Steel rule	N/A	09 February 2018	*

### COMMENTS

CALIBRATION/EQUIPMENT CHECKED BY:

NAME:  
TITLE:  
DATE:

*N. Orpwood*  
N. ORPWOOD  
TEST ENGINEER  
13/03/2017

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www.aviccabinssystemsuk.com

**2795**

UKAS IEC/ISO 17025:2017

Nadcap Non-Metallic Materials Testing

An Airbus Approved Test House  
ARP-ID 135583

## Fire Safety Test Report

Lab Reference No: FST51257 Issue 1

Sales Order No: SE16912

Customer: VIKING EXTRUSIONS

Purchase Order No: 29192

Material/Part No: JOB NO: 56464. SHORE HARDNESS: VFR203. BATCH NO: MO28510. CURE  
DATE: 25-07-22

Date of Test: 20 October 2022

Conditioning: EASA - 24hr. min. at 21 +/- 3°C and 50 +/- 5% RH

Time In: 17/10/2022 10.00

Time Out: 20/10/2022 12.30

Release Note No: N/A

Test Plan / Document: N/A

## Tests Results

Test Method/ Specification	F4 CS 25.853(a) Amdt.27 App.F Pt.I(a)(1)(v) & (b)(5) 15 second horizontal
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	TEST RESULT					MEAN	CRITERIA (max average)	PASS/ FAIL
	1	2	3	4	5			
Burn Rate (in/min)	0.00	0.00	0.00			0.00	4.0 in/min.	PASS

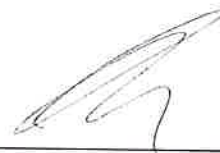
Comments & Observations	Sample failed to ignite and reach timing marker
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**Compiled By:**

I here by attest that this report has been generated in accordance with customer and regulatory requirements; recorded results reflect the test activity and test requirement.

Name Steve Ellis  
 Title Test Laboratory Engineer  
 Date 21 October 2022

Signed & Stamped




**Tested By:**

I here by attest that test(s) have been conducted in accordance with customer and regulatory requirements, and all equipment is within calibration and fit for function; recorded results reflect the test activity and test requirement.

Name Steve Ellis  
 Title Test Laboratory Engineer  
 Date 21 October 2022

Signed & Stamped

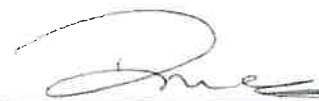



**Approved By:**

I here by attest that this report and stated results have been generated in accordance with customer and regulatory requirements; recorded results reflect the test activity and test requirement.

Name Dominic Moore  
 Title Head of Quality  
 Date 21 October 2022

Signed & Stamped

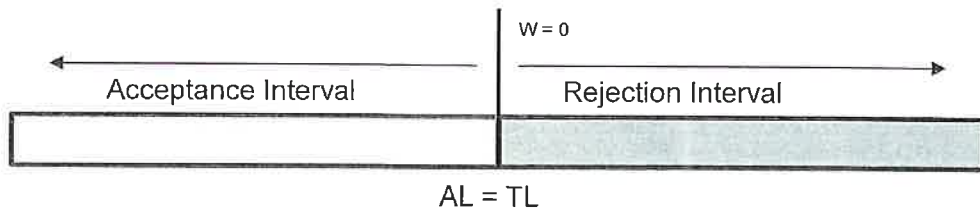



**Equipment Used**

Unique "P" No.	Description	Next Calibration Date
P234	CONDITIONING CHAMBER	12 November 2022
P342	DIGITAL THERMOMETER	21 July 2023
P013	HORIZONTAL FLAM CHAMBER	22 June 2023
P333	STEEL RULE	26 October 2022
P337	STOPWATCH	03 March 2023
P331	THERMOCOUPLE	21 July 2023

**Notes**

- Note 1** Results detailed in this report relate only to the item(s) tested, as submitted by the customer.
- Note 2** This test report **will not** be reproduced, except in full, without written approval from the laboratory.
- Note 3** Opinions and Interpretations are not accredited.
- Note 4** The material identification and/or descriptions have been supplied by the customer and has not been verified by AVIC Cabin Systems (UK) Limited.
- Note 5** The laboratory activities related to these results have been performed under our UKAS and Nadcap scopes of approval/accreditation. Results are reported as accredited, except in indicative instances.
- Note 6 Decision Rule**  
 The laboratory at AVIC Cabin Systems (UK) Limited employs the "**Simple Acceptance**" or "**Shared Risk**" decision rule as a default (unless otherwise specified by the customer). This is a binary decision rule, the acceptance limit (AL) is considered equal to the tolerance limit (TL) and the guard band (w), equal to length 0.  
 Therefore, the **specific risk** can be up to 50% probability of false acceptance (PFA), as referenced in ILAC-G8:09/2019.  
**PASS** - Result is below the acceptance limit, AL = TL  
**FAIL** - Result is above the acceptance limit, AL = TL



- Note 7 Uncertainty of measurement**  
 Flammability - Afterflame/Drip Exiting Time +/- 0.7sec, Burnlength +/- 0.1in, Burn Rate +/- 0.1in/min  
 Smoke Emission - +/- 4%, Toxic Gas Emission - +/- 15%